Department Of Veterans Affairs
Decentralized Hospital Computer Program

LABORATORY

PLANNING AND IMPLEMENTATION GUIDE

Version 5.2

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Information System Center
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Preface

The Laboratory Planning and Implementation Guide (PIG) Version 5.2 is designed to provide the Department of Veterans Affairs Medical Center (VAMC), Information Resources Management Services (IRM), and the Laboratory Information Manager (LIM) with the necessary information required to efficiently and effectively implement, maintain, and manage Laboratory Version 5.2 software package.

This documentation provides sufficient information about the software package for IRM personnel and the LIM to operate and maintain the software without additional assistance from software package developers. This Planning and Implementation Guide V. 5.2 was created to fulfill that requirement.

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INTRODUCTION

Introduction

Purpose

The purpose of the Laboratory Planning and Implementation Guide (PIG) V. 5.2 is to provide Information Resources Management Service (IRM) and Laboratory Information Manager (LIM) with a description of the package setup, special capabilities, files, security, and data dictionaries. Familiarity with the fundamentals of VA FileManager, Laboratory User Manual, Blood Bank User Manual, Anatomic Pathology User Manual, and the Laboratory Technical Manual is assumed.

Area of Application

The Laboratory V. 5.2 package covers every functional area of the Clinical Laboratory:

- Anatomic Pathology
- Blood Bank
- Chemistry
- Coagulation
- Hematology
- Microbiology
- Phlebotomy
- Quality Control
- Results Reporting
- Serology
- Surgical Pathology
- Test Accessioning/Ordering
- Toxicology
- Urinalysis
- Auto Instrument
- Workload Recording

Organization of Manual

This manual is organized into major chapters plus an Introduction and a Glossary for the complete guide. The chapters represent functional content areas or issues to be addressed in package implementation and maintenance.

Other manuals relevant to the Laboratory package are:

- Anatomic Pathology User Manual*
- Blood Bank User Manual*
- Laboratory User Manual*
- Laboratory Technical Manual*
- VA FileManager User Manual*
- VA FileManager Programmer Manual
- Users Guide To Computing*
- MailMan User Manual*
- Kernel Systems Manual
- Kernel Technical Manual

Functional Description

• What is the Laboratory Package?

The Laboratory package is part of the integrated Decentralized Hospital Computer Program (DHCP) Core Package and a clinically oriented system designed to provide data to health care providers as well as to other health care personnel. Its primary function is to assist the Pathology & Laboratory Medicine Service in managing and automating the workload and reporting process. The Laboratory package includes software for all major functional areas; selected examples of software modules are illustrated in this section.

• Who does the Laboratory package serve?

Health Care Providers/Other Health Care Providers:

The Laboratory package is a clinically oriented application, designed to provide data to health care providers as well as to other health care personnel. For this reason, it is a multifaceted package with many spin off advantages for other hospital services. Its primary function is to assist the Pathology & Laboratory Medicine Service in managing and automating workload generated by the Medical Center primary mission.

• Who can use the Laboratory Package and for what purpose?

The Health Care Provider:

The Laboratory package provides a method for Health Care Providers to place requests into the system for collection and analysis of patient's specimens. It also provides a means of tracking work activities to completion and reporting. When results become available, users may view the results in a variety of formats.
The Clinical Pathology & Laboratory Medicine Service:

The package provides methods of identifying and processing workload.

Test result values are accepted from manual input and/or automated instruments and test data is displayed for review before verification.

After verification, the results may be automatically distributed to appropriate locations throughout the institution.

Data is provided for management reports and administrative support.

• What are the benefits of the Laboratory Package?

Lab test information is more accurate, timely, and accessible.

Status of orders is more accessible to lab and hospital personnel.

Abnormal and critical values can be flagged to assist in verification and review of data.

Quality control data can be collected, automatically performed, and reported.

Delta checks can be made on a series of data to establish trends or significant clinical variations in value.

Functionality

- **Phlebotomy/Ordering**

  Supports ward order entry

  Reports status and transactions of tests

  Prints collection lists/labels

  Tracks the laboratory accession numbers and order numbers

  Provides maximum ordering frequency (number per day, daily, user defined limits)

  Flag duplicate orders

  Processes special ward instructions at time of ordering.

- **Specimen Processing**

  Provides worklists by urgency and accession number (instrument specific)

  Produces incomplete lists

  Produces workload/data capture reports

  Produces review lists for verification of data

- **Verification/Release of Data**

  Provides Delta Checks, flagging high/low/critical results

  Provides customized input checking

  Provides automatic calculations (e.g., LDL)

  Supports review/verification by group or individuals accessions

  Unidirectional and Bidirectional Auto Instrument Support

- **Reports**

  Produces supervisory management reports, audit trail reports, system integrity reports, and quality assurance and utilization review reports

  Produces discharge summaries and cumulative and discrete episode reports

  Produces automatic transmission of data at time of verification to the ordering location

  Provides quality control

Provides search capabilities (SNOMED criticals, HI-LO)

Provides Antimicrobial Trend Reports

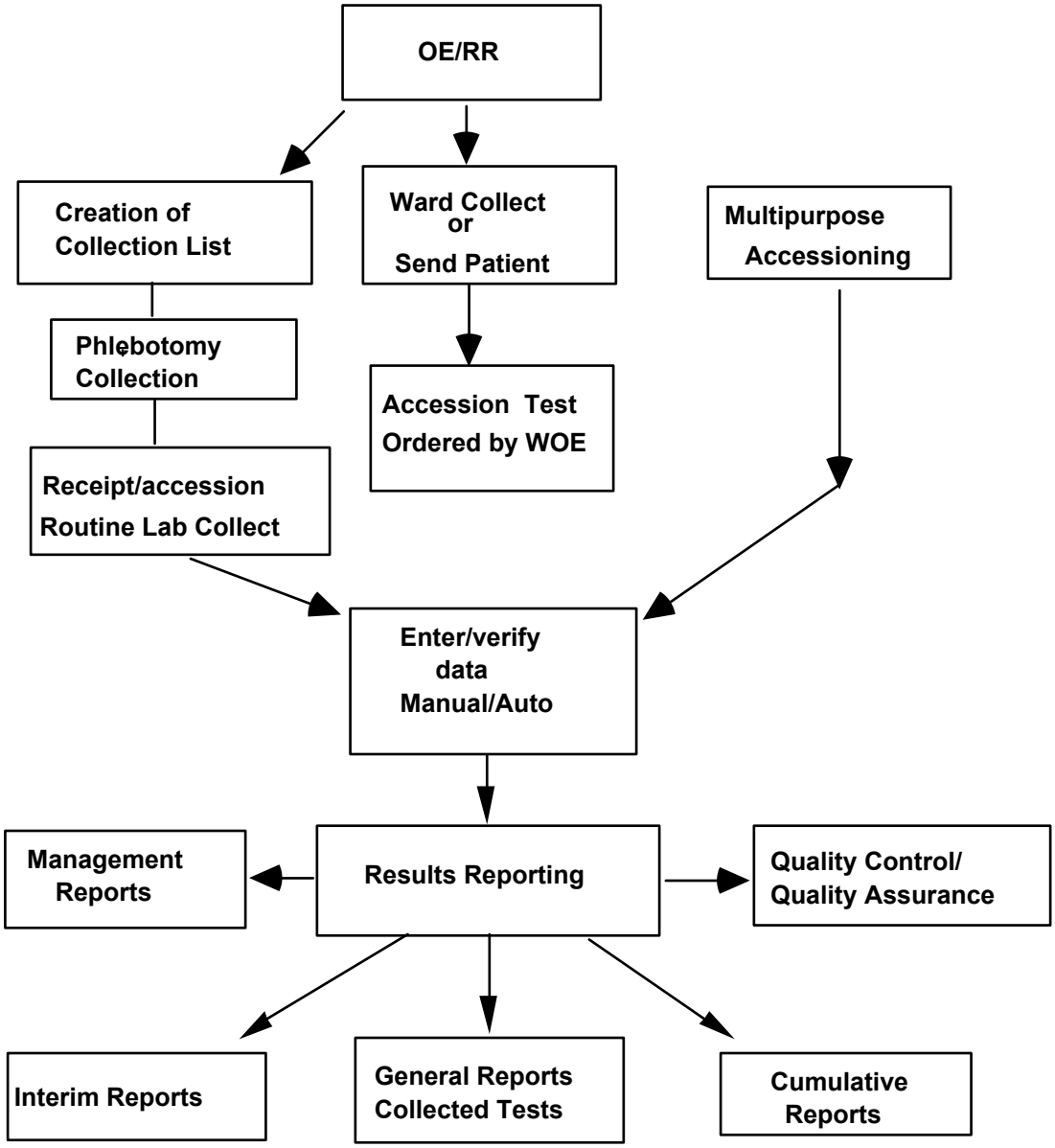
Provides Infection Control Reports

Provides Health Department Reports

Provides multiple reports of microbial interpretation

Provides searches for cytological agents with defined antimicrobial patterns.

Laboratory Module Work Flow



ORIENTATION

Orientation

Package Specific Notations

This section describes symbols used to indicate terminal dialogues or user responses in this manual.

Special Commands, Keys and Conventions

The keyboard you will work on is similar to that of a typewriter. However, there are some additional keys and functions you will be using. Here is a list of the common ones that you will use.

COMMANDS:

Continue

Entered at any point, it will terminate your session immediately, but the computer remembers what you were doing when you terminated. When you log on again, you will be asked if you want to continue at that same point. Some systems have not activated this functionality. Check with your LAC or IRM.

Halt

Enter halt at any menu level will terminate your session immediately.

Press

Press indicates 1 keystroke.

Example: Press the RETURN key.

KEYS:

Control (CTRL)

The CONTROL key is like a second shift key. It is held down while pressing another key.

CTRL/C gains the attention of the computer. It interrupts current activity at that terminal.

CTRL/S stops the printing. Useful when viewing a listing longer than your screen length. Some terminals have HOLD Screen or SCROLL/NO SCROLL for stopping scrolling.

CTRL/Q causes printing or scrolling to resume after CTRL/S has been used.

CTRL/U deletes current input line if <RET> has not t been pressed.

Enter or Return

There are three uses for the RETURN or ENTER key (denoted in this manual as <RET>):

• Entering information each time you respond to a prompt, you must press <RET>.

• Accepting a default just press <RET>

• Skipping a prompt will allow you not to enter any information in response to a prompt. You may press <RET> and the next prompt will appear if the previous prompt was not mandatory.

Delete or Backspace This key will deletes previous characters one at a time.

Up-arrow ^ Up-arrow "^" is (shift 6). This key will terminates the line of questioning you are in and returns you to the previous level in the routine. If you continue to enter "^" you can exit the menus and the Laboratory package.

PROMPTS:

Device A device prompt allows you to select a device for printing output. You may always enter Q for QUEUE when you are asked for a device, and then you ll be asked to specify the device name and the time to print.

Press ^ To Exit This process will terminate within the selected option. The screen will return to the menu you selected the option from.

NOTE: You must respond to some prompts in order to use the rest of an option. These prompts are called mandatory prompts. In these cases, the system supplies a message indicating that you MUST enter a response before continuing. You can use ^ to escape from the prompt but you will lose all information previously entered.

Deleting an entry

If you wish to delete the answer, enter @ (upper case 2) following the slashes:

```
Temporary Address: 812 Fifth Ave, Ogden, Utah// @
```

You will be asked "Do you really want to delete?"

If you answer "YES", this leaves the temporary address value blank.

Space bar convention

On a Select question, if you wish to enter the same answer just previously used for that question, you may respond with a space bar and <RET> for that question. The computer will enter the same response for that question as was most recently entered for it.

Example: You may wish to do a series of procedures for one patient. Each time (after the first) you are asked for Patient Name, you may enter a space bar and <RET> and the computer will select the same patient name.

Date And Time Format

Date and time can be entered in a variety of ways: (Your response is in the bold letters).

October 10, 1950
OCT 50
TODAY or **T** (today)
T-1 (yesterday)
T+1 (tomorrow)
T-4W (4 weeks ago)
NOW or **N** (Now)

10OCT@10AM (October 10 at 10: AM; current year is assumed if not entered)
3/10 (March 10 of the current year)

How To Go Back To A Previous Question Or Exit Option

To terminate a series of questions, enter "^" (shift 6) in response to the displayed question. Since this returns you to a previous level, you may need to enter "^" several times to exit the program or return to the level you wish. If you want to return, or go forward enter "^" and the name of the desired question.

Example:

```
YEAR OF BIRTH: 1950
SSN: 123456789
ADDRESS: ^YEAR
YEAR OF BIRTH: 1950// 1951
SSN: 123456789// <RET>
```

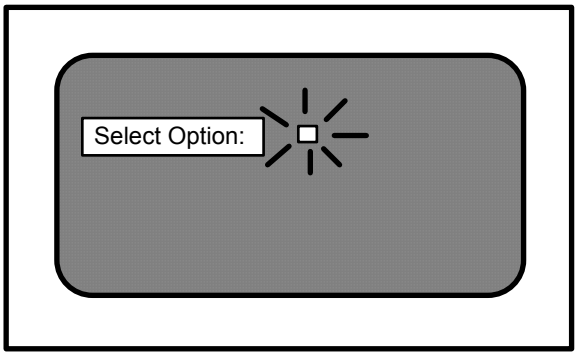
In this sequence, you needed to change the date of birth when you were at the address question. By entering ^ and the first few letters of the desired question, you returned and entered the correct date of birth.

Help

If in doubt as to possible answers to what is being asked, or the correct format to use, always enter ? and the computer will respond with an explanation and then repeat the question to you.

Prompts/Cursor

A prompt is an instruction the computer gives you on your terminal screen, followed by a colon (:) and a cursor. The prompt tells you what kind of information the computer is looking for (such as, Select NAME:), and the cursor tells you the computer is ready for you to type the information on your keyboard and send it to the computer (by pressing the enter or return key). The most common cursor is a flashing rectangle, but it may be a flashing or steady line or rectangle.



The entries you type into the computer are always indicated in this manual by bolded letters. The bolded parts of the entry are the letters that must be typed in so that the computer can identify the response. In most cases you need enter only the first few letters. This increases both speed and accuracy. A different font type `(Courier, 10 point)` is used to indicate "computer dialogue."

This arrangement will look like the following example where Adams is the name that the user types in response to the "Select PATIENT:" prompt.

`Select PATIENT:` **`Adams`**

Types of prompts

The package uses prompts to ask questions. Several types of prompts may be used to supply the information.

• Basic Prompt

Most prompts in the package ask a question or indicate the type of information to be supplied, followed by a colon.

Example: The computer asks for date of birth.

You enter October 10, 1950.

```
Date of Birth:   October 10, 1950
```

• YES/NO Prompt

If the question requires a "YES" or "NO" answer, it may end with a question mark.

```
Are you sure you wish to delete? YES
```

You may just type a "Y" or a "N".

• Select Prompt

If the question you are asked involves an answer chosen from a list, then the word Select may be used:

```
Select PATIENT:
```

If you need the list of valid answers, enter ? and the computer will respond with instructions and/or a list, and then asks you the same question again:

```
Select PATIENT: ?

Choose from:
Adams, Sam
Brown, John
Washington, George

Select PATIENT: Adams
```

If the list is long, you will be asked if you want to see the entire list. The list presented to you will stop when the CRT screen is filled. To continue press <RET>, to stop the list enter "^" (shift 6).

If your answer is not on the list, sometime you may be allowed to add it:

```
Select PROVIDER NAME: Herod,Michael C.
```

The computer beeps and asks you:

```
Are you adding Herod,Michael C. as a new provider name: YES
```

Answer "YES" and the computer will enter Herod, Michael C. into the valid answer list. If you had answered with anything but "YES", it would disallow the addition of the provider and repeat the question.

If you enter the first few letters of a response and there are multiple responses starting with that letter or combination of letters, the computer will respond and ask for a choice:

```
CHOOSE FROM: 1. PRINT
     2. PROFILE
Select 1 Thru 2: 1
```

• Default Prompt

Some questions have a most probable answer or default answer:

```
IS IT OKAY TO DELETE? NO// <RET>
```

In this case, if you press <RET>, you agree with the probable answer of "NO". If you enter "YES", that answer will be accepted instead of the current entry "NO". The most probable answer is always followed by two slashes. If you are editing a question which already has an answer, the two slashes ask if the answer is still okay. If not, you may enter the new answer following the slashes:

```
SSN: 12346789// 987654321
```

Signing On

Turn on the terminal using the on/off switch (unless your terminal is left on at all times). Some terminals turn off the display if no keystroke has been received for a few minutes. Touching any key will restore the display. After turning on the terminal, press the Return key to get the attention of the computer (a blinking cursor will appear).

You must have a personal **access** and **verify** codes before the computer will respond to you. These are to provide security for computer data. Your site manager or LIM will give you access and verify codes, which you must memorize and keep to yourself.

The ACCESS CODE and VERIFY CODE will not be displayed on the screen, to protect the security of the system.

After turning on the terminal, press <RET> to get the attention of the computer (a blinking cursor will appear).

If there is no cursor on the screen after you have turned the terminal on, check all power connections and connections between the keyboard and CRT. If you still get no response, contact your LIM.

If you do get a blinking cursor, press <RET> and you should see the access code prompt. If you are unable to get a response after you press <RET>, press CTRL/Q, and <RET> again. If the cursor still does not move, contact your LIM.

If you do get the proper response, you should see a screen that looks like the following example.

Example:

```
ACCESS CODE: ACCJOHN (these responses will not show)
VERIFY CODE: VERDOE  (up on the screen)

GOOD AFTERNOON, JOHN DOE

Select LABORATORY OPTION: M
```

If access is denied, re-enter your codes. (especially checking for misspellings or typos).

If you receive the message:

```
DEVICE LOCKED
```

You must wait a minute or so before trying to sign on again. This message means that an incorrect code has been entered. As a security precaution, the number of consecutive SIGN ON tries is limited.

Signing Off

Once you have completed your work, it is important to sign off, so that someone else can not do work in your name.

If Your Terminal Will Not Work

Check to make sure the <CAPS LOCK> is on. Occasionally the computer does not recognize small letters.

Check to see if the <NO SCROLL> has been pressed. Press <NO SCROLL> again.

Check to see if <CTRL S> has been pressed. Press <CTRL Q>.

If none of these works, check with your application coordinator or site manager.

If the computer is very busy because of many users working on it at the same time, it frequently will become very slow, even coming to a standstill at times. Just be patient, or try to arrange your time at the terminal for when there won t be so many users.

Warning Symbol

☛**WARNING:** The warning symbol indicates that the action to be performed is critical. This symbol is used in the documentation to alert you to a critical action.

Note Box

NOTE: The note box indicates that a special action maybe required or that the documentation is trying to call your attention to a significant point.

IMPLEMENTATION AND MAINTENANCE

Implementation and Maintenance

System Integrity Checks

Check files for inconsistencies [LRCKFILES]

This option includes the check from LRCKPTR plus additional checks on potential inconsistencies in various files. The following is a list of some of the messages that might be generated if there are discrepancies or problems. There are several routines that run when this option is called up. This option is most useful when you are initially setting up your files.

NOTE: Only the first 20 errors are totaled for the section, but a total error count is provided with the group.

Messages: Messages are labeled either: F (fatal) or W (warning).

NOTE: Fatal indicates potential problems with various software functions. Consult your IRM and then your Regional ISC if necessary.

From File #60 check: The user can choose not to check tests that are defined as NEITHER in the TYPE field when the option is selected.

F - A test can not be Atomic and Cosmic at the same time.
W - Atomic test has no site/specimen; therefore, no units or range
F - Test must have a HIGHEST URGENCY value
F - The data name field must be re-entered to set up location and field
F - BAD Data name
F - Needs a print name entered
W - Does not have a print order
F - BAD pointer to the ACCESSION file (#68)
F - BAD lab collection sample pointer to the COLLECTION SAMPLE file
F - BAD pointer to the PROCEDURE file (#61.5)
F - BAD Edit code pointer to the EXECUTE CODE file (#62.07)
F - BAD Batch data code pointer to the EXECUTE CODE file (#62.07)
F - BAD pointer in panel
F - Test is on its own panel (infinite loop)
F - BAD entry in Specimen/Site subfile
F - BAD Specimen/Site subfile pointer to TOPOGRAPHY FIELD file (#61)
F - BAD type of pointer to DELTA CHECKS file (#62.1)
F - BAD collection sample pointer to COLLECTION SAMPLE file (#62)
F - BAD required comment pointer to EXECUTE CODE file (#62.07)

From File #68:

F - Missing the LR subscript

W - Missing the print order
F - Has no abbreviation
F - BAD common accession # pointer to the ACCESSION file (#68)
F - BAD accession transform pointer to the EXECUTE CODE file (#62.07)
F - Accession transform field and EXECUTE CODE file (#62.07) not match
F - BAD verification code pointer to the EXECUTE CODE file (#62.07)
F - Verification code and EXECUTE CODE file (#62.07) don t match
F - Does not have an accession
W - Does not have an order number
F - Does not have an Order on file
F - BAD pointer to test LABORATORY TEST file (#60)
F - BAD pointer to URGENCY file (#62.05)
F - BAD pointer to the specimen COLLECTION SAMPLE file (#62)
F - BAD pointer to COLLECTION SAMPLE file (#62)
F - BAD instrument pointer to the AUTO INSTRUMENT file (#62.4)
F - BAD control name pointer to the LAB CONTROL NAME file (#62.3)

From File #69:

F - Entry LRDFN in ^LR(is missing
F - Does not have an ORDER number
F - BAD pointer to COLLECTION SAMPLE file (#62)
F - BAD pointer to the USER file (#)
F - BAD pointer to the LABORATORY TEST file (#60)
F - BAD pointer to the URGENCY file (#62.05)
F - BAD pointer to the ACCESSION file (#68)
F - BAD pointer to the specimen TOPOGRAPHY file (#61)

From Files # 68.2 and 62.4

F - MISSING ZERO NODE
F - Has duplicate routine entry
F - SYSTEM MUST have a device to get the data from
F - Has no program name. This will prevent data processing
F - MUST have a LOAD/WORK LIST entry
F - Enter a number has a BAD test pointer
W - A sequence/batch should have 0 cups/tray
F - BAD pointer in the LOAD transform field
F - BAD pointer in the INITIAL setup field
F - Does not have a profile defined
F - Has a BAD test pointer
F - At least one test of the panel MUST NOT be build name only
F - BAD accession area pointer

NOTE: Warnings are not critical and in most situations can be ignored. However, if you are experiencing problems with a particular item, please investigate. Consult your respective IRM if uncertain of the impact.

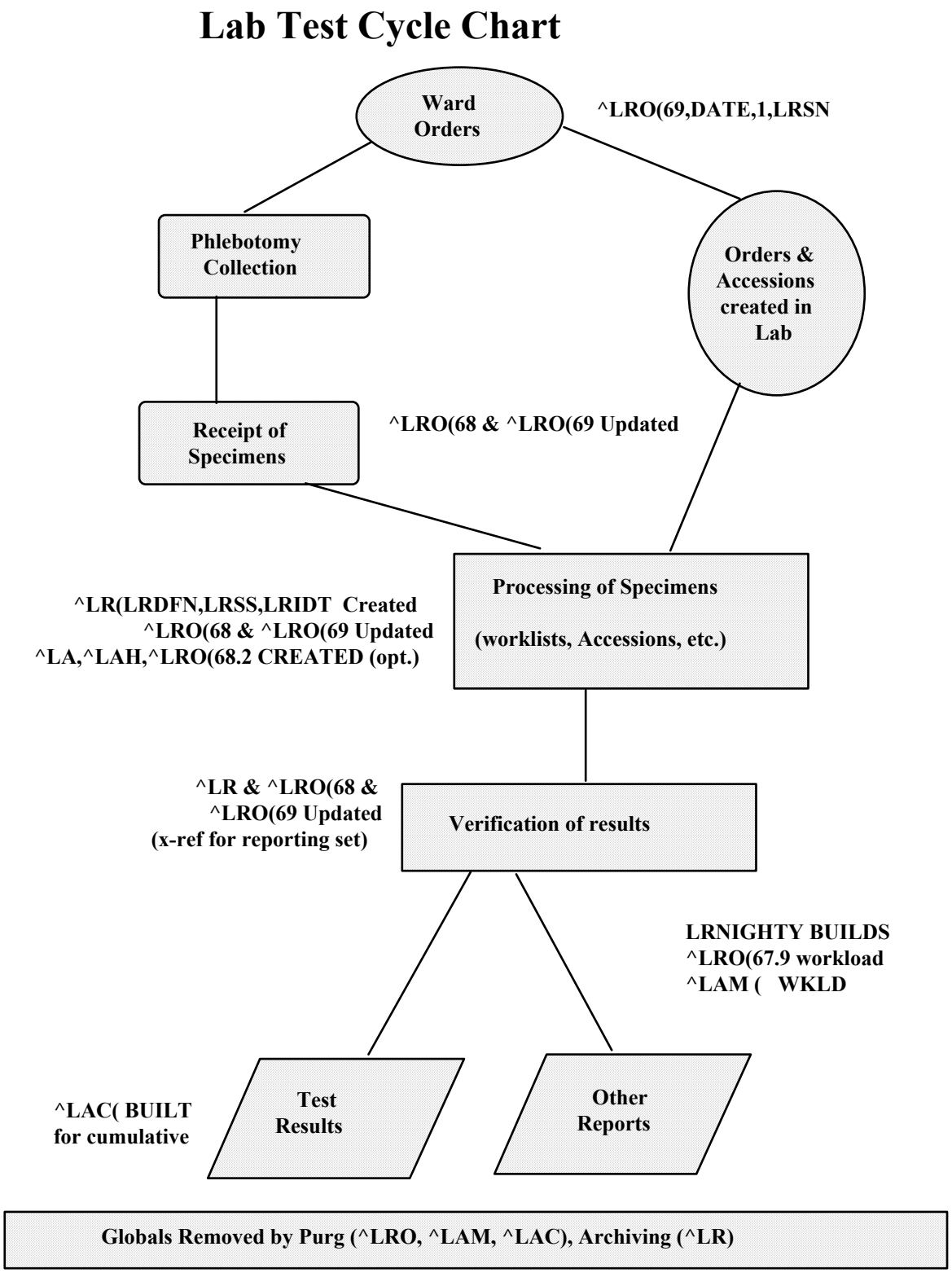
All of the F or W messages give you a place to start looking within each file mentioned. Most of them you can fix by making required field changes. Some will have to be fixed by using some of the utility functions of VA FileMan or re-cross referencing certain fields within files. If the “fix” is not evident to you, ask your IRM for help.

You should run this check every three months and after any unscheduled downtimes.

Check patient and lab data cross pointers [LRCKPTR]

This option should probably be run on some kind of routine basis (monthly would probably be more than adequate). This could be part of a laboratory quality assurance program to verify the internal consistency of the laboratory data files. The program goes through each file to see if there is an LR pointer. If there is, it then looks to see if that pointer is correct. The program then goes through the lab data file to see what file is being pointed to and makes sure there is a corresponding entry in that file.

LAB TEST CYCLE CHART



Laboratory Package Routine Integrity Menu

Lab Routine Integrity Menu

This menu is designed for Site Managers to provide the means to load LR ROUTINE INTEGRITY CHECKER file (#69.91) with data after the Laboratory package installation. This menu also provides a method to view data on a single routine. The Lab Routine Integrity Menu loops through File #69.91 to determine if any routines have been changed/edited. The Lab Routine Integrity Menu [LR INTEGRITY] is composed of three options:

1) [LR Integrity Load]
2) [LR Integrity Loop]
3) [LR Integrity Single]

This menu is also designed for support persons to determine the integrity of the laboratory routines, by determining the routine size and the ASCII value of the characters that are in the routines. By using these values, you can determine:

- If the routine has been altered or edited.
- The size of the routine (used in determining routine map space.)
- A double check on patch application. (This is not foolproof.)
- The total number of routines (excluding all INITs).
- Options that have been deleted or renamed. These are used in the post INITs.

NOTES:
1. LR ROUTINE INTEGRITY CHECKER file (#69.91) is based upon versions. If a version is no longer in use, that version can be deleted from the file.

2. The Lab Routine Integrity Menu [LR INTEGRITY] is distributed on the Lab liaison [LRLIAISON] menu.

3. You must delete all INITs before loading these routines.

4. Many LIM will not have this level of access.

This file is not exported with routines. The site must load the routines into the global/file. Option LR Integrity Load is provided for that purpose.

Loop thru LR Integrity [LR Integrity Loop]

This option will loop through the entire LR ROUTINE INTEGRITY CHECKER file (#69.91) to determine if any of the loaded routines in the file have been changed or edited.

Load Integrity File [LR Integrity Load]

This option will load the LR ROUTINE INTEGRITY CHECKER file (#69.91) with lab routines which have the correct version number in the second line. Those routines which do not match (e.g., LRINITs) will not be loaded.

The option should be done as soon as possible. Users can be logged on during this process.

If there are local routines in the LRZ namespace and you wish these to be included in the LR ROUTINE INTEGRITY CHECKER file (#69.91), they must have the correct second line format and version number.

Second line format
;;xx.xx;LAB SERVICE;**pn**;date/time
where xx.xx = Version Number
pn = Patch Number

Check a Single Routine Size [LR Integrity Single]

This option allows you to review stored data about a single routine. After entering the routine name, the option will show you the current data and compare this data with values stored in LR ROUTINE INTEGRITY CHECKER file (#69.91). It then indicates if the routine has been changed/edited. This option will also allow you to determine if a patch has been applied correctly. To get a complete listing, use the VA FileMan Print option.

File Editing

Editing file entries may be performed by the LIM if they have VA FileMan access. File attributes generally may NOT be edited.

There are certain files and or fields which require great caution when editing or entering data. Some of these fields may contain mumps codes. A FileMan access code of programmer is required to edit these files/fields. The assignment of programmer access codes is a local issue. Therefore, certain files and fields may not accessible by the LIM.

NOTE: Deletion from most files is strongly discouraged. It can be done in certain instances, but use caution. If there is any uncertainty, do not delete entries until advised by your IRM or Regional ISC.

If file entries are edited (either initially or after system implementation), they must be done in this order:

1. TOPOGRAPHY FIELD file (#61)
2. COLLECTION SAMPLE file (#62)
3. ACCESSION file (#68)
4. LAB DATA file (#63)
5. LABORATORY TEST file (#60)
6. ACCESSION TEST GROUP file (#62.6)
7. LABORATORY SITE file (#69.9)

It is recommended that before adding entries to the above files, you run [LRCHKFILES] to find any inconsistencies. Correct any **Fatal** responses listed. When this is completed, you will be ready to add new entries.

After the above files are finished, other files may be changed in any order. The above seven files must be changed in that order because of the interdependence of the files.

Other Laboratory Configurable Files

- MORPHOLOGY FIELD file (#61.1)
- ETIOLOGY FIELD file (#61.2)
- FUNCTION FIELD file (#61.3)
- DISEASE FIELD file (#61.4)
- PROCEDURE FIELD file (#61.5)
- OCCUPATION FIELD file (#61.6)
- URGENCY file (#62.05)
- ANTIMICROBIAL SUSCEPTIBILITY file (#62.06)
- EXECUTE CODE file (#62.07)
- DELTA CHECKS file (#62.1)
- LAB SECTION file (#62.2)
- LAB CONTROL NAME file (#62.3)
- AUTO INSTRUMENT file (#62.4)
- LAB DESCRIPTIONS file (#62.5)
- AGGLUTINATION STRENGTH file (#62.55)
- WKLD CODE file (#64)
- WKLD LOG file (#64.03)
- NON WKLD PROCEDURES file (#64.05)
- WKLD CODE LAB SECT file (#64.21)
- LAB REPORTS file (#64.5)
- INTERIM REPORTS file (#64.6)
- BLOOD INVENTORY file (#65)
- BLOOD BANK UTILITY file (#65.4)
- BLOOD DONOR file (#65.5)
- LAB LETTER file (#65.9)

- BLOOD PRODUCT file (#66)
- BLOOD BANK VALIDATION file (#66.2)
- OPERATION (MSBOS) file (#66.5)
- BLOOD COMPONENT file (#66.9)
- REFERRAL PATIENT file (#67)
- RESEARCH file (#67.1)
- STERILIZER file (#67.2)
- ENVIRONMENTAL file (#67.3)
- LOAD/WORK LIST file (#68.2)
- WORKLIST HEADINGS file (#68.4)
- LAB JOURNAL file (#95)

Laboratory Files Not To Be Edited

- ARCHIVED LR DATA file (#63.9999)
- WKLD SUFFIX CODE file (#64.2)
- WKLD ITEM FOR COUNT file (#64.22)
- WKLD INSTRUMENT MANUFACTURER file (#64.3)
- CUMULATIVE file (#64.7)
- NON PATIENT WORKLOAD file (#67.4)
- LAB MONTHLY WORKLOADS file (#67.9)
- LAB ORDER ENTRY file (#69)

Add a new data name

In the LABORATORY TEST file (#60), each test entry with a CH subscript and a type of BOTH or OUTPUT has a location or data name. See the location Data Name field of File #60. This data name points to a unique field in the LAB DATA file (#63) where the data for that test is to be stored. This unique field also defines what type of value can be entered as a result for the test (free-text, numeric or a set of codes).

NOTE: Panels, profiles, and tests with subscripts other than CH do not have data name entries.

The exported version of the LAB DATA file (#63), subfield #4 contains subfield entries called data names, most of which are associated with corresponding presupplied entries in the LABORATORY TEST file. These data names determine the type of response allowable when entering a result for a laboratory test. You should print a list of possible subfields to determine if additional entries must be added. The addition of data names must be done by using the Add a new data name [LRWU5] option.

Using Add a new data name option

```
Select Supervisor menu Option: LAB LIAison menu

   ANT    Add a new internal name for an antibiotic
   DATA   Add a new data name
   MOD    Modify an existing data name
          Add a new WKLD code to file
          AP Microfiche Archive
          Archive lab data ...
          Check files for inconsistencies
          Check patient and lab data cross pointers
          Diagram Menus
          Download Format for Intermec Printer
          Edit atomic tests
          Edit cosmic tests
          File list for lab
          LAB ROUTINE INTEGRITY MENU ...
          LIM workload menu ...
          Manually compile WKLD and workload counts
          OE/RR interface parameters ...
          Outline for one or more files
               Press 'RETURN' to continue, '^' to stop: <RET>
          Re-index Antimicrobial Suscept File (62.06)
          Turn on site workload statistics
          Turn on workload stats for accession area
          User selected lab test/patient list edits ...
          VA FileMan ...

Select Lab liaison menu Option: DATA  Add a new data name
This option will add a new data name to the lab package.
```

```
DATA NAME: GLUCOSE-TIMED
ARE YOU ADDING GLUCOSE-TIMED (SUBFIELD # 7022001) AS A NEW DATA NAME? NO// Y
(YES)
Enter data type for test: (N)umeric, (S)et of Codes, or (F)ree text? F
Minimum length: 2
Maximum length: 30

GLUCOSE-TIMED  added as a new data name

Data Name: GLUCOSE-TIMED    Subfield #: 7022001    Type: FREE TEXT
Input Transform: K:$L(X)>30!($L(X)<2) X
Minimum length: 2
Maximum length: 30

You must now add a new test in the LABORATORY TEST file and use
GLUCOSE-TIMED as the entry for the DATA NAME field.
```

Using VA FileMan

```
Select VA FileMan Option:  4  Modify File Attributes
MODIFY WHAT FILE: //  63  LAB DATA
Select FIELD:  4  CHEM, HEM, TOX, RIA, SER, etc. (Multiple
LABEL:  CHEM, HEM, TOX, RIA, SER, etc.  Replace <RET>
READ ACCESS (OPTIONAL) <RET>
WRITE ACCESS (OPTIONAL):<RET>
SOURCE: <RET>

Select DESTINATION: <RET>
Select GROUP: <RET>

Select CHEM, HEM, TOX, RIA, SER, etc.  SUB-FIELD: 555001
   (enter the sub-field number = station # + entry # in the format of
“555001”, “555002”, “555003”, etc.)
ARE YOU ADDING A NEW CHEM, HEM, TOX, RIA, SER, etc. SUB-FIELD NUMBER (THE
800TH)? Y//<RET>(YES)

LABEL:  SERUM MAYONNAISE
  CHEM, HEM, TOX, RIA, SER, etc. SUB-FIELD NUMBER:  555001// <RET>

DATA TYPE OF SERUM MAYONNAISE:  FREE TEXT
MINIMUM LENGTH:  1
MAXIMUM LENGTH:  10
(OPTIONAL) PATTERN MATCH (IN  X ): <RET>
WILL SERUM MAYONNAISE FIELD BE MULTIPLE ?  NO// <RET>
SUBSCRIPT:  49// 555001  (***NOTE: this must always match the sub-field
number!!!)
-POSITION:  1// <RET>  (***NOTE:  this answer must always be  1 )
IS SERUM MAYONNAISE ENTRY MANDATORY  (Y/N):  NO// <RET> (NO)
 HELP  - PROMPT: ANSWER MUST BE !-!) CHARACTERS IN LENGTH  Replace
EXECUTABLE  HELP :  <RET>

Select CHEM, HEM, TOX, RIA, SER, etc.  SUB-FIELD:  ^
```

You now have a new data name for the test SERUM MAYONNAISE. When you enter SERUM MAYONNAISE as a new test in File #60, be sure to fill in the Data Name field with the number 555001. The test name will then point to the correct new data name.

File Structure/Interaction

Before you begin the process of reviewing and editing the lab package files (also known as site configuring), it is important to note which of the files should be edited prior to going live and the sequence in which they should be modified.

The database for the lab package is composed of a series of files. These files contain all the information that is needed by the system to process or interpret test data and are the basis for storage, organization and retrieval of that data.

The files and the data they contain form the backbone of a comprehensive network that is used on three levels:

1. within files
2. between files in the lab package
3. among files in the lab package and other package files.

Information within a file may in some ways be dependent upon other elements stored in the same file. When this occurs, it is said that the file points to, or references itself. Similarly, data contained in one file may point to another separate file or a group of files. Finally, files within the lab package can be pointers to files found in other packages in the system (i.e., ADT or PHARMACY). This occurs when the lab file information is drawn from data contained in an outside file or when the lab file information points to an outside file.

Based on the relationships which exist between the files, the sequence of events during file modification becomes very important. Files which must be edited or modified in sequence are:

1. TOPOGRAPHY file (#61)
2. COLLECTION SAMPLE file (#62)
3. ACCESSION file (#68)
4. LAB DATA file (#63)
5. LABORATORY TEST file (#60)
6. ACCESSION TEST GROUP file (#62.6)
7. LABORATORY SITE file (#69.9)

These seven files are also known as **Day one** files, although editing of other files in addition to those listed above MUST be done in order to bring up a fully functional laboratory package.

We are classifying them as primary or pre-implementation files, which include the following:

1. TOPOGRAPHY file (#61)
2. COLLECTION SAMPLE file (#62)
3. ACCESSION file (#68)
4. LAB DATA file (#63)
5. LABORATORY TEST file (#60)
6. ACCESSION TEST GROUP file (#62.6)
7. LABORATORY SITE file (#69.9)
8. LAB CONTROL NAME file (#62.3)
9. AUTO INSTRUMENT file (#62.4)
10. LAB REPORTS file (#64.5)
11. INTERIM REPORTS file (#64.6)
12. LOAD/WORK LIST file (#68.2)

NOTE: Remember that the first seven files must be reviewed/edited in that order. These are Day One files. Files #8 thru #12 are pre-implementation files.

We have included review here, since in most cases you will only have to review the entries in the TOPOGRAPHY file (#61) to make sure the site/specimens you need are there. If you have to add an entry, do it first. The remaining primary files can be modified in any order you wish, with a few exceptions. If you want to put controls on a load or worklist, the entry must be made in the LAB CONTROL NAME file (#62.3) first. In order to specify what load or worklist is run on a particular instrument, you have to build the LOAD/WORK LIST file (#68.2) entry first and then associate it with the correct instrument in the AUTO INSTRUMENT file (#62.4).

To better understand the interrelationships of the files and their corresponding field characteristics, one of the first things you should do is use VA FileManager to obtain a list of file attributes (otherwise known as a data dictionary) for each and every laboratory package file. These listings will provide the information on type of field, length of field, number of decimals allowed, whether a field requires an entry, input transforms, output transforms, cross references, and identifiers, as well as pointers which exist between the files.

A good understanding of the files, what information they contain, and how they interrelate is important in the implementation process.

If you have lots of extra time, feeling ambitious, or a stickler for details, you can also modify the other lab package files prior to going live, although the package initially will be fully functional without extensive editing. Three exceptions here are Microbiology, Anatomic Pathology, and Blood Bank related files. These files should be reviewed and modified before bringing up those portions of the lab package. Specific information about those pre-implementation files can be found in the Microbiology, Anatomic Pathology, and Blood Bank sections in this manual.

Editing The Files

Listed below are some suggested steps you should take when adding to, editing, modifying, or otherwise changing any entries in the laboratory package files before and after implementation:

1. FAMILIARIZE YOURSELF WITH THE FILES - list the entries (if any); obtain a printout of the data dictionary for the file; figure out what type of information goes into the file. Use the option, Outline for One or More files [LRUFILE].

2. GATHER APPROPRIATE INFORMATION - compile and organize the necessary information for editing the file, consult existing lab documentation, and procedures; consult with department personnel from each area of the lab.

3. EDIT THE FILE - add new entries or modify existing entries; **DO NOT DELETE** existing entries unless absolutely necessary; consult with your site manager or regional ISC for any questions or problems. **BE CAREFUL!**

4. DOCUMENT YOUR WORK - obtain new copies of any and all file listings and printouts for reference after making any changes.

5. CHANGES AFTER GOING LIVE - determine what other file(s) (if any) will be affected by the change; ALWAYS make any changes to the day one files in the specified order. Document your changes (what fields and files, as well as the date).

Laboratory Files Field Descriptions

LABORATORY TEST file (#60)

The LABORATORY TEST file (#60) contains all specific information related to each individual test (also known as an atomic test) or laboratory tests grouped into panels or profiles (or cosmic tests). It is pointed to by several other files. Entries may be added or modified, but none of the supplied entries should be deleted. It is used to define the site specific parameters for each test, including synonym(s), accession area, collection sample(s), site/specimen(s), normal values, and interpretive remarks, or special instructions unique to the test.

Field List

```
(.01) NAME
(1) TEST COST
(2) SYNONYM (Subfile 60.1)
   (.01) Synonym
(3) TYPE
(4) SUBSCRIPT
(5) LOCATION (DATA NAME)
(6) ACCESSION AREA (Subfile 60.11)
   (.01) Institution
   (1) Accession Area
(7) UNIQUE ACCESSION #
(8) UNIQUE COLLECTION SAMPLE
(9) LAB COLLECTION SAMPLE
(10) REQUIRED TEST
(13) FIELD
(14) PROCEDURE (SNOMED)
(15) *QUICK INDEX
(16) EXTRA LABELS
(17) HIGHEST URGENCY ALLOWED
(18) FORCED URGENCY
(51) PRINT NAME
(52) Reserved
(53) PRINT CODE
(54) PRETTY PRINT ENTRY
(55) PRETTY PRINT ROUTINE
(56) PRINT ORDER
(98) EDIT CODE
(99.1) *BATCH DATA CODE
(99.2) EXECUTE ON DATA REVIEW
(100) SITE/SPECIMEN (Subfile #60.01)
(.01) Site/Specimen
(1) Reference Low
(2) Reference High
(3) Critical Low
(4) Critical High
(5.5) Interpretation (Subfile #60.07)
      (.01) Interpretation
(6) UNITS
(7) TYPE OF DELTA CHECK
(8) DELTA VALUE
(9) DEFAULT VALUE
```

```
(9.2) THERAPEUTIC LOW
(9.3) THERAPEUTIC HIGH
(10) *AMIS/RCS 14-4 (Subfile #60.06)
   (.01) AMIS/RCS 14-4
(20) FOREIGN COMPUTER SYSTEM
   (.01) FOREIGN COMPUTER SYSTEM
   (1) FOREIGN ITEM #
   (2) INTERGER
   (3) UNIT CONVERSION
(110) GENERAL PROCESSING INST. (Subfile #60.09)
   (.01) General Processing Inst.
(200) LAB TEST INCLUDED IN PANEL (Subfile #60.02)
(.001) Number
(.01) Lab Test
(.02) AP Multiply Factor
(300) COLLECTION SAMPLE (Subfile #60.03)
(.01) Collection Sample
(1) Form Name/Number
(2) Container
(3) Min Vol (In Mls.)
(4) Max. Order Freq.
(4.5) Single Day Max Order Freq
(5) Ward Remarks (Subfile #60.04)
      (.01) Ward Remarks
(6) Lab Processing Instructions  (Subfile #60.05)
      (.01) Lab Processing Instructions
(7) Required Comment
(500) SAMPLE WKLD CODE (Subfile #60.14)
(.01) Sample WKLD Code
(1) Sample WKLD Code #
(2) Test Multiply Factor
(310) GENERAL WARD INSTRUCTIONS (Subfile 60.08)
   (.01) General Ward Instructions
(320) REQUIRED COMMENT
(400) DATA NAME
(410) INPUT TRANSFORM
(411) DATA TYPE
(412) CULTURE ID PREFIX
(500) VERIFY WKLD CODE (Subfile 60.12)
(.01) Verify WKLD Code
(1) Verify WKLD Code #
(2) Test Multiply Factor
(3) Protect Suffix
(500.1)ACCESSION WKLD CODE (Subfile 60.13)
(.01) Accession WKLD Code
(1) Accession WKLD Code #
(2) TEST MULTIPLY FACTOR
(501) *ASK AMIS/CAP CODES
(502) DISPLAY GROUP
(503) COMBINE TEST DURING ORDER
(504) CIS TEST CODE
(505) SITE NOTES DATE (Subfile 60.0505)
   (.01) SITE NOTES DATE
   (1) TEXT
```

Fields Description

(.01) NAME: This is the name of the laboratory test you are defining/editing. It has to be between 3 and 30 characters in length, and must be unique. The current version contains over 1000 entries, so it would be useful to get a printout of the file to see how the names are listed BEFORE editing or adding test names. This name is used for verification of test results and is the name displayed on the interim reports (if shorter than 20 characters). It is displayed during test ordering and accessioning. The name of the laboratory test can also be displayed by inquiry type options such as the Test Description Information [LREV] option.

Hints

• You may decide to use an abbreviated familiar name for a test in this field, such as MCV instead of MEAN CORPUSCULAR VOLUME.

• The importance of using the sort and print options of VA FileMan to help you organize the information in this file CANNOT be stressed enough! (There are a lot of tests in this file and lots of fields for each test!) Use these lists to keep track of what you have edited, changed, or added, and always remember to include the date! Give copies of sorted groups of information (test name, reference ranges, units, type of collection sample and ward instructions, for example) to the people in the lab so they can verify that the correct data has been entered. Update and reprint the listings regularly, so that you will always have a current copy to use for reference. If you need help with using FileManager to print these lists, ask your Site Manager or contact your regional ISC. You can also use the printouts as a sort of check list to make sure you do not have any conflicting field entries. (Refer to the earlier part of this chapter for instructions on how to use the system option known as Check files for inconsistencies to help you with this.)

• Some of the more basic conflicts you should check for are:

◦ All tests to be placed on a routine phlebotomy collection list should have a Lab Collection Sample entry.

◦ All single, **CH** subscripted tests type OUTPUT or BOTH should have a Data Name and Site/Specimen entry.

◦ All panel type tests should have at least one Lab Tests To Be Included entry.

◦ All tests must have a Print Name entry.

◦ The number of Collection Sample entries should match the number of Site /Specimen entries.
Example: A test has two site/specimen types defined, both serum and plasma, then the test should also have two collection sample names defined, BLOOD (red top) and BLOOD (green top), or some other collection tube yielding plasma. There may also be times when one site specimen (plasma) relates to several acceptable collection samples.

• Should there be a test that your lab will no longer be using, or that came with the exported version of File #60 and you have chosen not to use, you will be able to deactivate the test name by prefixing the existing name with **zz-** as well as specifying the type of NEITHER for that test. Remember, it is a big "NO-NO" to delete any of the test names from this file!

◦ The prefix of **zz-** is chosen for the fact that it is at the end of the alphabet (will appear at the end of the list of the 1000 or so test names in the file) and also because there are few valid test names performed in the lab which begin with the letter **Z** (like Zinc).

◦ Remember, if you **zz** tests in File #60 and those tests have had previous results stored under their names, adding **zz** can make it very difficult for users to look up old results and test descriptions information. When old results are displayed, the **zz** will print in front of the test name. This looks strange and causes confusion for some users. It may be more efficient to change the name to something like SEROTONIN (BEFORE 1/20/90) instead of ZZSEROTONIN.

(1) TEST COST: This field allows for the entry of a cost of the particular test, which may be used by local software for cost accounting calculations and reports. Currently, this field is not used in any available lab package software program.

NOTE: This field will be superseded by the cost field in WKLD CODE file (#64). This field is still available for local use.

(2) SYNONYM (Subfile): This multiple field allows entry of additional names for each test name listed above (add new entry without asking). These synonyms may be alternate names, abbreviations, common misspellings of the test, etc. Each synonym must be 1-60 characters long, and unique - that is, a synonym cannot also be the name of another test. For example, if the test name is "HGB," you could have HEMOGLOBIN and HB as synonyms. However, HEMOGLOBIN and HB could not also be test **names** for different entries in the file. Be sure to list any synonyms

which are most commonly used at your site, especially if you are going to implement ward order entry functions. There s no such thing as too many synonyms.

(.01) Synonym: This is another name for the test. It may be locally preferred name, or a common misspelling.

Hints

• You can use the synonym field to display a series of alternate test names and thus guide the person placing the orders to the specific test(s) they should be ordering. You could use the same idea to give similar synonyms beginning with 24hr.- (i.e., 24hr.-test name) to all the 24 hour urine tests performed by the lab. Then no matter what the test name in File #60 is for the given test, all of the 24 hour possibilities will appear. Be sure to list every kind of synonym you can think up for each test in this field. It will help you tremendously in the long run, especially if you are implementing ward order entry functions right away. Include common misspellings, nicknames, abbreviations, etc. (Sad, but true - a lot of lab test names are hard to spell.)

• Adding a space after the synonym name can be a useful technique

◦ It can force a very short synonym to appear at the top of the lookups that match. If you want CL to appear first when used as a synonym for Chloride, enter it as CL<Space>. Otherwise, all the other tests in File #60 that have test names that start with CL will appear before CL.

◦ Since synonyms must be unique, if you want to use the same synonym for more than one test, you could enter them as :

CREAT
CREAT**<Space>**
CREAT**<Space><Space>**
etc. These will each appear on the screen as CREAT.

NOTE: However, this practice should be discouraged as it can be confusing for the person ordering the test.

(3) TYPE: The entry in this field allows a selection of how each test is orderable and displayable by the system.

Type INPUT indicates that the test can be ordered, but the answer or result will not be displayed. An example of this type is a request for a crossmatch.

Type OUTPUT indicates that the test and results can be displayed, but not ordered by itself. An example of this type would be any of the individual tests which make up a Urinalysis or CBC panel.

Tests which are both orderable and displayable are designated as type BOTH. Type BOTH tests will make up the majority of the tests you will be using.

The fourth type of NEITHER indicates that the test cannot be ordered or displayed. The most common use for this type is to deactivate or lock out tests which would not be available for ordering or displaying. For example, if there are test names in the file which are no longer used, or were exported with the lab package but not used in your lab, you can ignore the tests by changing the Type field entries to NEITHER. This allows you to avoid causing possible file pointer problems which might occur if you delete the unwanted entries. If you discontinue a test and change to type =NEITHER, users will not be able to lookup results. Remember, deleting presupplied entries in any of the package files is not recommended

Hints

• Tests within a panel may be either type BOTH or type OUTPUT. They do not all have to be type OUTPUT. If, however, the individual tests within a panel are not orderable alone, they should be designated type OUTPUT. Keep in mind that any tests of the type INPUT will not be selectable in the interim reports option Interim reports for selected tests as ordered [LRRSP]. Tests of the type NEITHER can be created as phantom or dummy tests to be used ONLY for defining the order in which the individual tests in the dummy panel will be built onto a load or work list profile.

• When using the type NEITHER to ignore test names, keep in mind that certain levels of security access to lab options can override these type designations. Users who hold both the LRLAB and LRSUPER security keys will be able to order tests designated OUTPUT and also will be able to add these types of tests to accessions which already exist. Also note that if a test designated as NEITHER or OUTPUT is listed as a numbered choice in an accession test group, it can be ordered and/or accessioned regardless of the type of lab security keys held by the ordering person. (Refer to the description of ACCESSION TEST GROUP file (#62.6) in this chapter.)

(4) SUBSCRIPT: The entry in this field indicates the way the system will handle and store the data which is usually input for this test. The entry points to a particular field in the LAB DATA file (#63). In most cases, the **CH** (for CHEM, HEM, TOX, RIA, SER, etc.) subscript will be the entry here. For micro tests, the entry would be **MI**, for Blood Bank tests, the entry would be **BB**, etc. With few exceptions, all non micro, non blood bank, and non anatomic path tests are in the **CH** subscript.

(5) LOCATION (DATA NAME): This field should NOT be edited, as it is triggered (filled in automatically by the system) when an entry is made in the Data name field for each test. This field points to the unique subfield in the LAB DATA file (#63) which defines the type of input for results and stores the results for each test.
All tests which have a site/specimen entered (i.e., all tests which are type BOTH or OUTPUT and therefore, will have results entered) MUST have a location (data name). See the Data name field at the end of this file. You will only see this prompt if you have @ access to VA FileManager but the contents of this field do display when the inquire function of FileManager is used.

(6) ACCESSION AREA (Subfile): This is a multiple field, that allows the assignment of individual tests to an accession area within one or more divisions (also called institutions). All of the subfields under Accession area repeat or loop back through the same sequence for each different accession area entered for the test. If you edit any of these entries with VA FileManager at a later date, only the LAST accession area name entered will appear. To get a complete listing of the accession area entries in the field, enter a (**?**).

Each accession area defined will contain the following information (subfield entries for each Accession area field entry):

> **(.01) Institution:** This is the division of the medical center where this test is performed. It points to entries in the INSTITUTION file (#4). If a test can be performed at more than one institution/division, each institution MUST be entered in this subfield. If the test belongs to a panel which has no accession area assigned, the test will be included only if the panel test is ordered from the same institution as the individual test.
>
> **(1) Accession area:** This is the particular lab department or area which the test is assigned to for completion and verification. Each test can belong to only ONE accession area. This entry points to valid entries in the ACCESSION file (#68) so any accession areas entered here must first be defined in File #68. If the test you are editing is the name of a panel or profile, then all tests on that panel or profile will be assigned to this accession area. If some of the tests on a given panel or profile belong to other accession areas, leave this field blank.

The tests belonging to the other areas will then be assigned to the appropriate area, based on how the Accession area field is defined for their individual entries in this file.

Example: A Lipid Profile panel pulls tests from three different accession areas. The Accession area field for the test named Lipid Profile would be left blank, and the tests would default to their respective accession areas.

Hints

• If the test (single test) will be used in more than one area of the lab (example: the test Volume used in both a 24-hour urine panel (UR accession area) and a fluid chemistry panel (CH accession area), leave this field BLANK. The test will be pulled onto the appropriate panel as defined by the accession area field entry for the panel test name. (In the example above, the PANEL name Fluid chemistry panel would have an entry of Hematology in the accession area field.)

• If the tests to be included on a certain panel test will be pulled from different accession areas, then leave this field blank for the PANEL name. Sort of opposite of the circumstances listed above.

Example: This situation might be a Post Transfusion Panel which includes tests from hematology, chemistry, urinalysis, and immunology accession areas, or a Creatinine Clearance which includes tests from chemistry and urinalysis (or urine chemistry) accession areas.

(7) UNIQUE ACCESSION #: If this field is set to "YES", this particular test will always receive its own separate accession number whenever it is ordered, regardless of the minimum volume required to perform the test or any combination of other tests being ordered at the same time. Normally, if a user orders a series of tests at the same time which are all performed on the same specimen type and assigned to the same accession area, they will be given the same common accession number, based on the minimum volume required for each test and the maximum volume of the collection sample specified. If, however, one wishes to assign a separate number for a specific test (for example, for a difference in specimen handling or processing for that test), setting the field to "YES" allows this.

Example: The test Fibrinogen may be performed from the same blue top tube which also has a PT and PTT ordered. The coagulation department wants to have the Fibrinogen have a separate accession number, since that test must be handled differently in lab procedures. The entry for Unique accession # for the test name Fibrinogen would be "YES".

(8) UNIQUE COLLECTION SAMPLE: If the test has ONLY ONE type of sample for which it is appropriate, entering "YES" in this field will not allow the entry of any other type of collection sample when ordering or accessioning the test, and the system will not prompt users ordering the test with the question `Is this sample the correct one?  Y//`

Example: Tests for which this field should be set to "YES" (have unique collection samples) are Urinalysis (always done on urine), Sperm count (always performed on semen), or Arterial blood gases (always performed on arterial blood). These examples may not apply at every facility.

(9) LAB COLLECTION SAMPLE: If the test may be ordered for **routine** phlebotomy collection by the lab, the **single** type of collection sample which would be collected by the phlebotomist should be entered here. By leaving the field blank, you are eliminating this test from the possible choices

available to ward personnel who are using the option "Lab test order (B)lood orders for lab draw" [LROW] or the "Fast lab test order (ROUTINE)" [LROW ROUTINE] option. The ward users will not be able to order any of the tests which do not have an entry in this field. This entry points to valid entries in the COLLECTION SAMPLE file (#62), so the collection sample name entered here must first be defined in File #62.

Example: The test **Cholesterol** may be ordered for routine collection. Enter the collection sample name BLOOD red top (or whatever sample is appropriate in this field). If the test CANNOT be ordered for routine phlebotomy collection (i.e., urine, spinal fluid), leave this field blank.

Hints

• You can use this field to manipulate the choices available to the user. Discrete tests such as Potassium, can be set up as a panel with a single entry in the FIELD:LAB TESTS INCLUDED IN PANEL of the same test name which is pulled onto the Chem 7 panel (K+, for example). The panel test name of Potassium could then be assigned a different type of collection sample, lab collection sample, or even be assigned to another accession area. This method could also be used to pull the test Urine creat (random) to the accession area Urinalysis and have creatinines ordered on any other types of samples pull onto load or work lists in the Chemistry accession area.

Assign them easily identifiable names or synonyms and when the person placing the order chooses the set up panel name, the corresponding tests should be pulled to the appropriate accession area. Using these types of methods to limit, predefine, or otherwise manipulate the test name choices available to persons placing orders outside of the lab is also vital in the success of your ward order entry system. (And it makes life a lot easier for the lab, too.)

• The entries are cross indexed so that you can enter the container type in this field directly. So instead of entering Blood and than having to select one, enter RED or LAVENDER. It is much faster.

(10) REQUIRED TEST: If this field is set to "YES" and a result is not entered for the test, the system will roll over the test accession number to the next day. If a required test is not verified, a pending default answer will be entered in the patient results LAB DATA file (#63).

Example 1: On a routine run of your multichannel chemistry analyzer, one of the channels goes out. You want to send out the batch of test results you **do** have from the other channels first, and trouble shoot the instrument later. If you have specified that channel test as a required test, you will be able to verify the batch of results with that channel missing. The missing value will be stuffed with a result of pending when the results are verified and available to the wards on the interim reports, indicating to them that the results of that one missing test are forthcoming. If the channel's test has NOT been defined as a required test, only the tests with results will show up on the interim report, and no reference is made to the missing test.

Example 2: You have a test named Electrolytes, which is made up of sodium, potassium, chloride, and CO_2. The first three tests are defined as Required, the last test - CO_2- is not. The potassium channel on the instrument goes out and you verify the remaining results for a batch of electrolytes. The ward would see the following results:

SODIUM	134
POTASSIUM	pending
CHLORIDE	99

CO_2 27

and would know that the potassium result will be available later. If the CO_2 channel is the only channel that goes out during a run and you verify the remaining results for another batch of electrolytes, the ward would see the following report:

SODIUM 129 POTASSIUM 3.7 CHLORIDE 101

The test name CO_2 does not appear and there is no pending result. As a general rule of thumb, all tests which have results entered or reported most of the time should be designated as required tests. Tests which are less frequently reported (i.e., urine microscopic tests, red cell and white cell morphologies, etc.) should not be required tests, unless you want them reported as pending when results are not entered and/or verified.

Hint

• Avoid making individual tests within a panel required if there is a good chance that you may not be entering a result for that test each and every time the panel test is performed. Examples include most of the single tests making up the microscopic portion of a Urinalysis or the tests which are part of a Differential and morphology (with the possible exception of segs or lymphs). If you do not want any of the tests in a certain panel to be required, you can make the panel name a required test. This will allow the panel test to be rolled over if for some reason it is overlooked or missed (i.e., no results have been entered at all for any of the tests in the panel and are, therefore, not verified).

(13) FIELD: This is the Data Dictionary field in LAB DATA file (#63) - Do Not Edit.

(14) PROCEDURE (SNOMED): This field points to entries in the PROCEDURE FIELD file (#61.5) which lists the specific SNOMED code for the test. It is not a required field. This field could eventually be used for sorting and searching test name entries based on the SNOMED code.

(15) *QUICK INDEX: This field is no longer used, and will be deleted after this version.

(16) EXTRA LABELS: This field allows you to specify the number of accession labels the system will generate each time the test is accessioned in addition to the number of labels normally printed. (The normal number of labels is based on the minimum volume required to perform the test and the maximum volume defined for the type of collection sample specified for that test.) Indicate the number of extra labels by entering the appropriate number (l for one extra label, 2 for two extra labels, etc.,). If you do not want any labels to print when the test is ordered, enter a -1 to suppress the label.

(17) HIGHEST URGENCY ALLOWED: Enter the highest ranking urgency or priority for which this test may be ordered. The number assigned to each urgency and the name of the urgency may be adjusted to fit your hospital's needs, by editing the URGENCY file. See the URGENCY STATUS file section in this chapter for more information.

(18) FORCED URGENCY: Enter the urgency which will be assigned to this test as a default if no other urgency is specified when the test is ordered.

Example: You might choose to have a default urgency of ROUTINE for the test serum iron or a default urgency of ASAP for arterial blood gases.

During multipurpose accessioning, the urgency prompt will not appear after you are asked for additional tests, for those tests having a forced urgency.

The urgency entered in this field will be the ONLY urgency displayed as a choice when the test is ordered using the Lab test order [LROW] option, and will in effect force the urgency on this particular test when ordered outside the lab.

(51) PRINT NAME: This field must be filled in with a one to seven character name of the test to be used as a default name on the cumulative reports (unless otherwise specified in the LAB REPORTS file (#64.5) - consult that file in this chapter and the "Reports" chapter for more specific information). The print name prints on the interim reports if the test name (first field of LABORATORY TEST file (#60)) is greater than 20 characters in length. The print name also appears on the accession labels.

(52) RESERVED: This is a free text field that is reserved for future use. Do Not Edit.

(53) PRINT CODE: Do Not Edit this field unless you are familiar with MUMPS code! If you are not knowledgeable in MUMPS, ask your site manager for help if you wish to enter print codes for your lab tests. The string of MUMPS code entered here can be used to manipulate the display format of result values for this test. It is usually a $J statement. It may be used to justify a decimal point to the right or left of a numerical result. Editing this field and your reasons for doing so should be discussed with your Site Manager or regional ISC contact person BEFORE attempting to add to or change existing print codes.

If a test has been placed on a major/minor header for cumulative reporting and this field is edited after being placed on the header, the print code will not be updated in the LAB REPORTS file (#64.5). You must re-enter the test in File #64.5 to trigger the print code update.

If a test using a print code falls on a miscellaneous page of the cumulative report, the print code is not checked and will not expand correctly. Only the stored internal entry from LAB DATA file (#63) will be printed.

Hint

• This field allows you to enter MUMPS code to expand the test result which the tech enters.

Example: A tech entering SC for the test Hemoglobin electrophoresis into a form which will be recognizable to persons looking at the result (i.e., Sickle Cell C Disease). By entering the print code:

$J($S(X="SC":"Sickle Cell C Disease",1:X),LRCW)
the SC entered by the lab would print as Sickle Cell C Disease on the patient reports (both the interim and the cumulative, provided that the SUBFIELD:TEST PRINT CODE for this test in the LAB REPORT file has not been entered with any other code).

(54) PRETTY PRINT ENTRY: This field and the next field are used by most microbiology tests and tests using special display formats (or pretty prints). Their function is to allow the display of test results in a different format than is normally generated for the test on the report Cumulative

report for selected tests [LRGEN]. This field should NOT be edited or changed except by your Site Manager. It is the entry point or line tag of a called routine to print a report in a particular format.

NOTE: The only imported entry point is EN - which is for Microbiology Tests - other Entry Points should NOT be used.

(55) PRETTY PRINT ROUTINE: See the explanation for the Pretty print entry field, above. This is the name or the routine which has the MUMPS code to output the report in the desired format.

NOTE: The Pretty Print routine is ignored if there are more than 18 tests, the printout will revert to the Interim Report style. The only exported routine is LRMIPC, which is used for Microbiology tests. This is a hard coded routine which must be changed by a programmer. Sites can have customize routines.

(56) PRINT ORDER: This field is used to sequence the display of tests on the Interim Report. You may use this to make the individual tests included in panels or profiles appear in a certain sequence or order when they are printed out on the Interim Reports. You do not need to define a print order for every test in any given accession area, but it is suggested that you define orders for the most common tests. The tests which are not assigned a print order will default to the sequence of the internal number of their corresponding sub-fields in the LAB DATA file (#63), and will be displayed before tests having a defined print order.

It is suggested that you obtain a FileManager printout of the LABORATORY TEST file (#60), sorted by accession area, and within accession area sorted by print order. Assign the print orders in the sequence you wish the tests to be displayed. Be careful not to assign two different test in the same accession area the same print order number! If this happens, the test with the lowest internal entry number in File #63 will be the only one that prints! The print orders can be assigned from the lowest number (.001) to the highest number (999.999) at any time. In other words, you may assign the number 35 to one test before you assign the number 15.1 to another.

Using the CBC as an example: Within the accession area, Hematology, you want the test results for a CBC to show up first on the interim report. Within the CBC, you want the individual test results to be displayed in the following order: WBC, RBC, HGB, HCT, MCV, MCH, and MCHC. You would assign the print orders in the following manner:

CBC	print order	=	**1**
WBC	print order	=	**1.1**
RBC	print order	=	**1.2**
HGB	print order	=	**1.3**
HCT	print order	=	**1.4**
MCV	print order	=	**1.5**
MCH	print order	=	**1.6**
MCHC	print order	=	**1.7**

Any other hematology tests would have to be assigned a print order other than the ones you have already assigned above. Another example: You have defined the print orders for CBC (above) and

now have purchased a new hematology instrument which also measures RDW. You want to insert the RDW test so it will display on the interim report between HCT and MCV. Assign the RDW test a print order of 1.41, and you will have adjusted your CBC display:

CBC	print order =	**1**
WBC	print order =	**1.1**
RBC	print order =	**1.2**
HGB	print order =	**1.3**
HCT	print order =	**1.4**
RDW	**print order**	**= 1.41**
MCV	print order =	**1.5**
MCH	print order =	**1.6**
MCHC	print order =	**1.7**

(98) EDIT CODE: This field is associated with Microbiology (MI subscripted) tests and Blood Bank subscripted tests. It points to the EXECUTE CODE file (#62.07). The execute code will define which microbiology fields will be prompted to the user for result entry and editing. If an entry already exists in this field, leave it there unless you are changing the subscript of this test from MI to CH or are creating another MI subscripted test in the file. The EXECUTE CODE file (#62.07) in effect sets up a MUMPS DR string for editing/inputting data.

(99.1) *BATCH DATA CODE: This field is no longer used, and will be deleted after this version.

(99.2) EXECUTE ON DATA REVIEW: This field points to the EXECUTE CODE file (#62.07). The code entered (generally some type of calculation) will be run (and the result calculated and displayed) when the test is reviewed.

(100) SITE/SPECIMEN (Subfile): This field designates the type of specimen(s) for which reference ranges, units, etc., will be established. The subfields allow MUMPS code to be used to set up reference ranges, based on sex, age, etc.

All single tests which have a Data name (pointing to a specific subfield in the LAB DATA file (#63)) will have a site/specimen. Each test may have more than one site/specimen defined, as this is a multiple field. All of the subfields under Site/Specimen repeat or loop back through the same sequence for each different type of site/specimen entered for the test. If you edit any of these entries with VA FileManager at a later date, only the LAST site/specimen name entered will appear. To get a complete listing of the specimen entries in this field, enter a ? mark.

Panels or profiles do not have site/specimens entered, since these will have already been designated under the individual test names. This field points to valid entries in the TOPOGRAPHY FIELD file (#61), so the site/specimen name(s) entered here must first be defined in File #61. The data entered in these fields are used during test data display and during verification to indicate elevated or critical levels to the user. Each site/specimen defined will contain the following information (subfield entries for each Site/specimen field entry):

(.01) Site/specimen: This is the name of the site/specimen as entered in the TOPOGRAPHY FIELD file (#61).

1. Do not put reference values in if the test is likely to have changing values (i.e., Send-out tests). Instead, create a canned comment using the LAB DESCRIPTION file (#62.5) and enter the comment in the comment field. This is especially useful for Send out tests as you can phrase

the comment to include the name of the test performing laboratory (e.g., XYZ lab reference range 1-3 ug/ml.)

2. The other approach is to create a new test in the LABORATORY TEST file (#60) with a new data name in the LAB DATA file (#63) e.g., old test XYZ (date name XYZ) with reference range of 010 ug/ml will have a name change to Test XYZ before 1-1-93 and new Test XYZ (date name XYZ 1/93) is created with a reference range of 3-13 ug/ml.

☛**WARNING:** Be careful about changing the reference values once they are entered. When any old tests done prior to the changes are viewed (either Interim or Cumulative options), the new reference range will be used. There are two ways to prevent this problem.

(1) Reference low: Enter the lower limit or value for the particular test when performed on this type of specimen. Any result lower than this entry will be flagged with an L whenever the results are displayed. If the lower limit value is 50, do not enter <50, simply enter the number 50. You may enter text in this field by enclosing it in quotations. Be sure that you limit the length of any text used so it will fit into your report formats. The maximum length of this field is 30 characters, regardless of the type of entry. Examples of possible test entries would be NEG for a POS/NEG test or called lab age/sex/wt dependent for a test that has reference ranges dependent on sex/age/weight. You can also enter a line of MUMPS Code to define sex or age based on reference range.

Example: $S(SEX=M: 52, 1:47)

(2) Reference high: Enter the upper limit or value for the particular test when performed on this type of specimen. Any result higher than this entry will be flagged with an H whenever the results are displayed. You may also use text in this field by enclosing it in quotations, again making sure the text length will fit on your report formats. The maximum length of this field is 30 characters, regardless of the type of entry.

(3) Critical low: Enter the low value for this test which designates a panic value or life threatening result which would need to be brought to the attention of the technologist, supervisor, physician, and/or ward personnel. When a test value falls below the limit set here, the system responds both visually (with a <CRITICAL> flag on the screen) and audibly (with a beep when the result displays on the screen) during manual entry of the results. When critical low values are transmitted from an automated instrument being run on line, the review function will flag that value as being critically low and require that some additional steps be taken to verify the critically flagged results. Any value which is flagged as critically low (or high) will be available on a specialized report, Search for critical value flagged tests [LRSORC], which is exported as part of the Supervisor menu. This critical report includes the patient's name, location, critical result, test name, and accession number associated with that value.

Critical low values will be flagged with an * as well as a corresponding L whenever the results are displayed. The warning will also be display in reverse video mode.

(4) Critical high: Enter the high value for this test, which designates a panic value result needing confirmation or additional review before the verification and release of the result to the physician. All information found above holds true for critical high values also, except that flags occur when the test result is higher than the limit set here.

Critical high values will be flagged with an * as well as a corresponding H whenever the results are displayed. The warning will also be display in reverse video mode.

NOTE: The upper and lower limits of the above four subfields are not inclusive, and test results equal to the values entered will not be flagged as high or low. For example, if the value entered for critical low for a serum potassium is 3.0, a potassium result of 2.9 will be flagged as a critically low result. A potassium result of 3.0 will not flag as critically low. Only numeric values can be evaluated for critical flags. Results such as Moderate or Negative will not flag.

(5.5) Interpretation (Subfile): This is a word processing field which allows you to enter a comment or other remarks pertinent to the test as it is performed on this specific site/specimen, remarks may be edited and formatted with the FileMan text editor.

Hints

• You can use this word processing field to notify the wards of an upcoming change in procedure or methodology which might affect the reference range, therapeutic values, or units of measurement of a specific test, or provide information on how to interpret test results (if the patient happens to be on certain types of medication or is a smoker, for example).

• Some examples might be:

Reference ranges for this test have not been established.
Test results are not valid if patient is on antibiotic therapy.
Results vary with age, sex and diet.
Effective June 1st, the reference range will be 10-30 mg/dL.
Effective June 1st, this test will be available on a WEEKLY basis ONLY.
CPK values >500 should be followed up with cardiac isoenzymes.

• These comments may also be added to the General Ward Instructions field, if appropriate. The main benefit of adding these remarks to the interpretation field is that they will be displayed when the physicians review the patient results using the Interim Report options. They may never get to see the comments if they were only entered in the General Ward Instructions field, since they may or may not be ordering tests themselves. You can be sure, however, that they will be seeing the patient results!

(.01) Interpretation: Enter any remark to accompany EVERY test result when reviewed with the Interim Report options. The remark will not print on the Cumulative report.

(6) Units: This field designates the units of measurement for the test (mg/dL, I.U., seconds, etc.,). The field length is defined as 1-10 characters.

(7) Type of delta check: This field points to entries in the DELTA CHECKS file (#62.1), which consists of various MUMPS coded routines designed to calculate, sum, skip, or otherwise manipulate the manner in which test results are entered into the system. Delta checks are generally used to compare a current test value with a previous result for the same test. However, by pointing to the DELTA CHECK file routines, it is possible to use delta checks as a means of range comparison and on line calculation of test results, which saves both time and keystrokes. Two of the delta checks most commonly used and entered in this field are ABS VALUE (which compares the absolute numerical value of the current result with that of an earlier result) and PERCENT (which performs the same type of numerical comparison, only based upon a percentage of the current test value). An example follows the next field description below.

Hint

• There are a number of different types of delta check execute codes which may be set up by entering the appropriate choices in these fields. One example is the delta check which allows the

system to keep track of the number of cells you count as a part of a differential and check to see that they add up to 100 (the system will warn you if they do not with a beep and the prompt CELLS DO NOT ADD TO 100. See the description for the DELTA CHECK file (#62.1) in this chapter for more information.

(8) Delta value: This field contains the numerical value you have chosen to use with the type of delta check specified in the above field, either ABS VALUE or PERCENT.

Samples which produce results outside of defined delta check ranges are appropriately flagged as such, both visually and audibly, and require that additional steps be taken to verify the results prior to release to the physician, in much the same way that critical values are. A listing of other types of delta checks available in the system can be found in the DELTA CHECKS file (#62.1).

Example 1: Your chemistry lab supervisor wishes to be made aware of any BUN test values on any non renal patients who are not numerically close to the previous set of BUN values, plus or minus 10 mg/dL. This can be done as a check to make sure that the proper patient identification of the specimen has occurred, since BUN values rarely deviate widely from what a given patient usually runs from day to day. In order to put the proper delta check in place, you would enter ABS VALUE in the Type of delta check field for the test name BUN, and then enter the number 10 in the Delta value field for the same test. This tells the system to check a patient's current BUN result and determine if it is within (+/-) 10 mg/dL of the patient s previous BUN result. If the current value is 13 mg/dL, and the last value was 20 mg/dL, then the result is within limits and has passed the delta check. If the previous value had been 40 mg/dL, the delta check would have flagged the patient's result with <DELTA CHECK>, beeped, and alerted the technologist to the discrepancy.

NOTE: Previous value must be within the days back for delta checks specification in LABORATORY SITE file (#69.9), Day Back for Delta Check field (#20).

Example 2: Your hematology department wants to be made aware of any patient's Platelet count which has increased or decreased more than 15 percent from the last Platelet count value. Enter PERCENT in the Type of delta check field for the test name Platelet count, and then enter the number **15** in the count against his previous platelet count and determine if the difference is within (+/-) 15%. If the result does not fall within this range, it will be flagged as described earlier.

(9) Default value: If a particular test has the same answer most of the time (say, greater than 80% of the time), entering that value in this field will create a default answer or prompt. This prompt will allow the tech to enter the common answer by simply hitting the return key when entering, editing, or verifying results.

Example: A VDRL result is non reactive better than 80% of the time. These default answers will end up saving lots of time when used with appropriate types of tests.

(9.2) Therapeutic low: Enter the lower limit value which represents the lower therapeutic range for drugs and other substances used for treatment which normally do not occur in the body and are measured by the lab test. Such tests could be any therapeutic drugs (lithium

aminoglycosides, dilantin, heparin, insulin, digoxin, etc.,). You may also use text in this field if surrounded by quotes.

(9.3) Therapeutic high: Enter the upper limit value (or text) which represents the upper end of the therapeutic range for any of the same types of substances listed above.

> **NOTE:** If both normal (reference) ranges and therapeutic ranges are defined for a test, the therapeutic range will print on the cumulative reports. In cases where a reference range is generally not considered to be clinically significant (e.g., lithium levels), enter only the therapeutic range associated with the test.

(10) *AMIS/RCS 14-4 (Subfile): This field is no longer used, and will be deleted after this version.

(.01) *AMIS/RCS 14-4: This field is no longer used, and will be deleted after this version.

(20) FOREIGN COMPUTER SYSTEM (Subfile): This is multiple field is use by sites that have a foreign computer system hooked to DHCP. Since most sites will not use these fields, they will not be discussed.

(110) GENERAL PROCESSING INST. (Subfile): This is a word processing field which you may use to include general instructions about processing this particular type of test. This set of instructions will appear to the person who accessions the specimen in the lab. These instructions apply to the handling or processing of the test, **regardless** of the type of collection sample. (e.g., Separate and freeze immediately or Place on ice and deliver to the chemistry stat lab.)

(200) LAB TEST INCLUDED IN PANEL (Subfile): This is a multiple field into which you place the name(s) of any tests which belong in the panel you are defining. This field is used ONLY when you are creating, editing, or defining a panel or profile test (e.g., Chem 7, SMAC, CBC, etc,.). Leave this field blank for any individual or single tests! This field points back to other entries in the (LABORATORY TEST file (#60).

(.001)Number: You will be prompted to enter a number for each test name included in the panel. This number determines the order in which the tests are displayed during data entry on a load or work list that you have specified to Expand panels on print. (See the Expand panels on print field in LOAD/WORK LIST file (#68.2), in this chapter.)

(.01) Lab Test: Before you can add tests to a panel, they must first be defined as single tests!! In other words, you must define the tests WBC, RBC, HGB, HCT, MCV, MCH, and MCHC first, and then add them to the panel name CBC.

(.02) AP Multiply Factor: For workload if procedure is counted more than once the number of times counted is entered here. Used only for cytology workload and labels. You must type a number between 1 and 99.0 Decimal Digits.

(300) COLLECTION SAMPLE (Subfile): This multiple field designates the type(s) of collection sample(s) for which minimum volumes, containers, etc., will be established. All of the subfields under Collection sample repeat or loop back through the same sequence for each different type of collection sample entered for the test. When editing this field with VA FileManager at a later date, only the LAST collection sample name entered will appear. Use the "?" mark to get a full listing of the entries in the field.

All panel or profile type tests, and tests of type INPUT or BOTH will have at least one collection sample (i.e., the test CBC will have a collection sample of BLOOD lavender defined, but the individual tests such as WBC, RBC, etc., will not). The general rule of thumb is if you can order the test, you need to define a collection sample for it. This field points to valid entries in the COLLECTION SAMPLE file (#62). So the collection sample(s) entered here must first be defined in File #62.

Hint
• If you have entered "YES" in the previous field Unique collection sample, then you will be allowed to enter only one collection sample name here. Each collection sample defined will contain the following information (subfield entries for each Collection sample field entry).

(.01) Collection sample: This is the name of the collection sample, as entered in COLLECTION SAMPLE file (#62). If more than one collection sample is entered, the first one will be the default sample. The first collection sample name which is entered in this field will be the sample name which appears to the person placing the order or accessioning the test, if multiple collection sample types are allowed for a given test.

Example: If the test Urine Lytes can be performed on both URINE (random) and URINE (24hrs) collection samples, and have been entered in that order in this field, the ordering/accessioning person will see the prompt: "Is URINE (random) the correct sample to collect? Y//". The most commonly submitted sample type should be entered first in this field. If you wish, you may rearrange the order of the sample names by first deleting them and then adding them back to the field. It is recommended that you define the order of the samples included here (rearranging them if necessary) before going live!

(1) Form name/number: This is a free text field in which you may state the VA form number, fee basis form name, etc., required when requesting this test. You might want to use this mainly for your send out tests. The information filled in here will appear on the Test Description Information [LREV] option as well.

(2) Container: This field is triggered or filled in by the system if there is a container type defined for this collection sample entry in COLLECTION SAMPLE file (#62). If not, you may enter a free text name here.

Hint
• If the container or type of tube is not defined for a particular collection sample entry in the COLLECTION SAMPLE file (#62), you may enter a free text descriptive name of the container to be used, up to 30 characters in length.

Examples:

COLLECTION SAMPLE:	URINE(24 hr.)
CONTAINER:	Jug w/out preservative
COLLECTION SAMPLE:	URINE(24 hr.)
CONTAINER:	Jug w/ 15ml conc. HCl
COLLECTION SAMPLE:	CSF
CONTAINER:	Sterile screw-top tube (#1)
COLLECTION SAMPLE:	URINE(random)
CONTAINER:	Sterile cup wrapped w/foil

This container description you have entered will be associated with the collection sample only when this particular test is ordered (i.e., the container Sterile cup wrapped w/foil listed above will apply to the random urine sample submitted for the test Porphyrin screen only). The container information will also appear on the Test Description Information [LREV] option.

(3) Min. vol. (in mls.): Use this field to indicate the minimum volume of **whole** blood which needs to be collected to perform this test if it is ordered by itself, or the minimum volume required to perform the test if it s part of a panel. The volumes you state here will be totaled by the system on the collection list and labels. The system will print the number of accession labels based on the maximum volume (volume large) you have indicated that a specific container will hold in the COLLECTION SAMPLE file (#62). You can also use this field to provide information to the wards when they use the option Test description information [LREV], as to the volume required for this test on other samples (urine, fluids).

(4) Max. order freq.: Enter a number between 1 and 120, to limit the ordering of this test to once per # of days entered within a certain time period. This entry will then force the system to remind the ordering person that this test has already been ordered and/or performed when using all Lab Test Order options. Use this field to prevent the ordering of the same test within the specified number of days ordered.

Only numeric values will be accepted. If the field already has entries, the code will convert the entries to numeric values (e.g., 1day=1 day, 2w=2 weeks, 01=1, one day=0). The code will ignore any alpha characters and use only the numeric values if the data begins with a number. If the field contains only alpha characters, the code will assume to value to be 0 (zero), and no action will take place.

Hint

• If the test is ordered and then deleted for any reason even if it was deleted before collection, the maximum order frequency warning will still display if the test is reordered.

Example: Patient was not at bedside during the morning draw. The order was canceled. Later, the Ward drew the sample. When the repeat order is entered, the maximum order frequency flag was displayed because the test had a one per day maximum order frequency.

(4.5) Single day max order freq.: Enter a number specifying the maximum number of times a test can be ordered in a single day.

(5) Ward remarks (Subfile): This is a word processing field in which you may insert instructional text for the ward personnel regarding the specific collection sample that is being edited. (May contain instructions on how to collect the sample, etc.)

> **(.01) Ward remarks:** Text to be seen by the ward each time the test is ordered for a specific collection sample.

(6) Lab processing instructions (Subfile): Another word processing field you can use to enter pertinent information about the test collected in this particular sample, which will appear to the person who accessions the test into the lab.

(7) Required comment: You may use entries in this field to **force** the ordering person to provide the information the lab needs to perform the analysis correctly on this particular type of collection sample. This field points to the EXECUTE CODE file (#62.07), where applicable comment type execute codes are defined. (These include peak/trough draw times, urine volume,

etc.) If this field has an entry, this required comment will take precedent over the required comment for the test itself.

(500) Sample WKLD Code (Subfile): If there is a particular WKLD code which is associate with the assaying of this type of specimen, enter that WKLD code here. For example spinal fluid electrophoresis, this specimen must be concentrated before the procedure can be performed.

(.01) Sample WKLD Code: If this test has a sample type which should have a specific WKLD code associated with it, enter the WKLD code here.

Example: Urine electrophoresis always has a urine protein performed. Enter the WKLD Code for that procedure here. It will only be counted when the collection sample is urine.

NOTE: This field is similar to Verify WKLD Code subfile except for the treatment of the suffix and collection sample specific.

(1) Sample WKLD Code #: This field is triggered by the sample WKLD Code and is not editable by the user.

(2) Test Multiply Factor: If this particular WKLD Code should be multiplied in order to receive proper count. Enter that number here. Type a number from 1 to 20, 0 Decimal Digits. The default is 1.

(310) GENERAL WARD INSTRUCTIONS (Subfile): This word processing field allows you to enter remarks, comments or instructions to the ward personnel regarding this test, no matter what type of site/specimen or collection sample is being used.

Example: This test is performed on Mondays, Wednesdays, and Fridays only, or Lab draw only. Call the hematology lab to schedule the test.

(.01) General ward instructions: This text is to be seen by the ward each time the test is ordered regardless of the type of collection sample.

(320) REQUIRED COMMENT: This field also points to the EXECUTE CODE file (#62.07) entries which define the specific types of required comments associated with each test.

This Required comment field differs from the previous one in that it refers to the test, not the specific collection sample. This comment is the default required comment if the selected collection sample has no entry in its required comment field.

(400) DATA NAME: This field points to a specific subfield in the LAB DATA file (#63) where the actual test results are stored for each patient. Each individual or single test of the type BOTH or OUTPUT with a subscript of CH must have an entry in LAB DATA file (#63) for it to be used functionally within the system. Panel or profile tests, being composed of individual tests CANNOT have Data name field entries since only single tests have data names. In most cases, the exported entries in the LABORATORY TEST file (#60) will have this field filled in with the corresponding Data name entry. If the field is blank, and it is not a panel or profile, you may have to look at a

listing of the file attributes (or the data dictionary) for the File (#63), field (#4) to see if an appropriate data name is there that can be used.
If you enter new test entries in LABORATORY TEST file (#60) , and there are no appropriate data names in the LAB DATA file (#63) for those new tests, it is possible to add a new data name by modifying File #63. This requires that you follow a suggested method of modification in order to avoid conflicts with any locally modified data names and any new versions of the Lab package software. (See New Data Name section of this manual).

NOTE: Only individual tests which are CH-subscripted have data names in File #63. MI and BB-subscripted tests do not have data names.

(410) INPUT TRANSFORM: Computed field - Do Not Edit.

(411) DATA TYPE: Computed field - Do Not Edit.

(412) CULTURE ID PREFIX: Used to indicate to the VITEK that this is a test to be downloaded and used to indicate a multiplier factor. This is so multiple tests can be downloaded for 1 accession.

(500) VERIFY WKLD CODE (Subfile): The Workload Codes for the test /procedure are entered here.

NOTE: All of the subfields under VERIFY WKLD CODE repeat or loop back through the same sequence for each different VERIFY WKLD code entered for the test. If you edit any of these entries with VA FileManager at a later date, only the last VERIFY WKLD code name entered will appear. To get a complete listing of the entries in the field, enter a **?** mark.

(.01) Verify WKLD code: The WKLD Codes for the test are entered here. Enter only the WKLD Code for the procedure that are done at your Medical Center for this test.

(1) Verify WKLD code #: This field contains the WKLD Codes for this test. This field is triggered by the sample WKLD Code and is not editable by the user.

(2) Test multiple factor: If this WKLD Code should be counted more than once, enter the number of times it should be counted to get the total correct workload. If the field is blank, then it will automatically be counted 1 time. Type a number from 1 to 20, 0 Decimal Digits.

NOTE: In version prior to V. 5.2, this field was named the Default "YES" field. That field is not used with V. 5.2 and greater. A different procedure is used at the time of verification.

(3) Protect suffix: If you wish to prevent the suffix from being converted to another suffix during verification enter "YES" in this field. Codes which do not have a .0000 suffix need not be protected. They are not changed during verification.

(500.1) Accession WKLD Code (subfile): The subfile holds the WKLD Codes to be credited during the accession process.

NOTE: None of the suffixes are changed in this subfile. Only those WKLD Codes found in the verification WKLD Codes subfile have the potential to have the suffix changed.

(.01) Accession WKLD Code: Enter the WKLD Code used to identify the accession workload for this test. This field can also be used for prep procedures, i.e., inoculating culture plates. This WKLD Code count will appear on the date that the specimen was accessioned into the laboratory. This field functions in the same manner as the WKLD Codes, except it does not require a completion date to be counted. For Cytology Screening Workload the appropriate WKLD Codes are entered here.

(1) Accession WKLD code #: This field contains the actual WKLD Code number. This field is triggered by the sample WKLD Code and is not able to be edited by the user.

(2) Test multiply factor: If this WKLD Code should be counted more than once, enter that number here. The default is 1. This field is identical to the multiply field in the verification WKLD Code subfile.

(501) *ASK AMIS/CAP CODES: This field is obsolete and marked for deletion

(502) DISPLAY GROUP: This field will be used with Order Entry/Results Reporting (OE/RR) module. Should your institution install OE/RR, this field will allow the grouping of certain tests together for display during ordering or results reporting. Further information will be included in the OE/RR Release Notes.

NOTE: This field points to DISPLAY GROUP file (#100.98). Your system may indicate the file does not exist. This is normal if OE/RR is not installed on your system or not turned on.

(503) COMBINE TEST DURING ORDER: This field will prevent this test from being combined with any other test during the ordering process.

Example: If Glucose is a part of the CHEM 7 panel and the user orders both tests, they will be combined if:

1) the tests are of the same sample type (e.g., Blood)
2) the two tests have the same urgency (e.g., Routine)
3) this field is set to "YES" or "NULL".

The user will be notified if two tests are combined, and the duplicate will be deleted before order numbers are assigned. If you do not want this test to be combined with any other test(s), set this field to "NO". Then the above conditions will be ignored.

NOTE: The entire process of combining of tests during ordering is controlled by a field in the LABORATORY SITE file (#69.9). The Combine Test on Order field (#602) must be set to "YES" to activate this process. The contents of this field are stored in the 17th piece of LRPARAM.

(504) CIS TEST CODE: This field is used by Clinical Information System such as those found in MICU. This field is not used with the Laboratory itself, but is a special field for interface with external system computer systems.

Example: Creating a basic atomic test.

```
Select Supervisor menu Option: LAB LIAison menu

   ANT    Add a new internal name for an antibiotic
   DATA   Add a new data name
   MOD    Modify an existing data name
          Add a new WKLD code to file
          AP Microfiche Archive
          Archive lab data ...
          Check files for inconsistencies
          Check patient and lab data cross pointers
          Diagram Menus
          Download Format for Intermec Printer
          Edit atomic tests
          Edit cosmic tests
          File list for lab
          LAB ROUTINE INTEGRITY MENU ...
          LIM workload menu ...
          Manually compile WKLD and workload counts
          OE/RR interface parameters ...
          Outline for one or more files
               Press 'RETURN' to continue, '^' to stop: <RET>
          Re-index Antimicrobial Suscept File (62.06)
          Turn on site workload statistics
          Turn on workload stats for accession area
```

```
          User selected lab test/patient list edits ...
          VA FileMan ...

Select Lab liaison menu Option: DATA  Add a new data name
This option will add a new data name to the lab package.
DATA NAME:

Add a new data name

This option will add a new data name to the lab package.
DATA NAME: SODIUM,STAT
ARE YOU ADDING SODIUM,STAT (SUBFIELD # 7000003) AS A NEW DATA NAME? NO// Y
  (YES)
Enter data type for test: (N)umeric, (S)et of Codes, or (F)ree text? N
Minimum value: 0
Maximum value: 99999
Max decimal digits: 12

'SODIUM,STAT' added as a new data name

Data Name: SODIUM,STAT    Subfield #: 7000003    Type: NUMERIC
Input Transform: S Q9="0,99999,12" D ^LRNUM
Minimum value: 0
Maximum value: 99999
Maximum # decimal digits: 12

You must now add a new test in the LABORATORY TEST file and use
SODIUM,STAT as the entry for the DATA NAME field.

Select VA FileMan Option: ENTER or Edit File Entries
INPUT TO WHAT FILE: LABORATORY TEST// <RET>
EDIT WHICH FIELD: ALL// <RET>
Select LABORATORY TEST NAME: SODIUM,STAT
  ARE YOU ADDING 'SODIUM,STAT' AS A NEW LABORATORY TEST (THE 1324TH)? Y (YES)
   LABORATORY TEST SUBSCRIPT: CH  CHEM, HEM, TOX, SER, RIA, ETC.
   LABORATORY TEST HIGHEST URGENCY ALLOWED: STAT
   LABORATORY TEST PRINT NAME: NA-STAT
   LABORATORY TEST DATA NAME: SODIUM,STAT
TEST COST: <RET>
Select SYNONYM: <RET>
TYPE: ?
     CHOOSE FROM:
       I        INPUT (CAN BE ORDERED)
       O        OUTPUT (CAN BE DISPLAYED)
       B        BOTH
       N        NEITHER
TYPE: B  BOTH
SUBSCRIPT: CHEM, HEM, TOX, SER, RIA, ETC.// <RET>
LOCATION (DATA NAME): CH;7000003;1//   (No Editing)
Select INSTITUTION: REGION 7                                        7000
  ACCESSION AREA: CH1  CHEMISTRY1
UNIQUE ACCESSION #: ?
     CHOOSE FROM:
       1        YES
       0        NO
UNIQUE ACCESSION #: <RET>

UNIQUE COLLECTION SAMPLE: ?
     CHOOSE FROM:
       0        NO
       1        YES
UNIQUE COLLECTION SAMPLE: <RET>
LAB COLLECTION SAMPLE: BLOOD
     1   BLOOD          SERUM      MARBLED TOP
```

```
     2   BLOOD          PLASMA      GRAY
     3   BLOOD          BLOOD      LAVENDER
     4   BLOOD          PLASMA      BLACK TOP
     5   BLOOD          PLASMA      BLUE
     6   BLOOD          SERUM      SPC BLUE2ML
TYPE '^' TO STOP, OR
CHOOSE 1-6: 1
REQUIRED TEST: YES
PROCEDURE (SNOMED): <RET>
*QUICK INDEX: <RET>
EXTRA LABELS: <RET>
HIGHEST URGENCY ALLOWED: STAT// <RET>
FORCED URGENCY: <RET>
PRINT NAME: NA-STAT// <RET>
Reserved: <RET>
PRINT CODE: <RET>
PRETTY PRINT ENTRY: <RET>
PRETTY PRINT ROUTINE: <RET>
PRINT ORDER: 123
EDIT CODE: <RET>
*BATCH DATA CODE: <RET>
EXECUTE ON DATA REVIEW: <RET>
Select SITE/SPECIMEN: SERUM          0X500
  ARE YOU ADDING 'SERUM' AS A NEW SITE/SPECIMEN (THE 1ST FOR THIS LABORATORY
TEST)? Y  (YES)
  REFERENCE LOW: 135
  REFERENCE HIGH: 175
  CRITICAL LOW: 120
  CRITICAL HIGH: 150
  INTERPRETATION:
  1> <RET>
  UNITS: Meq/L
  TYPE OF DELTA CHECK: <RET>
  DELTA VALUE: <RET>
  DEFAULT VALUE: <RET>
  THERAPEUTIC LOW: <RET>
  THERAPEUTIC HIGH: <RET>
  Select *AMIS/RCS 14-4: <RET>
  Select FOREIGN COMPUTER SYSTEM: <RET>
Select SITE/SPECIMEN: <RET>
GENERAL PROCESSING INST.:
  1> <RET>
Select LAB TEST: <RET>

Select COLLECTION SAMPLE: BLOOD
     1   BLOOD          SERUM      MARBLED TOP
     2   BLOOD          PLASMA      GRAY
     3   BLOOD          BLOOD      LAVENDER
     4   BLOOD          PLASMA      BLACK TOP
     5   BLOOD          PLASMA      BLUE
     6   BLOOD          SERUM      SPC BLUE2ML
TYPE '^' TO STOP, OR
CHOOSE 1-6: 1
  FORM NAME/NUMBER: <RET>
  MIN VOL (in mls.): <RET>
  MAX. ORDER FREQ.: <RET>
  SINGLE DAY MAX ORDER FREQ: <RET>
  WARD REMARKS:
  1> <RET>
  LAB PROCESSING INSTRUCTIONS :
  1> <RET>
  REQUIRED COMMENT: <RET>
  Select SAMPLE WKLD CODE: <RET>
Select COLLECTION SAMPLE: <RET>
```

```
GENERAL WARD INSTRUCTIONS:
  1> <RET>
REQUIRED COMMENT: <RET>
DATA NAME: SODIUM,STAT// <RET>
CULTURE ID PREFIX: <RET>
Select VERIFY WKLD CODE: <RET>
Select ACCESSION WKLD CODE: <RET>
*ASK AMIS/CAP CODES: <RET>
DISPLAY GROUP: <RET>
COMBINE TEST DURING ORDER: YES
CIS TEST CODE: <RET>
Select SITE NOTES DATE: 5/2/94   MAY  2, 1994
  ARE YOU ADDING 'MAY  2, 1994' AS A NEW SITE NOTES DATE (THE 1ST FOR THIS
LABORATORY TEST)? Y  (YES)
  TEXT:
  1>TEST CREATED TO ILLUSTRATE HOW TO CREATE A TEST.
  2> <RET>
EDIT Option: <RET>
```

(505) SITE NOTES DATE (Subfile): This multiple field is used to store information (site notes) that concerns a particular entry in the LABORATORY TEST file (#60).

(.01) Site Notes Date: This field contains the date of the notes.

(1) Text: This field contains the actual text of the note for this test.

TOPOGRAPHY file (#61)

The TOPOGRAPHY file (#61) contains approximately 9000 site/specimen entries as defined by the Systematized Nomenclature of Medicine (SNOMED) manual. This field, topography, is a detailed and structured system of identifying all parts of the body in anatomical terms. This file is used to define specific information on each site, specimen, or body source entry such as the SNOMED code, type of collection sample, abbreviation(s) and scientific journal reference(s).

New entries may be added to this file and careful modification of existing entries is also allowed, although not recommended unless you are familiar with the entire package. DO NOT DELETE existing entries, as this might interfere with the pointers from this file to other files. You may also add any additional abbreviations that might help your Lab s technologists use the system faster by using the names or abbreviations they are most familiar with. Any new entries should be made according to the SNOMED conventions of identifying body parts or sources by a five-digit code. (Specific information on how to use SNOMED s coding system can be obtained from a pathologist or pathology clerical person.)

<u>Field List</u>

(.01) NAME
(.07) ICD0 CODE
(2) SNOMED
(2.5) SEX SPECIFIC
(3) SYNONYMS (Subfile 61.01)
    (.01) Synonyms
(4) WEIGHT
(4.1) COLLECTION SAMPLE
(5) JOURNAL REFERENCE (Subfile 61.02)
    (.01) Title Of Article
    (1) Author(S)
    (2) Medical Journal
    (3) Volume
    (4) Starting Page
    (5) Date
    (6) List On Patient Record
(6) ABBREVIATION
(63.05) *NEGATIVE BACTERIOLOGY COMMENT

Fields Description

(.01) NAME: This is the name field of the specimen type (or body source), as in the site/specimen field of LABORATORY TEST file (#60). Must be between 2-80 characters in length. This is a required field.

(.07) ICD9 CODE: Enter the appropriate ICD9 code associated with the specimen type or body source.

(2) SNOMED CODE: Enter the appropriate SNOMED code for this specimen type; 2-7 characters long and not beginning with a T. (This code can be found in any standard SNOMED manual.) This is a required field.

(2.5) SEX SPECIFIC: Enter "M" for male or "F" for female if the specimen/source is specific for one sex only (i.e., enter "F" if the source is uterine lining.)

(3) SYNONYMS (Subfile): A multiple field required, allowing you to enter as many abbreviations, synonyms or common misspellings as needed for each topography entry (2-80 characters).

> **(.01) Synonyms:** This is a multiple field. Enter synonyms or common misspelling of the specimen.

(4) WEIGH: Answer either "YES" or "NO" depending on whether the specimen should be weighed for surgical pathology. This field is more applicable to the Anatomic Pathology module.

(5) COLLECTION SAMPLE: This field points to the COLLECTION SAMPLE file (#62) and indicates the type of sample to obtain to yield this specimen.

> **Example:** You would collect the sample BLOOD (in a red top tube) to yield the specimen SERUM. This ties the collection sample and the site/specimen together, so that whenever a user enters BLOOD, SERUM is displayed as the choice, and vice versa.

(5) JOURNAL REFERENCE: A multiple field which points to the LAB JOURNAL file (#95) and allows you to enter any journal references that apply to the specimen or source. (Again, most useful for Microbiology or Anatomic Path.)

(.01) Title of Article: Enter the title of the article itself, up to 80 characters in length.

(1) Author(S): Enter the name(s) of the article s author(s), up to 80 characters in length.

(2) Medical Journal: Enter the name of the journal the article appears in, points to entries in the LAB JOURNAL file (#95).

(3) Volume: Enter the one to six character volume number of the journal.

(4) Starting page: Enter the first page of the article, up to six characters.

(5) Date: Enter the date the article was published.

(6) List on patient record: If you enter "YES", the journal reference will appear on the patient's report whenever the specimen is obtained for testing.

(1) ABBREVIATION: A one to three character abbreviation for the specimen or source.

(63.05) *NEGATIVE BACTERIOLOGY COMMENT: This is a comment which facilitates the batch entry of microbiology results. The text contained in this field is the default comment for this particular specimen or body source.

NOTE: Data for this file data is exported on a global tape. If this is the first installation of Lab on your system, you must read in the global tape.

MORPHOLOGY file (#61.1)

The MORPHOLOGY file (#61.1) describes or names pathological disease processes occurring in cells, tissues, or organs of the body. Entries may be added or modified, but none of the supplied entries should be deleted. This file describes specific information about each morphology, such as SNOMED code, synonyms, short list for anatomic pathology journal reference, and abbreviation of the morphology.

Field List

(.01) NAME
(2) SNOMED CODE
(3) SYNONYMS (Subfile 61.11)
    (.01) Synonyms
(4) ON SHORT LIST
(5) JOURNAL REFERENCE (Subfile 61.12)
    (.01) Title Of Article
    (1) Author(S)
    (2) Medical Journal
    (3) Volume
    (4) Starting Page
    (5) Date
    (6) List On Patient Record
    (7) Topography Restriction (Subfile 61.13)
        (.01) Topography Restriction
(6) ABBREVIATION

NOTE: The MORPHOLOGY file (#61.1) is exported on a global tape. If this is the first installation of Lab on your system, you must read in the global tape.

Fields Description

(.01) NAME: The name of morphology. Answer must be 3-30 characters in length.

(2) SNOMED CODE: The characters following M- in the SNOMED reference book. Must be two to eight characters in length and **not** to begin M or M-.

(3) SYNONYMS (Subfile): This is a multiple field. Enter synonyms or common misspelling of this morphology.

(.01) Synonyms: Enter synonyms, abbreviations, or common misspelling of this morphology.

(4) ON SHORT LIST: If answer "YES" the entry will appear on a short list of codes generated by the search option of FileMan.

(5) JOURNAL REFERENCE: A multiple field which points to the LAB JOURNAL file (#95) and allows you to enter any journal references that apply to the specimen or source. (Again, most useful for Microbiology or Anatomic Path.)

(.01) Title of Article: Enter the title of the article itself, up to 80 characters in length.

(1) Author(S): Enter the name(s) of the article's author(s), up to 80 characters in length.

(2) Medical Journal: Enter the name of the journal the article appears in, points to entries in the LAB JOURNAL file (#95).

(3) Volume: The volume number/name that contains the article.

(4) Starting page: The first page of the article.

(5) Date: Date of article.

(6) List on patient record: If this reference is to be listed on a patient record whenever this morphology is involved, this field requires a "YES" entry.

(7) Topography restriction (Subfile): To restrict printing references for certain organ/tissues with the selected morphology enter one or more characters of the topography code. (Example for lung enter 28.) No restriction if no entry.

(.01) Topography restriction: To restrict printing references for certain organ/tissues with the selected morphology enter one or more characters of the topography code. (Example for lung enter 28.) No restriction if no entry.

(6) ABBREVIATION: This must be a one to five characters abbreviation for this morphology and will be used as a unique code for it.

ETIOLOGY FIELD file (#61.2)

Etiology is the underlying cause of a disease process and an individual's method of acquiring the disease. Entries can be added or modified in the ETIOLOGY FIELD file (#61.2), but none of the supplied entries should be deleted. The file describes specific information about each etiologic agent, such as SNOMED code, gram stain, identifier, journal reference, abbreviations, sensitivity edit template, and the optional health department report. This file is mainly used in Microbiology. Consult with the microbiology department personnel before attempting to make any changes to this file. It is extremely helpful to obtain a master listing of the existing entries and give a copy to the micro department before deciding what changes/additions need to be made. For more detailed information and helpful hints on setting up and editing this file from a micro point of view, see the Microbiology section of this manual. DO NOT DELETE any of the presupplied entries because of the possibility of breaking any pointers between this file and others.

Field List

```
(.01) NAME
(1.6) CLASS/GROUP-TRIBE/FAMILY
(2) SNOMED CODE
(3) GRAM STAIN
(3.5) *BIOCHEMICAL WORKUP (Subfile 61.23)
(.01) *Biochemical Workup
(4) IDENTIFIER
(5) JOURNAL REFERENCE (Subfile 61.21)
(.01) Title Of Article
(1) Author(S)
(2) Medical Journal
(3) Volume
(4) Starting Page
(5) Date
(6) List On Patient Record
(7) Topography Restriction (Subfile 61.24)
(.01) Topography Restriction
(6) ABBREVIATION
(7) SYNONYM (Subfile 61.22)
(.01) Synonym
(8) SUSCEPTIBILITY EDIT TEMPLATE
(9) *SENSITIVITY DISPLAY TEMPLATE
(10) HEALTH DEPT REPORT
(11) ETIOLOGY WKLD CODE (Subfile 61.211)
(.01) Etiology WKLD Code
(1) Etiology WKLD Code #
(2) Multiply By
```

NOTE: The ETIOLOGY FIELD file (#61.2) is exported on a global tape. If this is the first installation of Lab on your system, you must read in the global tape.

Field Description

(.01) NAME: A required field which is the name of the etiologic agent (e.g., bacterium, fungus, parasite, etc.,) up to 80 characters long.

(1.6) CLASS/GROUP-TRIBE/FAMILY: Enter the 1-30 character class/group or tribe/family to which the bug belongs.

(2) SNOMED CODE: This is a required field; enter two to seven character SNOMED code for the etiologic agent. The SNOMED code cannot begin with an E.

(3) GRAM STAIN: This field allows you to choose from a set of codes to enter the appropriate gram stain reaction P for gram positive, N for gram negative, and I for indeterminate.

(3.5) *BIOCHEMICAL WORKUP (Subfile): This field is no longer used and will be deleted after this version.

> **(.01) *Biochemical workup:** This field is no longer used and will be deleted after this version.

(4) IDENTIFIER: Another set of codes, to identify the type or category of bug (the etiologic agent). Choose from B (bacterium), F (fungus), P (parasite), M (mycobacterium), V (Virus), C (Chemical), D (drug), or R (rickettsiae). This field determines which types of entries are acceptable as test results.

(5) JOURNAL REFERENCE: A multiple field which points to LAB JOURNAL file (#95) which allows entry of any journal references (articles) that apply to the causative agent. (See the Journal reference field of the TOPOGRAPHY FIELD file (#61) for the same information.) Most useful for Microbiology and/or Anatomic Pathology.

> **(.01) Title Of Article:** Title of an article that discusses the name etiologic agent. Answer must be 1-80 characters in length.

(1) Authors(s): Author(s) of the named article.

(2) Medical Journal: The name of the medical journal containing the article.

(3) Volume: The volume number/name that contains the article.

(4) Starting page: The first page of the article.

(5) Date: Date of article.

(6) List on patient record: If this reference is to be listed on a patient record whenever this etiologic agent is involved, this field requires a "YES" entry.

(7) Topography restriction (Subfile 61.13): To restrict printing references for certain organ/tissues with the selected etiology enter one or more characters of the topography code. (Example for lung enter 28). No restriction if no entry. A topography restriction does not apply to microbiology reports.

(.01) Topography restriction: To restrict printing references for certain organ/tissues with the selected etiology enter one or more characters of the topography code. (Example for lung enter 28). No restriction if no entry. A topography restriction does not apply to microbiology reports.

(6) ABBREVIATION: Must be a one to five character abbreviation for this etiologic agent and will be used as a unique code for it.

(7) SYNONYM (Subfile): A multiple field. Allows entry of as many misspellings, abbreviations, or synonyms as needed.

(.01) Synonym: This field contains common misspellings, abbreviations, or synonyms of this etiologic agent.

(8) SUSCEPTIBILITIES EDIT TEMPLATE: This field determines the set of antibiotics (or other drugs) to be edited (have values entered) for this etiologic agent. It must be between 2-30 characters edit template name. If this entry is not defined, the Micro Default Template field (#203) and Micro Other Template field (#204) entry in LABORATORY SITE file (#69.9) will be used. If that is not defined, then all antibiotics will be prompted for entry/editing. It is recommended that an entry be made in File #69.9, since the addition of all new antibiotics may cause <STORE> errors at some sites.

(9) *SENSITIVITY DISPLAY TEMPLATE: No longer used. Will be deleted in the next version.

(10) HEALTH DEPT REPORT: Answer "YES" if you want the etiologic agent (if isolated) to appear on the Health Department Report.

(11) ETIOLOGY WKLD CODE (Subfile): This field contains a list of possible WKLD Codes from which a technologist may choose additional work load. If this particular isolate may require extra work in order to isolate or identify it, then list those possible WKLD Code here. The technologist will only be able to select for this list. Therefore the list should be complete.

(.01) Etiology WKLD code: Enter a WKLD Code which can be associated with the isolation and identification of this particular organism. The verifier will be able to select from these entries for additional work load. This field is used only for Microbiology workload.

(1) Etiology WKLD code #: This is a free text field. Answer must be nine characters in length.

(2) Multiply by: If this WKLD Code should be counted more than once, enter the number here. The default is "1".

FUNCTION FIELD file (#61.3)

The FUNCTION FIELD file (#61.3) defines specific information about each function, such as SNOMED code, synonyms, section, identifier, journal reference, and abbreviations. This file is used mainly in Anatomic Pathology. However, it is also used in Blood Bank for coding of antigens and antibodies. Function is a detailed list of biochemical and physiologic terms encountered in clinical medicine. These terms describe functional states, abnormalities, signs, and symptoms of disease for each organ system. Entries can be added or modified in the FUNCTION FIELD file (#61.3), but none of the supplied entries should be deleted.

Field List

(.01) NAME
(.04) CORRESPONDING ANTIGEN/ANTIBODY
(.06) COMPATIBILITY FACTOR
(2) SNOMED CODE
(2.5) SECTION
(3) SYNONYMS (Subfile 61.31)
    (.01) Synonym
(4) IDENTIFIER
(5) JOURNAL REFERENCE (Subfile 61.32)
    (.01) Title Of Article
    (1) Author(s)
    (2) Medical Journal
    (3) Volume
    (4) Starting Page
    (5) Date
    (6) List On Patient Record
    (7) Topography Restriction (Subfile 61.33)
        (.01) Topography Restriction
(6) ABBREVIATION
(7) COMMENT (Subfile 61.37)
    (.01) Comment
(500) WKLD CODE (Subfile 61.34)
    (.01) WKLD Code
    (.02) WKLD Code Number
    (.03) Multiply Factor

NOTE: The FUNCTION FIELD file (#61.3) is exported on a global tape. If this is the first installation of Lab on your system, you must read in the global tape.

Fields Description

(.01) NAME: The name of the function.

(.04) CORRESPONDING ANTIGEN/ANTIBODY: Indicate which antigen or antibody that may be known by another name.

(.06) COMPATIBILITY FACTOR: If an antigen, enter the incidence (as a decimal) in the population. If an antibody. enter the frequency (the corresponding antigen is absent in the population).

(2) SNOMED CODE: The characters following F- in the SNOMED reference book.

(2.5) SECTION: The function s area by body system.

(3) SYNONYMS (Subfile): This is a multiple field. Enter synonyms or common misspellings of this function.

(01) Synonym: Enter synonyms or common misspellings of this function.

(4) IDENTIFIER: This is a blood bank identifier.

(5) JOURNAL REFERENCE (Subfile): This is a multiple field. You may enter Journal references that apply to this function.

(.01) Title Of Article: Title of an article that discusses the named function. Answer must be 1-80 characters in length.

(1) Authors(s): Author(s) of the named article.

(2) Medical Journal: The name of the medical journal containing the article.

(3) Volume: The volume number/name that contains the article.

(4) Starting page: The first page of the article.

(5) Date: Date of article.

(6) List on patient record: If this reference is to be listed on a patient record whenever this function is involved, this field requires a “YES” entry.

(7) Topography restriction (Subfile 61.13): To restrict printing references for certain organ/tissues with the selected function enter one or more characters of the topography code. (Example for lung enter 28.) No restriction if no entry.

(.01) Topography restriction: To restrict printing references for certain organ/tissues with the selected function enter one or more characters of the topography code. (Example for lung enter 28.) No restriction if no entry.

(6) ABBREVIATION: Must be a 1-5 character abbreviation for this function and will be used as a unique code for it.

(7) COMMENT (Subfile): If there are some additional comments which should be associated with the function to assist the user.

(.01) Comment: If there are some additional comments which should be associated with the function to assist the user.

(500) WKLD CODE (Subfile): If additional workload codes should be counted every time this function is performed, enter them here..

(.01) WKLD code: Enter WKLD Code(s) associated with this entry.

(.02) WKLD code number: This field is triggered by the WKLD Code field of the WKLD Code subfield of the FUNCTION FIELD file (#61.3).

(.03) Multiple factor: Type a number between 1 and 100, 0 Decimal Digits.

DISEASE FIELD file (#61.4)

The DISEASE FIELD file (#61.4) defines specific information about each disease, such as SNOMED code, synonyms, section, identifier, journal reference, and abbreviations. This file is used mainly in Anatomic Pathology and Microbiology. Entries can be added or modified, but none of the supplied entries should be deleted.

Field List

(.01) NAME
(2) SNOMED CODE
(3) SYNONYMS (Subfile 61.41)
    (.01) Synonym
(5)JOURNAL REFERENCE (Subfile 61.411)
    (.01) Title Of Article
    (1) Author(S)
    (2) Medical Journal
    (3) Volume
    (4) Starting Page
    (5) Date
    (6) List On Patient Record
    (7) Topography Restriction (Subfile 61.421)
        (.01) Topography Restriction
(6) ABBREVIATION

NOTE: The DISEASE FIELD file (#61.4) is exported on a global tape. If this is the first installation of Lab on your system, you must read in the global tape.

Fields Description

(.01) NAME: The name of the disease.

(2) SNOMED CODE: The characters following D- in the SNOMED reference book.

(3) SYNONYMS (Subfile): This is a multiple field. Enter synonyms or common misspellings of this function.

(01) Synonym: Enter synonyms or common misspellings of this function.

(5) JOURNAL REFERENCE (Subfile): This is a multiple field. You may enter Journal references that apply to this disease.

(.01) Title Of Article: Title of an article that discusses the named disease. Answer must be 1-80 characters in length.

(1) Authors(s): Author(s) of the named article.

(2) Medical Journal: The name of the medical journal containing the article.

(3) Volume: The volume number/name that contains the article.

(4) Starting page: The first page of the article.

(5) Date: Date of article.

(6) List on patient record: If this reference is to be listed on a patient record whenever this disease is involved, this field requires a "YES" entry.

(7) Topography restriction (Subfile): To restrict printing references for certain organ/tissues with the selected disease enter one or more characters of the topography code. (Example for lung enter 28.) No restriction if no entry.

(.01) Topography restriction: To restrict printing references for certain organ/tissues with the selected disease enter one or more characters of the topography code. (Example for lung enter 28.) No restriction if no entry.

(6) ABBREVIATION: Must be a 1-5 character abbreviation for this disease and will be used as a **unique** code for it.

PROCEDURE FIELD file (#61.5)

The PROCEDURE FIELD file (#61.5) defines specific information about each procedure, such as SNOMED code, synonyms, section, identifier, journal reference, and abbreviations. This file is mainly used in Anatomic Pathology and Microbiology. Procedures is a list of diagnostic, therapeutic, and administrative procedures performed by health care personnel. Entries may be added or modified, but none of the supplied entries should be deleted.

Field List

(.01) NAME
(2) SNOMED CODE
(2.3) ASK RESULT
(3) SYNONYMS (Subfile 61.51)
    (.01) Synonym
(5) JOURNAL REFERENCE (Subfile 61.52)
    (.01) Title Of Article
    (1) Author(S)
    (2) Medical Journal
    (3) Volume
    (4) Starting Page
    (5) Date
    (6) List On Patient Record
    (7) Topography Restriction (Subfile 61.53)
        (.01) Topography Restriction
(6) ABBREVIATION

NOTE: The PROCEDURE FIELD file (#61.5) is exported on a global tape. If this is the first installation of Lab on your system, you MUST read in the global tape.

Fields Description

(.01) NAME: The name of the procedure.

(2) SNOMED CODE: The characters following P- in the SNOMED reference book.

(2.3)ASK RESULT: If a result of a procedure should be prompted for, enter "YES".

(3) SYNONYMS (Subfile): This is a multiple field. Enter synonyms or common misspellings of this function.

(01) Synonym: Enter synonyms or common misspellings of this function.

(5) JOURNAL REFERENCE (Subfile): This is a multiple field. You may enter Journal references that apply to this procedure.

(.01) Title Of Article: Title of an article that discusses the named procedure. Answer must be 1-80 characters in length.

(1) Authors(s): Author(s) of the named article.

(2) Medical Journal: The name of the medical journal containing the article.

(3) Volume: The volume number/name that contains the article.

(4) Starting page: The first page of the article.

(5) Date: Date of article.

(6) List on patient record: If this reference is to be listed on a patient record whenever this procedure is involved, this field requires a "YES" entry.

(7) Topography restriction (Subfile): To restrict printing references for certain organ/tissues with the selected procedure enter one or more characters of the topography code. (Example for lung enter 28.) No restriction if no entry.

(.01) Topography restriction: To restrict printing references for certain organ/tissues with the selected procedure enter one or more characters of the topography code. (Example for lung enter 28.) No restriction if no entry.

(6) ABBREVIATION: Answer must be a one to five character abbreviation for the procedure and will be used as a unique code.

OCCUPATION FIELD file (#61.6)

The OCCUPATION FIELD file (#61.6) defines specific information about each function, such as SNOMED code, synonyms, section, identifier, journal reference, and abbreviations. Occupation is a list of occupations as defined by SNOMED. Entries can be added or modified in this file, but none of the supplied entries should be deleted.

Field List

(.01) NAME
(2) SNOMED CODE
(3) SYNONYMS (Subfile 61.61)
    (.01) Synonym
(5)JOURNAL REFERENCE (Subfile 61.62)
    (.01) Title Of Article
    (1) Author(S)
    (2) Medical Journal
    (3) Volume
    (4) Starting Page
    (5) Date
    (6) List On Patient Record
(6) ABBREVIATION

NOTE: The OCCUPATION FIELD file (#61.6) is exported on a global tape. If this is the first installation of Lab on your system, you MUST read in the global tape.

Fields Description

(.01) NAME: The name of the job.

(2) SNOMED CODE: The characters following J- in the SNOMED reference book.

(3) SYNONYMS (Subfile): This is a multiple field. Enter synonyms or common misspellings of this function.

(01) Synonym: Enter synonyms or common misspellings of this function.

(5) JOURNAL REFERENCE (Subfile): This is a multiple field. You may enter Journal references that apply to this job.

(.01) Title Of Article: Title of an article that discusses the named procedure. Answer must be 1-80 characters in length.

(1) Authors(s): Author(s) of the named article.

(2) Medical Journal: The name of the medical journal containing the article.

(3) Volume: The volume number/name that contains the article.

(4) Starting page: The first page of the article.

(5) Date: Date of article.

(6) List on patient record: If this reference is to be listed on a patient record whenever this job is involved, this field requires a "YES" entry.

(6) ABBREVIATION: Must be a 1-5 character abbreviation for this job and will be used as a **unique** code for it.

COLLECTION SAMPLE file (#62)

The COLLECTION SAMPLE file (#62) contains all information specific for the collection sample requirements for a particular laboratory. Each collection sample entry is defined in this file, and the site specific information contained includes the default type of specimen, color of the collection tube stopper, type of collection container, large and small volumes, whether or not the sample can be collected by the laboratory personnel and synonym(s). Information in the file is used in various calculations involved in the printing of the specimen labels and phlebotomy collection lists.

Use VA FileManager to print out the data dictionary for the file by selecting the option List File Attributes, specifying File #62, and choosing the standard print format. This will provide you with detailed information on exactly what type of information is needed for each entry in the file to be defined properly.

Field List

```
(.01) NAME
(2) DEFAULT SPECIMEN
(3) TUBE TOP COLOR
(4) VOLUME LARGE
(5) VOLUME SMALL
(6) LAB SECTION
(7) CAN LAB COLLECT
(8) SYNONYM (Subfile 62.01)
   (.01)Synonym
(500) COLLECTION WKLD CODE (Subfile 62.02)
(.01) Accession Area
(1) Lab Test (Subfile 62.21)
(.01) Lab Test
(1) WKLD Code (Subfile 62.211)
(.01) WKLD Code
( 2) Test Multiply Factor
```

NOTE: The COLLECTION SAMPLE file (#62) is exported on a global tape. If this is the first installation of Lab on your system, you must read in the global tape.

Fields Description

(.01) NAME: This is the name of the collection sample you will be editing or adding to this file and must be 3-30 characters in length. The name used in this field will appear to the ordering person when he/she places the order initially and also when the order is presented for review. Using a very simple, self explanatory name will ease the ordering process for non Lab people.

Example: URINE, 24 hr, URINE, 12 hr, and URINE, 2 hr will allow the ordering people to choose the sample appropriate for the test they re trying to order. The same can be done with BLOOD (red top) and BLOOD (marbled top). If it is necessary to enter duplicate names which will have different default specimen types or tube top colors, then use quotes around the duplicate names to enter them. This may be the case if you have a collection sample of BLOOD (green top) but need to have both a default specimen of plasma and a default specimen of blood.

(2) DEFAULT SPECIMEN: This entry points to the TOPOGRAPHY FIELD file (#61) and must contain an existing site/specimen entry from that file. This site/specimen is then predefined or linked with the collection sample name.

(3) TUBE TOP COLOR: A 2-11 character description of the type of container or tube used to collect the sample may be entered here. This entry combines with the sample name in prompts to the ordering person, so that a tube top color of blue for the sample blood will appear as BLUE BLOOD on the screen. This information also appears on the Test Description Information [LREV] option, on labels and on collection lists.

(4) VOLUME LARGE: This entry defines the total volume that the largest size of the specified container or tube will hold.

Example: BLOOD (RED TOP could be 20 mls. for the large size red top tube. The volume in mls. that you indicate in this field for a specific collection sample will determine how many labels will be generated for a series of tests that are all done on the same type of collection sample. If a number of tests are ordered whose Min. vol. (from File #60) required totals to less than 20 mls., only one label will print, and read LARGE RED TOP. If the individual minimum volumes exceed 20 mls. when totaled, more than one label will print to indicate this.

(5) VOLUME SMALL: This entry may be used to define the volume held in (alternate) small size collection sample containers or tubes. If the total volume required for tests ordered exceeds the Volume large entry and is less than the entry defined here for a small tube, then two labels will print, one marked LARGE and one marked SMALL.

NOTES:
1. It is not required that both of the VOLUME fields have entries defined. Either one or both may be used for calculating the volumes to be drawn by the phlebotomy team (who will use the collection list/labels generated from orders placed for routine collection by the lab).

2. The above discussion of Volume large and Volume small assumes that none of the tests being ordered had an entry in the Unique Accession # field in File #60. An entry of "YES" in the Unique Accession # field for any test automatically forces the generation of a label for that test alone, regardless of the minimum volume required for the test.

(6) LAB SECTION: This entry must be chosen from the existing valid entries in the LAB SECTION file (#62.2). The lab section entry in this field will (in some cases) limit the types of collection sample name displayed when the ordering person enters a ? at the COLLECTION SAMPLE prompt during the ordering procedure. If, however, you have an entry of Chemistry & Toxicology as the lab section for a sample, it is still possible to specify that sample when ordering a test done in another section of the lab, even if inappropriate.

Example: A collection sample of BLOOD (red top) has this field filled in with Chemistry & Toxicology. A person ordering a CBC test (performed in the Hematology area of the lab) can force the system to accept the red top tube as the sample for that test, even though only the collection sample of BLOOD (lavender top) is appropriate for a CBC. It is not readily apparent why the system allows this to happen in some routines and not others.

(7) CAN LAB COLLECT: This field should be filled in with a "YES" or a "NO", depending on whether or not the collection sample may be collected by routine phlebotomy or drawn by lab personnel on a routine basis. The entry does not appear to override the entry in the Lab Collection Sample field in File #60 for individual tests that are drawn by lab personnel. In this case, it is best to define the ONE collection sample which will be drawn by the phlebotomists for any particular test by using the File #60 field, and not this field in File #62.

(8) SYNONYM: This field allows the entry of multiple synonyms (each 1-20 characters in length) for the collection sample. These would include misspellings, alternate names, and even outdated names for a single collection sample. A good example would be the collection sample BLOOD (red top); possible synonyms entered in this field could be:

BLOOD (marbled top)
BLOOD (jungle top)
BLOOD (SST tube)
BLOOD (large red)
BLOOD (red)
RED TOP
LARGE RED
MARBLED TOP
JUNGLE TOP
SST
BLOOD (CHEMISTRY)

(500) COLLECTION WKLD CODE (Subfile): This field is used for those unique situations when an accession WKLD Code can not be used. For example Bacterial culture test. By using this field you do not have to enter collection samples in LABORATORY TEST file (#60).

(.01) Accession Area: Which accession area does the test belong that you want have accession WKLD Codes triggered.

(1) Lab Test (Subfile): Enter a list of lab test that should trigger workload capture.

(.01) Lab test: Enter a list of lab test that should trigger workload capture.

(1) WKLD Code (Subfile): Enter a list of WKLD Codes you wish to have counted when this test is accessioned. This is an alternate point for entering accession WKLD Codes. It is similar to accession WKLD Codes but is by accession area and test. This field is to be used when it is not desirable to enter collection samples to a test in LABORATORY TEST file (#60). It is particularly useful in Microbiology type test.

(.01) WKLD Code: Enter the WKLD Code for this.

(2) Test Multiply Factor: This field contains a number by which the count should be multiplied by.

URGENCY file (#62.05)

The URGENCY file (#62.05) contains eight presupplied urgencies; Stat, ASAP, Preop, Call Result, Admit, Outpatient, Purple Triangle, and Routine. Each urgencies assigned a numerical priority with 1 for STAT being highest priority and 9 for ROUTINE being the lowest priority. An urgency status is defined as the priority given to each laboratory test, or how quickly that test must be performed by laboratory personnel, based on site specific criteria.

NOTES:

1. Additional urgencies WKL as a suffix are supplied with Laboratory V. 5.2 software package. The urgencies are to be used for workload functions only. WKL is a shortened name for workload. The internal entry numbers are 50 - 59. Any urgency less than internal entry number 50 is displayed to all user, both laboratory, and non-laboratory. Only users holding the LRLIASON security key are allowed to see the urgency of WKL.

2. The URGENCY file (#62.05) is exported on a global tape. If this is a first time installation of the Laboratory package software on your computer system you must read in the global tape.

Using existing policy in your laboratory for your source of information, entries may be added to the file, or existing entries may be modified by changing the name of one of the existing urgency entries. DO NOT DELETE any of the existing entries, since this file is pointed to by several other laboratory files. You do not have to use all eight levels of priority listed in the file. You may change the name of any of the existing urgencies, keeping in mind that the numeric priority will remain the same. For example, if your hospital uses an urgency of PATIENT WAITING instead of CALL RESULT, with the same level of priority:

Existing entries		Site-specific entries
1) STAT	(no change made)	1) STAT
2) ASAP	(no change made)	2) ASAP
3) PREOP	(no change made)	3) PREOP
4) CALL RESULT	(change name to..)	4) “PATIENT WAITING”
5) ADMIT	(no change made)	5) ADMIT

Similarly, an example of a site whose highest two priorities are YESTERDAY and NOW, as well as the eight existing urgencies, along with an additional urgency of WEEKLY, which has a lower priority than ROUTINE:

Existing entries		**Site-specific entries**
1) STAT	(change name to..)	1) "YESTERDAY"
2) ASAP	(change name to..)	2) "NOW"
3) PREOP	(change name to..)	3) "STAT"
4) CALL RESULT	(change name to..)	4) "ASAP"
5) ADMIT	(change name to..)	5) "PREOP"
6) OUTPATIENT	(change name to..)	6) "CALL RESULT"
7) PURPLE TRIANGLE	(change name to...)	7) "ADMIT"
8) (add new urgency; priority #8)		8) "OUTPATIENT"
9) ROUTINE	(change name to...)	9) "PURPLE TRIANGLE"
(add new urgency; priority #10)		10) "ROUTINE"
(add new urgency; priority #11)		11) "WEEKLY"

All of the urgencies which were modified were simply name changes of the existing entries. Three additional urgencies were added (#8 to fill in an empty spot, #10, and #11 to account for the first two original urgency spots being filled in the two site specific highest priority urgencies) to come up with the final site specific urgency status list.

Field List

```
(.001) NUMBER
(.01) URGENCY
(1) CAN LAB COLLECT?
(2) WORKLOAD ONLY
```

Fields Description

(.001) NUMBER: This is the internal entry number associated with the URGENCY NAME.

(.01) URGENCY: This is the name of an urgency status which may be available at your site. The entry must be between 3-30 characters in length and not start with punctuation. The exported lab software comes with presupplied entries, starting with STAT at the highest numerical priority (1) and ending with ROUTINE which has the least or lowest priority. In order to assign a number to an urgency, it will be necessary to create or add a new one to the file. You can NOT renumber renamed urgencies. It is not a good idea to delete entries in this file, since there are a number of other files and fields that refer to these entries and store the associated urgency status.

(1) CAN LAB COLLECT ?: Enter "YES" in this field if orders with this particular urgency status will be allowed on routine phlebotomy collection lists. Also answer "YES" if the lab will allow orders placed using the Lab test order (Lab Collect) [LROW] option to be assigned this urgency. This field will limit the allowable urgencies in the Fast lab test order (ROUTINE) [LROW ROUTINE] option also, when the * is used to change the urgency of a test listed in the accession test group.

(2) WORKLOAD ONLY: This field should only be set to yes for workload (WKLD) urgencies. These urgencies are used only with workload module. Only urgencies with an internal number of 50 or greater should have this field set to "YES".

ANTIMICROBIAL SUSCEPTIBILITY file (#62.06)

The ANTIMICROBIAL SUSCEPTIBILITY file (#62.06) is used by each Laboratory to define specific information about the types of antibacterial antibiotics your Laboratory uses. TB drugs do not have entries in this file. It contains approximately 40 presupplied entries. Each of the entries may be defined according to the needs of your hospital. Information which is site configurable for each antibiotic includes the sensitivity result, the interpretation for each type of result, the type of specimen the antibiotic is used on, the type of template the system uses to display the result and the abbreviation. (The abbreviation is also used to report these antibiotics on the specialized Infection Control and Antibiotic Trends microbiology reports.)

Field List

```
(.001) NUMBER
(.01) NAME
(.5) PRINT ORDER
(1) DRUG NODE
(2) SUSCEPTIBILITY RESULT (Subfile 62.061)
(.01) Susceptibility Result
(1) Default Interpretation
(2) *Organism (Subfile 62.081)
(.01) *Organism
(1) *Alternate Interpretation
(2) *Additional Display Comment
(3) Alternate Interpretation (Subfile 62.091)
(.01) Alternate Interpretation
(1) Organism (Interp)
(2) Specimen (Interp)
(3) *PRIMARY DISPLAY (Subfile 62.062)
(.01) *Specimen
(1) *Display (Subfile 62.063)
(.01) *Display
(4) DISPLAY COMMENT
(5) INTERNAL NAME
(6) ABBREVIATION
(7) DEFAULT SCREEN
(8) ALTERNATE SCREEN (Subfile 62.08)
(.01) Alternate Screen
(1) Organism (Screen)
(2) Specimen (Screen)
```

NOTE: This file is exported on a global tape. If this is the first installation of Lab on your system, you must read in the global tape.

Fields Description

(.001) NUMBER: The internal entry number automatically assigned by the system when an entry is added to the file. Do not edit.

(.01) NAME: The 3-30 character name of the antibiotic is entered in this field is required.

(5) PRINT ORDER: Determines the order in which antibiotics will be displayed on reports.

(1) DRUG NODE: This field is automatically stuffed with the pointer to the Microbiology subfile of the LAB DATA file (#63). You will probably not see this prompt when adding entries. Do Not Edit.

(2) SUSCEPTIBILITY RESULTS (Subfile): A multiple field allowing you to enter the appropriate sensitivities for this antibiotic.

(.01) Susceptibility result: The free text (1-20 characters) result should be entered here. Choose from S, I, or R (sensitive, intermediate, or resistant) or MIC (minimum inhibitory concentration) numerical values.

(1) Default Interpretation: The free text (1-10 characters) interpretation of the above result should be entered here. This field entry is what is displayed on reports.

NOTE: You may enter S, I, R, or numerical MIC values in either or both of these two fields. (See the Microbiology section for further details.)

(2) *Organism (Subfile): This field is no longer used and will be deleted after this version.

(.01) *Organism: This field is no longer used and will be deleted after this version.

(1) *Alternate Interpretation: This field is no longer used and will be deleted after this version.

(2) *Additional Display Comment: This field is no longer used and will be deleted after this version.

(3) ALTERNATE INTERPRETATION (Subfile): The interpretation that will be used if the ORGANISM (INTERP) and SPECIMEN (INTERP) are appropriate for the organism and specimen on which results are being.

(.01) Alternate interpretation: The interpretation that will be used if the ORGANISM (INTERP) and SPECIMEN (INTERP) are appropriate for the organism and specimen on which results are being.

(1) Organism (interp): The organism will be used to determine an Alternate Interpretation. An organism with the name containing GRAM POS implies any gram

positive organism. An organism with the name containing GRAM NEG implies any gram negative organism. During result entry in micro, the gram stain on the organism being edited is determined as the entry in the Gram Stain field of the ETIOLOGY FIELD file (#61.2). An organism with the name containing UNKOWN implies any organism.

(2) Specimen (interp): The specimen used to determine an Alternate Interpretation. An specimen with the name containing UNKOWN implies any specimen.

(3) *PRIMARY DISPLAY (Subfile): This field is no longer used and will be deleted after this version.

(.01) *Specimen: This field is no longer used and will be deleted after this version.

(1) *Display (Subfile): This field is no longer used and will be deleted after this version.

(.01) *Display: This field is no longer used and will be deleted after this version.

(4) DISPLAY COMMENT: A free text (2-40) field that contains any relevant comment that is to be displayed with antibiotic susceptibility.

(5) INTERNAL NAME: A pointer to the LAB DATA file (#63) organism subfield. This internal name (or number) must match the name you create (e.g., 2.00XXXNNN) when adding a new antibiotic. New entries to this file require adding a new antibiotic to the Microbiology subfile of the LAB DATA file (#63). For instructions on adding antibiotics and for detailed information on editing the rest of this file, consult the Microbiology section.

(6) ABBREVIATION: This field entry must be three characters in length. This is the antibiotic abbreviation which is used in generating the antibiotic trends report and infection control survey report.

(7) DEFAULT SCREEN: The entry in this field specifies how the antibiotic results and/or interpretation will be displayed. A = the result is always displayed, N = the result is never displayed (unless the user holds the LRLAB security keys), and R = a restricted display that is used when interpretation of antibiotics always displayed is resistant. (A null entry defaults to A) Refer to the Micro chapter for more specifics on this field and the three listed below with an asterisk (*).

(8) ALTERNATE SCREEN (Subfile): If for some reason the screen should be different for certain specimens or organisms, when compared to the normal display, indicate how the system should handle the cases.

(.01) Alternate Screen: This screen will be used instead of the default screen if the ORGANISM (SCREEN) and SPECIMEN (SCREEN) are appropriate for the organism and specimen being edited.

(1) Organism (Screen): This organism will be used to determine an Alternate Screen. An organism with the name containing GRAM POS implies any gram positive organism. An organism with the name containing GRAM NEG implies any gram negative organism. During

result entry in micro, the gram stain on the organism being edited is determined as the entry in the Gram Stain field of the ETIOLOGY FIELD file (#61.2). An organism with the name containing UNKOWN implies any organism.

(2) Specimen (Screen): The specimen used to determine an Alternate Screen. A specimen with the name containing UNKNOWN implies any specimen.

EXECUTE CODE file (#62.07)

The EXECUTE CODE file (#62.07) is used to store a variety of program instructions that are used in various programs in the Laboratory package. The best way to see what they are and what they do is to sort them out by type. This may only be of academic interest, since these codes are rarely changed. There are eight different types or categories of execute codes:

This field by field file description has only been included as a reference. The EXECUTE CODE file (#62.07) can ONLY be modified by a programmer or Site Manager.

Field List

```
(.01) NAME
(1) EXECUTE CODE
(2) PURGE CONTROL
(3) TYPE
(4) HELP PROMPT
(5) SUBSCRIPT NAME
(6) DESCRIPTION (Subfile 62.071)
(.01) Description
(500) EXECUTE WKLD CODE (Subfile 62.09)
(.01) Execute WKLD Code
(1) Execute WKLD Code #
(2) Multiply Factor
```

(501) SITE NOTES DATE (Subfile 67.7501)
    (.01) SITE NOTES DATE
    (1) TEXT
    (.01) NOTE

NOTE: The EXECUTE CODE file (#62.07) is exported on a global tape. If this is the first installation of the Laboratory software on your system, you must read in the global tape.

Fields Description

(.01) NAME: The 2-30 character name of the MUMPS code to be executed. The user given name of the code. Do Not Edit!

(1) EXECUTE CODE: This field contains valid MUMPS code up to 220 characters, which tells the system how to carry out a specific function.

The execute code example: For the SMAC name the code is S CUP=CUP+1 I CUP>8 S CUP=1,TRAY=TRAY+1. Do Not Edit!

(2) PURGE CONTROL: This field contains the time interval to purge. Set of Codes for Daily, Monthly, Quarterly, or Yearly.

(3) TYPE: A set of codes which define the category or type of execute code, dependent upon specific function. The set of code categories are identify, verification, accession, loadlist, edit, or comment.

(4) HELP PROMPT: The user entered help prompt for the execute code name.

(5) SUBSCRIPT NAME: An internal function name. DO NOT EDIT EVER!!

(6) DESCRIPTION: A word processing field to allow for a description of the execute code to be entered. DO NOT EDIT!

(500) EXECUTE WKLD CODE (Subfile): Workload codes associated with the execute code are stored here.

(.01) Execute WKLD Code: Enter the WKLD codes associated with the execute code.

(1) Execute WKLD Code#: Type a number between 10000 and 99999, 3 Decimal Digits.

(2) Multiply Factor: Type a number 1 and 100, 0 Decimal Digits.

(501) SITE NOTES DATE (Subfile): This multiple field to hold information about a particular entry in the EXECUTE CODE file (#62.07).

(.01) Site Notes Date: This field contains the date of the notes.

(1) Text: This subfile field holds the text of the note.

(.01) Note: This field holds the actual text of the note.

DELTA CHECKS file (#62.1)

The DELTA CHECKS file (#62.1) contains entries whose use is optional. They are entered in the LABORATORY TEST file (#60) under the site/specimen for the field Type of Delta Check. The Delta Value field may be used or need to have an entry depending on the type of delta check. If test results are being entered or reviewed for verification on a test that has an entry in the Type of Delta Check field for that site/specimen then the code in the DELTA CHECK file is executed. Usually, the delta check is used to prompt back to the technologist a warning that there is some inconsistency in the data, so that the data can be rechecked before it is verified. Delta checks can be used for other reasons such as skipping over entries that do not need to be prompted or for doing calculations on data and storing the calculated results.

The most common delta check is the ABS VALUE or PERCENT delta check which is used to check back to the previous reported value as to whether it exceeds + or - the delta value. The ABS VALUE will use a numeric delta value of the same units as the test, whereas PERCENT will use a % change. Information on how to set up these two types of delta checks can be found in the Type of delta check and Delta value field descriptions in LABORATORY TEST file (#60) in this chapter.

Delta checks that skip entries simply set the variable LRSKIP equal to the entry to skip to. This is the same as typing in a ^ entry. It might be useful on a test like Normocytic. If the test is normocytic then all following tests having to do with cell size or shape would be skipped. The delta check would be NORM 1 or NORM 2.

Tests can be checked against other tests whose values may be related. A1C displays a glucose result when entering a Hgb A1C. Hct and Hgb can be checked to see if they correspond within a reasonable limit. A Platelet estimate can be compared to the Platelet count. An automated differential can be compared to a manual one. A simple delta check, “MCHC” displays a prompt if the result is above a specific value. This is similar to setting a critical value except that the delta check is only seen by the technologist before verifying, whereas the critical value is flagged on all reports outside of the lab.

You can use delta checks to see if the number of cells reported on the differential count add up to 100. Calculations can be done using delta checks. Auto instrument routines will generally transmit calculated values so you may not wish to use delta checks for these tests. On entering results, you can enter a computation for simple math operations and then enter the results. Also, the execute code type of delta check can be used that may be better suited for these needs.

If you wish to create new delta checks or to modify existing ones, you are required to have programmer access in VA FileManager and of course any changes or additions should be thoroughly checked out in a test account before putting them into your production account. This file can ONLY be modified by a programmer or Site Manager.

<u>Field List</u>

```
(.01) NAME
(10)  EXCUTABLE CODE
(20)  OVERFLOW 1
(30)  DESCRIPTION (Subfile 62.11)
(.01) DESCRIPTION
(31)  SITE NOTES DATE (Subfile)
      (.01) SITE NOTES DATE
```

(1) TEXT (Subfile)
(.01) TEXT

NOTE: The DELTA CHECKS file (#62.1) is exported on a global tape. If this is the first installation of the Laboratory package software on your computer system, you must read in the global tape.

Fields Description

(.01) NAME: This entry is the 3-30 character name of the delta check, usually either an absolute check or a percentage check.

(10) EXECUTABLE CODE: 2-250 characters of valid MUMPS code which defines what the delta check checks, and how the system goes about calculating the delta check values.

(20) OVERFLOW 1: Gives the programmer up to 250 characters of extra space for extensive MUMPS code from above.

(30) DESCRIPTION (Subfile): A word processing field which allows entry of what a particular delta check does or how the system uses it.

(.01) Description: This field contains information about how the delta check is used, or what it does.

Some of the delta checks currently available in this file are:

ABS VALUE — performs a numerical range comparison of an absolute difference between two sets of test results.

Example: Result must be within +/- 10 mg/dL.

PERCENT — performs a range comparison of a percentage difference between two sets of test results.

Example: result must be within +/- 15% of previous value.

HGB and HCT — used together to check if the hemoglobin value X 3 = the hematocrit value +/- 2. (To set this delta check up, enter HGB in the Type of Delta Check field in LABORATORY TEST File (#60) for the test name Hemoglobin and enter HCT in the Type of Delta Check field in File #60 for the test name Hematocrit).

DIFFINIT — All three of these are used together to check if cells

DIFFANS counted in a differential add up to 100 to set up this.

DIFFSUM Delta check, enter DIFFINIT in the Type of Delta Check field in File #60 for the first type of cell to be counted (usually Segs). Enter DIFFANS in the Type of Delta Check field in File #60 for the last type of cell to be counted (e.g., Blasts). For all other tests (types of cells to be counted) in the panel, enter DIFFSUM in the Type of Delta Check field in File #60.

(31) SITE NOTES DATE (Subfile): This is a multiple field to hold site notes.

(.01) Site Notes Date: This is the date of the note.

(1) Text (Subfile): This is the subfile to hold the text of the note.

(.01) Text: This is the actual text of the note.

LAB SECTION file (#62.2)

The LAB SECTION file (#62.2) defines the functional laboratory areas. Each area may have multiple accession areas. Entries may be added, but supplied entries should not be modified, or deleted. It is pointed to by the COLLECTION SAMPLE file (#62) and ACCESSION TEST GROUP file (#62.6).

Field List

```
(.01) NAME
(2) SUBSCRIPT
(3) ABBREVIATION
(4) LAB  SUBSECTION(S) (Subfile 62.201)
(.01) Lab subsection(s)
(5) MAJOR SECTION
```

Fields Description

(.01) NAME: This is a required field specifying the functional (or otherwise differentiated) area of the lab. Each area generally has more than one accession area (as defined in the ACCESSION file (#68). Entries included in the LAB SECTION file (#62.2) in the exported version of lab should be reviewed, but generally it is not necessary to add any new sections.

(2) SUBSCRIPT: This is a required field (set of codes) which designates the abbreviation of the lab section and refers to a particular subfile of the LAB DATA file (#63).

NOTE: This subscript is what gets entered into the Subscript field (#4) for each entry in the LABORATORY TEST file (#60).

(3) ABBREVIATION: This is a free text field, 1-3 characters. Abbreviations are used on some reports.

(4) LAB SUBSECTION(S) (Subfile): Entries in this multiple field allow the designation of appropriate lab subsections for each Lab section name.

(.01) Lab SubSection(s): Each lab section may be made up of one or more lab sections.

(5) MAJOR SECTION: If the entry in the Name field at the top of this page is a subsection, enter the name of the larger more inclusive lab section here.

Example:

Field name	A	B
Name	Mycology	Microbiology
Lab Subsection(s)	--------- none ---------	Mycology Parasitology Virology (etc...)
Major section	Microbiology	Microbiology

NOTES:
1. This file defines specific functional areas of the laboratory. It contains seven presupplied entries. Each of the functional areas may have more than one accession area associated with it.

2. It will generally not be necessary to edit this file prior to going on line. Additions can be made, but existing entries should **not** be deleted or changed since other Laboratory files (specifically COLLECTION SAMPLE file (#62) and ACCESSION TEST GROUP file (#62.6)) point to these entries.

3. The utilization of these field/files has been transferred. Consult the section on Lab Statistics in this manual to determine how to set up the lab sections for use with the workload statistics portion of the lab package.

4. The LAB SECTION file (#62.2) is exported on a global tape. If this is the first installation of the Laboratory software on your system, you must read in the global tape.

LAB CONTROL NAME file (#62.3)

This LAB CONTROL NAME file (#62.3) contains the definition of each of the laboratory controls used as part of the laboratory's quality control program. Every lab control for which data will be gathered, entered, calculated, recorded, and/or stored by the system must have an entry in this file. Also to be included as entries in this file are any control like samples which might appear on any of your load or work lists see LOAD/WORK LIST file (#68.2), including references, blanks, water samples, or similar priming materials. Each lab control name entry is defined by the file, listing information such as expiration date, lot number, type of specimen the control mimics, tests performed on the control, mean and standard deviation values, etc.

NOTE: Once a name has been entered, do not delete the entry. If you include an identifying portion of the lot # in the name, then the control is easily identified on printouts or displays. Also, subsequent lots of the same control can be entered into the file.

Field List

```
(.01) NAME
(.02) EXPIRATION DATE
(.03) EXCLUDE DATA ENTRY
(.04) MIMIC SPECIMEN
(.09) IDENTIFIER/LOT #
(2) TEST (Subfile 62.31)
(.01) Test
(1) Mean
(2) 1 Sd
(3) Location
(3) PARALLEL CONTROL
(4) ACCESSION TEST (Subfile 62.32)
(.01) Accession Test
(63) LABORATORY REFERENCE
```

Fields Description

(.01) NAME: The name of the control used. Once a name has been entered, do not delete the entry. Must be 3-30 characters in length.

(.02) EXPIRATION DATE: The date the control lot expires. This is used as a reference date only; the system will continue to accept data after the expiration date unless specified.

(.03) EXCLUDE DATA ENTRY: Filling this field in with a "YES" will prevent any further control data from being captured by the system. You will still be able to accession these controls, however.

When the lot of control expires, fill this field in with a "YES". This will retain data associated with the expired control and not allow any more control data to be accepted for that control.

(.04) MIMIC SPECIMEN: This field points to the TOPOGRAPHY FIELD file (#61) and defines a specimen type which each control imitates (or mimics). This enables the controls to be treated the same way patient samples are during accessioning, processing, and reporting.

Example: A hematology control mimics blood; a chemistry control mimics serum.

(.09) IDENTIFIER/LOT#: This free text field allows you to enter the control lot number, code, or other manufacturer or lab identification..

(2) TEST (Subfile): This is a multiple field which designates the individual tests that will be run on the control and for which data will be gathered.

(.01) Test: The actual test name from the LABORATORY TEST file (#60) for which control values will be entered. This must be a single test (type both or output only). No panels or profiles are allowed.

(1) Mean: The mean value of the control for this test.

(2) 1 SD: The value equal to +/- 1 S.D. for this test. The system will calculate the I.S.D. values.

(3) Location: Filled in by the system, do not edit.

(3) PARALLEL CONTROL: If you want to run paired controls as part of the Q.C. Multirule-Shewhart, enter another control name here.

(4) ACCESSION TEST (Subfile): This is a multiple field where you specify what tests are actually ordered or accessioned on the controls. This enables the system to generate accessions for the controls and pull them onto the appropriate load or worklists. Panels and/or profiles as well as singly orderable tests (type input or both) are appropriate.

(.01) Accession Test: Entries here are used when controls are accessioned into the laboratory.

Example: If your Chem Control I appears on your Chem load list, then you would specify Chem 7 in this field, and the seven individual tests in the Test field (#.01) above. Enter the test name as it appears in the LABORATORY TEST file (#60).

(63) LABORATORY REFERENCE: This field points to the LAB DATA file (#63). Do Not Edit, filled in by the software package.

AUTO INSTRUMENT file (#62.4)

The AUTO INSTRUMENT file (#62.4) contains all specific information related to each automated instrument in the laboratory. It is used to define the site specific parameters by which each instrument will be run, including what automated interface routine program will be used, the type of load or work list that will be run on the instrument, and the individual tests which will generate data from that instrument. The file specifically defines for each instrument the name, echo device, program, load/work list, entry for LAGEN routine, lab test associated with the instrument, WKLD suffix code, and alarm terminal (the alerting terminal when the interface line is not working). It is necessary to review and edit this file prior to interfacing any automated instruments to be run on line. For more complete information on how this is accomplished and the implications of editing this file, please refer to the section in the Technical Manual entitled Instrumentation/ Interfacing.

Field List

```
(.001) NUMBER
(.01) NAME
(.14) WKLD METHOD
(.15) WKLD CODE METHOD NAME
(.16) WKLD CODE SUFFIX
(1) ECHO DEVICE
(2) PROGRAM
(3) LOAD/WORK LIST
(5) ENTRY for LAGEN ROUTINE
(6) CROSS LINKED BY
(9) *ECHO ALL INPUT
(10) METHOD
(11) DEFAULT ACCESSION AREA
(12) OVERLAY DATA
(20) NEW DATA
(25) RESTART
(26) HANDSHAKE RESPONSE
(27) ACK TRIGGER VALUE
(28) ACK RESPONSE VALUE
(29) DIRECT DEVICE
(30) CHEM TESTS (Subfile 62.41)
(.001) Number
(.01) Test
(2) Param 1
(3) Param 2
(4) Param 3
(6) Download Code
(11) Routine Storage
(31) LOAD CHEM TESTS
(40) ALARM TERMINAL (Subfile 62.42)
(.01) Alarm Terminal
(60) MICRO CARD TYPE (Subfile 62.43)
(.01) Micro Card Type
(.5) Card Name
(.7) Process Card Call
(1) Organism (Subfile 62.44)
(.01) Organism
(1) Card Code For Organism
(2) Drug (Subfile 62.46)
```

```
(.001) Number
(.01) Drug
 (1) Drug Node
(2) Param1
(3) Card Code
(4) Display Order
(9) Section
(10) Bit Position
(3) Message (Subfile 62.461)
(.001) Number
(.01) Code
(2) Flag Value
(3) Message
(70) INTERFACE NOTES
(91) DOWNLOAD ENTRY
(92) DOWNLOAD PROTOCOL ROUTINE
(93) FILE BUILD ENTRY
(94) FILE BUILD ROUTINE
(95) SEND TRAY/CUP LOCATION
(96) QUEUE BUILD
(97) MICRO INTERPRETATION CHECK
(100) METH NAME
(101) MEAN DATA VALUE 1
(102) MEAN DATA VALUE 2
(103) MEAN DATA VALUE 3
(105) MICRO AUTO APPROVAL METHOD
(106) DEFAULT AUTO MICRO TEST
(107) SITE NOTES DATE (Subfile 62.4107)
        (.01) Site Notes Date
        (1) TEXT (Subfile 62.41071)
            (.01) Text
```

Fields Description

(.001) NUMBER: The internal number assigned by the system whenever an entry is added. Do not edit.

(.01) NAME: This is the name (3-30 characters) of the instrument. If you have more than one of the same instrument, be sure to designate them; e.g., Ektachem 400-I and Ektachem 400-II.

(.14) WKLD METHOD: This field indicates what method the system should use as a default method for workload identification purposes.

(.15) WKLD CODE METHOD NAME: This field is automatically filled in when a selection of WKLD code method name is made. It represents an eye readable name of the code selected.

(.16) WKLD CODE SUFFIX: This field indicates what suffix should be used as a default suffix code for this instrument.

(1) ECHO DEVICE: Echo of raw instrument data to a CRT or a printer is no longer supported. This field is used when setting up a LSI or a direct connect auto instrument. Refer to the section on

automated instrument file set up for more information. This field identifies the device name that the auto instrument data line is connected.

(2) PROGRAM: The free text name of the interface routine (copies of the presupplied entries in this file). If the program (routine) is not listed here in the exported version for your instrument, contact your regional ISC or Site Manager to see whether the appropriate routine is available.

(3) LOAD/WORK LIST: Points to the LOAD/WORK LIST file (#68.2). This is a required field. Choose the load/work list name that will be used for this instrument if you plan to run by list. If you plan to run by accession number, this field must also be filled in with the name of the load/work list, even though you may not use it when running the instrument.

(5) ENTRY FOR LAGEN ROUTINE: Choose from a set of codes based on how you plan to run this instrument. (This entry sets up the correct cross reference between the raw data and the patient or specimen identification.)

You may have to test different combinations, depending on the particular interface routine and/or the way your instrument transmits the raw data, especially if you are lucky enough to have an older or more obsolete instrument. Check with the instrumentation/interface portion of this guide for more information.

(6) CROSS LINKED BY: This field specifies a variable from the interface program which helps set up the cross reference between data and sample, and is dependent on the interface routine itself. (See the instrumentation/interface section.)

(9) *ECHO ALL INPUT: If the echo device field has been filled in, answering “YES” will tell the system to echo all data to that device. If you choose “NO”, no data will be echoed. This field will be deleted in later version.

(10) METHOD: This is a free text field (1-20) specifying the method of the testing performed by the instrument. (It is easiest to fill this in with the instrument name.)

(11) DEFAULT ACCESSION AREA: This field points to the ACCESSION file (#68) and defines a default accession area from which the tests run on and the instrument is pulled. (If no accession area is specified, as in the case of running by accession, when only the numeric portion of the entire accession is specified, the system will assign that accession number to the default accession area listed here as an entry.) If the load/worklist field has been filled in, this field should match the accession area for that list.

(12) OVERLAY DATA: Setting this field to “YES” will allow data to overlay (or replace) previous unverified data (i.e., when specimens are rerun). If you set this field to “NO”, the second set of data will be transmitted in addition to the existing data. You would have to clear instrument data to remove the previous data first, and then re-run the specimens, especially if you will be group reviewing and verifying.

(20) NEW DATA: For most instruments, this field will have an entry of D NEW^LASET. See the instrumentation/interface section.

(25) RESTART: See the instrumentation/interface section.

(26) HANDSHAKE RESPONSE: If the instrument requires a handshake response, this field contains the executable MUMPS code to set the response into the variable OUT. S OUT=$C(6) (OUT contains the ASCII character 6 ACK).

(27) ACK TRIGGER VALUE: This field contains the ASCII sequence use to acknowledge an auto instrument. Not all instruments use this field. This is the decimal value that will trigger the ACK response (0-99).

(28) ACK RESPONSE VALUE: If this instrument setup instructions indicate a standard ack value is required by the instrument, enter the $C(X) for the acknowledgment. Not all instrument make use of this field. Where X= the ASCII number of the ACK character.

(29) DIRECT DEVICE: This field is used when bypassing the LSI. It is the name of the device that is used to communicate with a direct connect instrument.

(30) CHEM TESTS (Subfile): This is actually a misnomer - it should read TESTS or LAB TESTS, since the entries in this multiple field specify the laboratory test names which will be run (generate data) on the instrument. (You do not run chem tests on a Coulter!)

(.001) Number: Internal entry number of the test entry in this field, assigned by the system. Can only be changed if you delete the test first, and re-enter it. This number may be meaningful to the auto instrument and how it identifies the test.

(.01) Test: Points to the appropriate test(s) in the LABORATORY TEST file (#60). Again these entries can be changed only by deleting them first and then re-entering.

(2) PARAM 1: This is used to extract a test from a data stream. It may contain a line number or character number. Set by LASET into TC(I,2) this field. Check the interface notes or review the routine. Answer must be 2-100 characters in length and valid mumps code.

(3) PARAM 2: This is used to extract a test from a data stream. It may contain a line number or character number set by LASET into TC(I,3) in this field. Type a whole number between 0 and 10000. Refer to the instrumentation/interface section for information about these five fields.

(4) PARAM 3: This is used to extract a test from a data stream. It may contain a line number or character number set by LASET into TC(I,4) in this field. Answer must be 1-100 characters in length.

(6) Download Code: This is the code to send the instrument for downloading of load lists that this test is requested. This field at present is only used by the EKTACHEM BI-DIRECTIONAL INTERFACE.

(11) Routine Storage: Pointer to the LAB DATA file (#63) and is triggered by the test name above. Do NOT edit.

(31) LOAD CHEM TESTS: This field is used by the LASET routine to determine what to do with the chem test subfile. T or blank moves the data into the TC array. U moves the data into the ^TMP("LA",$J, global. N will not move the data at all. Set according to needs of instrument routine.

(40) ALARM TERMINAL (Subfile): A multiple field to be filled in with the device name(s) where a warning message will print should the LSI/interface stop.

(.01) Alarm Terminal: This field contains the name/numbers of devices which will report the status of the interface. This points to the DEVICE file (#3.5). Enter the device names that should be told of a LSI interface stop.

(60) MICRO CARD TYPE (Subfile): This entire subfile is at present devoted to supporting BIDIRECTIONAL interfacing of the Microbiology Auto Instrument. If you are not attempting to interface one of these types of instruments, you may ignore this entire subfile. If you are attempting to interface such an instrument, consult Microbiology Instruments Guide, there are examples available for various instruments.

(.01) Micro Card Type: Enter the Micro Card Type. Answer must be one to four character in length (Instrument card type). This is a HEX code which represent the card type. OE=GRAM.

(.5) Card Name: Enter the Card Type Name (.e.g. Gram Neg Id Card Name). Refer to the instrumentation/interface section for information.

(7) Process Card Call: If a routine is required to process incoming data from the instrument, enter routine name. see interface notes for routine(s) names. These fields have been added to facilitate the interfacing of microbiology instruments.

(1) Organism (Subfile): This subfield contains a list of possible identifiable organism which can be identified on or by this card. It is a multiple field and contains particulars for each organism.

(.01) Organism: Enter the name of organism which is in ETIOLOGY FIELD file (#61.2). This file will only allow organism which are either Bacterium, Fungus or Mycobacterium identifiers.

(1) Card Code For Organism: Enter the card code for this organism. It is usually a two digit Hex code.

(2) Drug (Subfile): This subfield contains a list of drugs which Card is capable of testing and reporting.

(.001) Number: Enter the number used by the instrument to identify the drug in uploaded data stream. Enter 1-99 matching the index from the instrument.

(.01) Drug: Field 4 under the existing multiple field Drug, called display order, has been added. This is to assist Micro in displaying the drugs in the order in which they come off the instrument.

(1) Drug node: Enter the drug name which the number corresponds to in File #62.06.

(2) PARAM1: Enter a MUMPS code string needed to convert/extract data into the variable V. This field is similar to Param 1 fields in other auto instruments. The name has been changed to prevent confusion in referring to the two fields.

(3) Card code: This is the code from the card to do the lookup on. On each card it is possible to have codes represent different messages or canned comments. This subfield identifies the relationship. Enter the code and the card upload data will be contained.

(2) Display Order: Enter a number from 1 to 100 for display order or 0 for file entry order.

(9) Section: Answer must be 2-30 characters in length.

(10) Bit Position: The bit (number of characters from the left) position where the drug is located.

(3) Message (Subfile): For each card code, there can be an associated message to represent that code. This subfield setup that relationship.

(.001) Number: Type a whole number between 1 and 99. This field represents the internal file number for this message. This number must be unique to the file.

(01) Code: Message code, 1-10 characters in length.

(2) Flag value: This field contains the flag value sent by the instrument with the upload data. Value if matches then include msg.

(3) Message: When the flag value is detected this message will be used. This field is similar to the LAB DESCRIPTION file (#62.5) and Expanded comments.

(70) INTERFACE NOTES : This word processing field contains notes on how to set up the instrument and other pertinent information on interfacing the instrument, entered by lab package developers.

(91) DOWNLOAD ENTRY: This field is used to indicate an entry point into the routine used to do the actual downloading of data to the instrument.

(92) DOWNLOAD PROTOCOL ROUTINE: This field is used to indicate the routine used to do the actual downloading of records to instrument.

(93) FILE BUILD ENTRY: This field is used to indicate the entry point into a routine that is used to reformat the worklist record for transmission and place it in the 0 nodes of the LA global.

(94) FILE BUILD ROUTINE: This field is the name of the routine which is used to reformat the worklist records for transmission.

(95) SEND TRAY/CUP LOCATION: This field will contain the default to the question, Send Tray/Cup location, used by the same Bidirectional routines.

(96) QUEUE BUILD: This field contains the Default answer to Queue to build Question.

(97) MICRO INTERPRETATION CHECK: This field specifies how the data being processed should be handled.

(100) METH NAME: Pointer to the method field of this file, and will be stuffed automatically. Refers to the statistical method used by the instrument.

(101) MEAN DATA VALUE 1: These fields should contain the expected mean values of the first, second, and third results.

(102) MEAN DATA VALUE 2: A group of three results to be used in the Bull Algorithm quality control calculations.

(103) MEAN DATA VALUE 3: A group of three results to be used in the MCV, MCH, and MCHC values from a CBC.

(105) MICRO AUTO APPROVAL METHOD: This field selects the method to be used with this instrument during verification. This entry will allow RPT DATE APPROVAL prompt during verification. The default is VS [Verify Supervisor]. If one wants the report to be released and verified, enter VS. Otherwise a supervisor must release the report before being verified and printed to the cumulative.

NOTE: This field is associated with the MICRO Approval Method field in the LAB REPORTS file (#64.5). Make sure they agree and are appropriate for your site. This field is only used for MICROBIOLOGY AUTOMATED INSTRUMENTS.

(106) DEFAULT AUTO MICRO TEST: This is the default Laboratory test name to be used to record workload for each organism when using the Automated Micro Instrument to verify test.

(107) SITE NOTES DATE (Subfile): Date of the note.

(.01) Site Notes Date: Date

(1) TEXT (Subfile): The actual text of the note. This is a word processing field.

(.01) Text: The actual text of the note.

LAB DESCRIPTIONS file (#62.5)

This LAB DESCRIPTIONS file (#62.5) is basically a dictionary of abbreviated codes or notations which are used in the laboratory repeatedly. Each one of the canned codes will expand to a full length message whenever the code is typed in at a "Select COMMENT:" prompt. Using these codes proves to be a great time saver for lab users, and is especially helpful to the Microbiology package (notorious for long, long names of bacteria and numerous comments on culture results). The Blood Bank and Anatomic Pathology modules use this file extensively as well.

A screen is associated with each description. Each field that uses these descriptions will check for a specific screen to determine whether or not to expand the entry (this check is performed by the input transform). Lab descriptions for Anatomic Pathology are used in a slightly different manner.

Field List

```
(.01) NAME
(.5) SYNONYM
(1) EXPANSION
(5) SCREEN
(6) SORTING GROUP
(9) PLURAL
(10) SPECIMEN DESCRIPTION
```

Fields Description

(.01) NAME: Enter a 1-9 character abbreviated notation or code for the description or comment. These are entered at any "Select COMMENT:" prompt in the system.

NOTE: Use the lab description code name to set up a particular type of shorthand notation or abbreviation for a commonly used comment in the lab. Ensure that the series of characters will not be found in normal free text comments. The characters chosen should be a very unique set of letters/numbers. For example, AND would be a very poor choice because it is found in normal sentences or comments.

Example: H might stand for HEMOLYZED, DS might stand for DUPLICATE SPECIMEN, etc.

Hints:
• You can also use these codes to enter comments about policies in your lab, or to avoid having extremely lengthy panels of tests.

Example: Your chemistry department has a policy of performing direct bilirubins ONLY if the total bilirubin result is high enough for it to be clinically significant.

You could make a lab descriptions code BILI, which when entered at the "Select COMMENT:" prompt for any accession, would expand out to read DIRECT BILIRUBINS ONLY DONE ON TOTAL VALUES 1.5 MG/DL.

• Keep in mind that the number of characters allowed for each expansion is 68, and that two or more codes may be entered (the COMMENT field is a multiple) by leaving a space between each code, but the two or more expansions must not be longer than 68 characters combined.

Example: You could enter H DS in the comment field together without problem, since the number of characters in HEMOLYZED plus the number of characters in DUPLICATE SPECIMEN add up to less than 68.

The next example might be for a Urinalysis panel. You have included all of the types of urine casts, crystals and other components you might expect to find as tests in the panel. This can make it a rather lengthy process in order to enter the urinalysis results, especially if there are a number of components found in a particular urine sediment. If you include abbreviations for all of the cast and crystal names as lab descriptions, the tech will be able to use these in combination to enter into the "Select COMMENT:" prompt. You could then shorten your existing Urinalysis panel.

Example: You enter the codes into the file to stand for HYALINE CASTS (HC) and TRI-PO4 CRYSTALS (TC), as well as having entries for FEW (F) and MANY (M). Instead of having to set hyaline casts and triple phosphate crystals up as tests or, if they already exist in File #60, include those tests on your Urinalysis panel, your techs can simply enter the appropriate combinations of lab descriptions codes in the COMMENT field (i.e., enter M HC F TC to expand out to read MANY HYALINE CASTS FEW TRI-PO4 CRYSTALS) and so reflect the urine microscopic findings for the accession. You could also define a descriptions code of MNP or MICROSCOPICS NOT PERFORMED ON CHEMICALLY NEGATIVE URINES for the techs to enter as a comment, if that is the policy of the lab.

(.5) SYNONYM: This is another name, notation, code, or abbreviation for the same comment. Must be 1-9 characters long and UNIQUE (not already in use as a name or synonym).

(1) EXPANSION: This is the comment in its fully expanded form. Expansion takes place immediately after entry of the code, both on the screen in the "Select Comment:" prompt and On patient reports, under COMMENTS.

(5) SCREEN: This field describes the type of screen this lab description is associated with,(i.e., gram stain, hematology, microbiology, accession comments, or smear/prep).

Test descriptions are classified using the following codes:

A - Order
C - AP, Accession Area Cyto
D - BB, Function Unit Disposition
E - AP, Accession Area EM

F - Fungus
G - Gram Stain
I - AP
J - BB, Function Audit
K - General
L - Lab
M - Micro
P - Parasite
R - BB, Function Unit Transfusion
S - AP, Accession Area Surg Path
T - TB
V - Virus
W - Smear
X - BB, Function Unit Testing
Y - Sputum Screen
Z - BB, Function Donor Collection

The screens are divided into the following categories:

I - AP	J - BB Audit	K - General	
C - AP Cyto	D - BB Disp	A - Order	F - Fungus
E - AP EM	R - BB Trans	L - Lab	G - Gram stain
S - AP SP	X - BB Testing	M - Micro	P - Parasite
	Z - BB Collect	T - TB	V - Virus
		W - Smear	Y - Sputum screen

A screen of I applies to any description that would use screens (C, E, or S) in Anatomic Pathology. Screen K applies to any of the other screens (A, L, etc.,). A description with no screen can be used throughout the Laboratory package.

(6) SORTING GROUP: An arbitrary category for the code, which can be used to designate departmental codes. Answer must be 1-15 characters long.

Example: Hematology may use a combination of H and A screened comments on a daily basis. This is very helpful when using VA FileMan sorts to printout customized lists of codes for the users.

(9) PLURAL: This is the correct plural form (spelling) of the code.

(10) SPECIMEN DESCRIPTION: A word processing (free text) field allowing a detailed description of a specimen to print out when the comment code is entered.
Descriptions in Anatomic Pathology are used in two ways:

1. Log-in for Cytology, Electron Microscopy or Surgical Pathology - When you enter a name from the LAB DESCRIPTION file that has the appropriate screen (C for Cyto, E for EM, S for SP or I for any of the three areas) in the SPECIMEN file, the contents of the Specimen Description field in the LAB DESCRIPTION file will be copied (invisibly to the user) into the Gross Description field for Cyto, EM or Surg Path in the patient s data. These fields are word processing fields and may have many lines of data. The following fields are affected:

SPECIMEN-(File #63, Field #2, Subfield #.012, Subfield #.01) will process to GROSS DESCRIPTION-(File #63, Field #2, Subfield #1, Subfield #.01)

SPECIMEN-(File #63, Field #9, Subfield #.012, Subfield #.01) will process to GROSS DESCRIPTION-(File #63, Field #9, Subfield #1, Subfield #.01)

2. The other use of descriptions occurs while editing the Microscopic Exam /Diagnosis field. If an entry is made in this field (preceded by an *) and is a name in the LAB DESCRIPTION file (#62.5) with an appropriate screen, then the Specimen Description field in the LAB DESCRIPTION file (#62.5) will be copied into the Microscopic Exam/Diagnosis field. Fields affected are:

MICROSCOPIC EXAM/DIAGNOSIS-File #63, Field #2, Subfield #1, Subfield #.01

MICROSCOPIC EXAM/DIAGNOSIS -File #63, Field #8, Subfield #1, Subfield #.01

MICROSCOPIC EXAM/DIAGNOSIS-File #63, Field #9, Subfield #1, Subfield #.01

Descriptions in Blood Bank are used in the following fields:

Screen D for Blood Bank disposition

DISPOSITION COMMENT	File #65, Field #5, Subfield #.01
COMPONENT DISPOSITION COMMENT	File #65.5, Field #5, Subfield #66, Subfield #1, Subfield #.01

Screen J for Blood Bank Audit

COMPONENT REQUEST REASON	File #63, Field #63.084,2.1

Screen R for Blood Bank Transfusion

TRANSFUSION COMMENT	File #63, Field #.085, Subfield #1, Subfield #.01
TRANSFUSION COMMENT	File #65, Field #7, Subfield #.01

Screen X for Blood Bank Testing

DIRECT AHG TEST COMMENT	File #63, Field #1, Subfield #2.91
ANTIBODY SCREEN COMMENT	File #63, Field #1, Subfield #8
ABO TESTING COMMENT	File #63, Field #1, Subfield #10.2
RH TESTING COMMENT	File #65.5, Field #5, Subfield #11.3
SYPHILIS SEROLOGY COMMENT	File #65.5, Field #5, Subfield #12.3
HBsAg COMMENT	File #65.5, Field #5, Subfield #13.3

HIV TESTING COMMENT	File #65.5, Field #5, Subfield #14.3
ANTIBODY SCREEN COMMENT	File #65.5, Field #5, Subfield #15.3
HBcAB TEST COMMENT	File #65.5, Field #5, Subfield #16.3
ALT TEST COMMENT	File #65.5, Field #5, Subfield #17.3

Screen Z for Blood Bank Collection

COLLECTION DISPOSITION COMMENT	File #65.5, Field #5, Subfield #6.2, Subfield .#01.

Descriptions in Microbiology are used in the following fields:

Screen M for Micro

PRELIMINARY BACT COMMENT	File #63, Field #5, Subfield #1, Subfield #.01
QUANTITY	File #63, Field #5, Subfield #12, Subfield #2, Subfield #.01
COMMENT	File #63, Field #5, Subfield #12, Subfield #2, Subfield #.01
BACT RPT REMARK	File #63, Field #5, Subfield #12, Subfield #13, Subfield #.01

Screen Y for Sputum screen

SPUTUM SCREEN	File #63, Field #5, Subfield #11.58

Screen G for Gram stain

GRAM STAIN	File #63, Field #5, Subfield #11.6, Subfield #.01

Screen W for Smear

BACTERIOLOGY SMEAR/PREP	File #63, Field #5, Subfield #11.7, Subfield #.001
PARASITOLOGY SMEAR/PREP	File #63, Field #5, Subfield #15.51, Subfield #.01
MYCOLOGY SMEAR/PREP #.01	File #63, Field #5, Subfield #19.6, Subfield

Screen P for Parasite

QUANTITY	File #63, Field #5, Subfield #16, Subfield #1, Subfield #1
COMMENT	File #63, Field #5, Subfield #16, Subfield #1, Subfield #2, Subfield #.01
PRELIMINARY PARASITE COMMENT	File #63, Field #5, Subfield #17, Subfield #.01
PARASITE RPT REMARK	File #63, Field #5, Subfield #17, Subfield #.01

Screen F for Fungus

QUANTITY	File #63, Field #5, Subfield #20, Subfield #1
COMMENT	File #63, Field #5, Subfield #20, Subfield #2, Subfield .#01
PRELIMINARY MYCOLOGY COMMENT	File #63, Field #5, Subfield #20.5, Subfield #.01
MYCOLOGY RPT REMARK	File #63, Field #5, Subfield #21, Subfield #.01
TB RPT REMARK	File #63, Field #5, Subfield #27, Subfield #.01

Screen V for Virus

PRELIMINARY VIROLOGY COMMENT	File #63, Field #5, Subfield #36.5 Subfield #.01
VIROLOGY RPT REMARK	File #63, Field #5, Subfield #37, Subfield #.01

Other descriptions are used in the following fields:

Screen L for Lab

COMMENT	File #63, Field #4, Subfield #.99, Subfield #.01

AGGLUTINATIONS STRENGTHS file (#62.55)

This AGGLUTINATIONS STRENGTHS file (#62.55) contains a list of all strengths of reactions, including a description of the reaction as described in the Technical Manual of the American Association of Blood Banks.

Field List

```
(.01) NAME
(1) WILL STAND FOR
```

Fields Description

(.01) NAME: The shorthand notation of agglutination strength.

(1) WILL STAND FOR: The full description of the agglutination strength.

ACCESSION TEST GROUP file (#62.6)

The ACCESSION TEST GROUP file (#62.6) is used to define predetermined sets or groups of laboratory tests which will expedite the ordering and accessioning of the most commonly or frequently requested tests performed in your laboratory. The groups which are created as entries in this file will be available for use with any of the Multipurpose accessioning Fast Bypass Data Entry/Verify [LRQUICK] or Fast lab test order [LRFASTS] options used to order and accession test requests into the laboratory by various pathways. Each group is defined in this file, and can be arranged according to lab (accession) area, groups of tests usually ordered together, or specialized groups of tests (e.g., an admitting profile or a presurgical profile).

Field List

```
(.001) NUMBER
(.01) ACCESSION TEST GROUP
(.02) LAB SECTION
(.03) LAB ONLY
(.04) LAB COLLECT ONLY
(1) TEST (Subfile 62.61)
(.001) Number
(.01) Test
(1) Test Name
(2) Collection Sample
(3) Sample Name
(4) Specimen
(5) *Label
```

NOTE: This file is exported on a global tape. If this is the first installation of Lab on your system, you MUST read in the global tape.

Fields Description

(.001) NUMBER: The internal number.

(.01) ACCESSION TEST GROUP: The entry in this field has to be between 3-30 characters. This is the title you give to a grouping of tests you may predefine to be associated with specific collection samples. The tests you choose for these groupings will appear as numbered choices on certain Fast lab test order option screens.

(.02) LAB SECTION: This is a required field which MUST contain an entry that exists in the LAB SECTION file (#62.2). This entry does not limit your choice of tests that you will be able to add to this particular accession test group. You can have an entry of the lab section Chemistry & Toxicology and still have Hematology tests appear on your numbered screen.

NOTE: Exception - if Microbiology is the lab section entry, ONLY micro tests may be added to appear on the accession test group.

(.03) LAB ONLY: If you want to create a series of accession test groups and have some or most of them available for use ONLY by holders of the LRLAB security key (i.e., not the ward or clinic users), then entering a 1 for "YES" in this field will allow you to do so.

(.04) LAB COLLECT ONLY: If this accession test group is to be used for routine lab collects (i.e., tests ordered from this group will appear on the routine morning collection list), enter a "YES". Leave blank otherwise.

(1) TEST (Subfile): This is a multiple field which will allow you to choose the tests to be included in the group, rename the tests as you would like them to appear on the screen to users and specify the associated collection samples. This will provide additional help to users ordering tests, as they will be able to see the sample name on the screen. The name of these tests must exist in File #60, either as individual (atomic) or panel/profile (cosmic) tests. If you will be using the same test more than once on the same test group, but wish to change the collection sample associated with the test, you may enter duplicate test names in quotes.

(.001) Number: The internal number. Type a whole number between 1 and 999. Enter the number to be associated with the test. This number will determine the display order of the tests as they appear to the user/ordering person.

(.01) Test: This field specifies all tests included in this accession group. You may use this field to rename the test above to what you would like to have appear on the test group screen. (Think of it as a display name.) You may choose to simply rename the test.

Example: THYROID PANEL in File #60 could be displayed as T3/T4/FTI on the screen or you could change the display name to reflect the appropriate specimen type for the test number chosen.

Example: Changing the File #60 name of GLUCOSE to display as GLUCOSE SERUM.

(1) Test Name: Triggered by the Test field.

(2) Collection Sample: This field contains the correct collection sample for this test. This field points to COLLECTION SAMPLE file (#62) and must contain an existing entry from that file. The sample entry also determines the default specimen type for the test ordered from the test group.

(3) Sample Name: Triggered by the Collection Sample field. This entry is triggered (or automatically stuffed by the system) by the entry in the Collection Sample field above. The sample name will appear as the default prompt for this field.

(4) Specimen: Triggered by the Collection Sample field. This entry is also triggered by the default specimen type associated with the Collection sample field entry above.

(5) *Label: This field is used as a quick lookup reference in Albany routines. It has an "AC" cross reference. This field will be deleted in a later version.

Hints

• Be careful which types of tests you choose to place onto each accession test group screen as numbered choice, as these screens are used when tests are ordered through any of the Fast lab test order options (outside the lab). If you list a test whose collection sample is NEVER collected by your phlebotomy team as a numbered choice, it will show up, if selected, on your collection list anyway. Additionally, you may choose to make a number of common tests done on different specimens available on one screen, to make it easier for the ordering of a group of commonly ordered tests (e.g., CBC, PT, PTT, Chem 7, Amylase, and Urinalysis) on a patient at the same time. (Of course, you will have trained them to order this particular set of tests as WARD COLLECT or SEND PATIENT, since the Urinalysis can not be ordered for ROUTINE collection.

☛**WARNING:** If a test of type NEITHER or OUTPUT is listed as a numbered choice in the accession test group, it can be ordered by users, regardless of what lab security keys are held.

• The Test field is triggered by the name of the test you have entered into the TEST field to be included as part of the accession test group as a numbered choice. You can enter any name you wish here which might more accurately reflect the nature of the test to the person who is ordering from the screen, or, in other words, create a display name for the numbered choice.

If, for instance, your serology department has a panel named Strep identification panel, but the physicians and ward clerks refer to any type of strep antibody test as ASO titer, you could enter ASO titer as the test name for that test. The numbered choice that would appear on the screen would be ASO TITER.

Example: When the test which the physicians choose to order is a CBC but the name they use is Blood count, the ward clerk ordering the test would not recognize that CBC and Blood count are the same test. You could enter Blood count as the TEST NAME for the CBC choice so the screen will display the numbered choice as Blood count.

Example: The clerks are consistently ordering the test VDRL instead of RPR for routine admission testing. You could either:

a) remove the test VDRL from the test grouping, or

b) leave the test VDRL on the screen and rename the RPR test to read RPR(ADMIT),or

c) have only one entry of RPR on the screen as the display name, which will point to a panel test consisting of the tests RPR and VDRL. Therefore, when the clerk orders the numbered RPR both tests are actually being ordered as part of a panel).

As you can see, there are many possibilities for how to setup the ordering screens to make it easier for the ward personnel to order the correct test. This will save time for the Lab, by not having to track down the reason why an incorrect test was ordered.

LAB DATA file (#63)

☛**WARNING:** Since the LAB DATA file (#63) contains verified laboratory patient data, you should NOT edit it unless you are very familiar with FileManager.

The LAB DATA file (#63) is the storage file for all laboratory patient data. This file defines where the data are stored for each patient in the global ^LR. The file is divided into the following sections (subscripts): Blood Bank, Chem-Hem-Tox-RIA-Ser-etc., Microbiology, Surgical Pathology, EM, Cytopathology, and Autopsy. Each section has its own set of fields which actually are the individual tests included within each specific section. The file is supplied with many fields for each section. Changes in this file may cause database degrades or inconsistencies leading to serious errors and the possibility of not being able to upgrade your system in the future, if standard VA conventions for file numbering are not used. Each individual test (atomic) in the LABORATORY TEST file requires a Data Name entry in this file.

If exported data names are modified, make a list of those data names that you edited. The next version of the Laboratory package software may overwrite your modifications. Refer to the section on Adding Data Names, to prevent overwriting by the new version of Lab.

<u>Field List</u>

```
(.01) LRDFN
(.02) PARENT FILE
(.03) NAME
(.04) DO NOT TRANSFUSE
(.05) ABO GROUP
(.06) RH TYPE
(.07) RBC ANTIGENS PRESENT(other) (Subfile 63.13)
(.01) RBC ANTIGENS PRESENT
(.02) RBC ANTIGENS PRESENT COMMENT
(.075) ANTIBODIES IDENTIFIED (Subfile 63.075)
(.01) ANTIBODIES IDENTIFIED
(.02) ANTIBODIES IDENTIFIED COMMENT
(.076) BLOOD BANK COMMENTS (Subfile 63.076)
(.01) BLOOD BANK COMMENTS
(.08) RBC ANTIGENS ABSENT(other) (Subfile 63.016)
(.01) RBC ANTIGENS ABSENT
(.02) RBC ANTIGENS ABSENT COMMENT
(.084) BLOOD COMPONENT REQUEST (Subfile 63.084)
(.01) BLOOD COMPONENT REQUEST
(.02) PREOP REQUEST
(.03) REQUEST DATE/TIME
(.04) NUMBER OF UNITS
(.05) DATE/TIME UNITS WANTED
```

```
(.06) PREVIOUS TRANSFUSIONS
(.07) PREVIOUS TRANSFUSION REACTION
(.08) ENTERING PERSON
(.09) REQUESTING PERSON
(1) UNITS SELECTED FOR XMATCH (Subfile 63.0841)
(.01) UNIT SELECTED FOR XMATCH
(.02) INVERSE SPECIMEN DATE
(2.1) COMPONENT REQUEST REASON
(2.2) APPROVED BY
(2.3) TREATING SPECIALTY
(.085) TRANSFUSION RECORD (Subfile 63.017)
(.01) TRANSFUSION DATE/TIME
(.02) COMPONENT
(.03) COMPONENT ID
(.04) ENTERING PERSON
(.05) ABO
(.06) RH
(.07) UNITS POOLED
(.08) TRANSFUSION REACTION
(.09) DATA ENTERED VIA OLD RECORDS
(.1) VOL(ml) TRANSFUSED
(.11) TRANSFUSION REACTION TYPE
(1) TRANSFUSION COMMENT (Subfile 63.186)
(.01) TRANSFUSION COMMENT
(2) CROSSMATCH COMMENT (Subfile 63.027)
(.01) CROSSMATCH COMMENT
(.086) TRANSFUSION REACTION DATE (Subfile 63.0171)
(.01) TRANSFUSION REACTION DATE
(.02) TRANSFUSION REACTION TYPE
(.03) PERSON ENTERING REACTION
(1) TRANSFUSION REACTION COMMENT (Subfile 63.172)
(.01) TRANSFUSION REACTION COMMENT
(.09) HOSPITAL ID
(.091) PAT. INFO.
(.092) LOCATION TYPE
(.1) REPORT ROUTING (LOCATION)
(.101) REPORT ROUTING (PROVIDER)
(.11) CUMULATIVE REPORT PAGES (Subfile 63.03)
(.01) CUMULATIVE REPORT PAGES
(1) PAGE
(.2) HLA ANTIGENS PRESENT (Subfile 63.14)
(.01) HLA ANTIGEN PRESENT
(.02) HLA ANTIGEN PRESENT COMMENT
(.21) HLA ANTIGENS ABSENT (Subfile 63.141)
(.01) HLA ANTIGENS ABSENT
(.02) HLA ANTIGEN ABSENT COMMENT
(1) BLOOD BANK (Subfile 63.01)
(.01) DATE/TIME SPECIMEN TAKEN
(.03) DATE REPORT COMPLETED
(.04) ENTERING PERSON
(.05) SPECIMEN
(.055) COLLECTION SAMPLE
(.06) ACCESSION NUMBER
(.07) PHYSICIAN
 (.08) WARD
(.090 PHLEBOTOMIST
(.1) DATE/TIME RECEIVED
(.99) SPECIMEN COMMENT (Subfile 63.199)
(.01) SPECIMEN COMMENT
(2.1) DIRECT AHG(POLYSPECIFIC)
```

```
(2.2) DIRECT AHG(5 min incub)
(2.3) DIRECT AHG CC
(2.4) ANTI-IgG
(2.5) ANTI-IgG CC
(2.6) ANTI-COMPLEMENT
(2.7) ANTI-COMPLEMENT (5 min incub)
(2.8) ANTI-COMPLEMENT CC
(2.9) DIRECT AHG INTERPRETATION
(2.91) DIRECT AHG TEST COMMENT
(3) ELUATE ANTIBODY (Subfile 63.012)
(.01) ELUATE ANTIBODY
(4) SCREEN CELL METHOD (Subfile 63.014)
(.01) SCREEN CELL METHOD
(.02) TECHNIQUE
(1) SCREEN CELL (Subfile 63.015)
(.01) SCREEN CELL
(.02) SOURCE
(.03) INTERPRETATION
(.04) IS
(.05) 37 C
(.06) AHG
(.07) CONTROL CELL
(.08) ROOM TEMP
(.09) 12-18 C
(.1) 4 C
(6) ANTIBODY SCREEN INTERPRETATION
(6.1) RBC ANTIGEN PRESENT (Subfile 63.011)
(.01) RBC ANTIGEN PRESENT
(.02) COMMENT
(6.2) RBC ANTIGEN ABSENT (Subfile 63.0112)
(.01) RBC ANTIGEN ABSENT
(.02) COMMENT
(6.3) HLA ANTIGEN PRESENT (Subfile 63.013)
(.01) HLA ANTIGEN PRESENT
(.02) COMMENT
(6.4) HLA ANTIGEN ABSENT (Subfile 63.0114)
(.01) HLA ANTIGEN ABSENT
(.02) COMMENT
(7) SERUM ANTIBODY (Subfile 63.46)
(.01) SERUM ANTIBODY
(.02) ANTIBODY COMMENT
(8) ANTIBODY SCREEN COMMENT (Subfile 63.48)
(.01) ANTIBODY SCREEN COMMENT
(9) RBC TYPING METHOD (Subfile 63.018)
(.01) RBC TYPING METHOD
(.02) TECHNIQUE
(1) ANTISERUM (Subfile 63.019)
(.01) ANTISERUM
(.02) LOT #
(.03) INTERPRETATION
(.04) IS
(.05) 37 C
(.06) AHG
(.07) CONTROL CELL
(.08) ROOM TEMP
(.09) 12-18 C
(.1) 4 C
(10) ABO INTERPRETATION
(10.2) ABO TYPING TECH
(10.3) ABO TESTING COMMENT
```

```
(11) RH  INTERPRETATION
(11.2) RH TYPING TECH
(11.3) RH TESTING COMMENT
(121) PT CELLS+ANTI D (sal)
(122) PT CELLS+RH CTRL (sal)
(123) PT CELLS(sal)+ANTI D(hp IS)
(124) PT CELLS(ser)+ANTI D(hp IS)
(125) PT CELLS+ANTI D (hp 37)
(126) PT CELLS+ANTI D (hp AHG)
(127) PT CELLS+ANTI D SLIDE (hp)
(128) PT CELLS(sal)+RH CTRL (hp IS)
(129) PT CELLS(ser)+RH CTRL(hp IS)
(129.1) PT CELLS+RH CTRL (hp 37)
(129.11) PT CELLS+RH CTRL (hp AHG)
(129.12) PT CELLS+RH CTRL SLIDE (hp)
(131) INTERPRETATION OF RH TESTING
(132) RH TEST COMMENT
(1330 PT Cells(sal)+Anti D(mod) IS
(134) PT Cells(ser)+Anti D(mod) IS
(135) PT Cells+Anti D(mod) 37
(136) PT Cells+Anti D(mod) AHG
(138) PT Cells(sal)+RH Ctrl(sal) IS
(139) PT Cells(ser)+RH Ctrl(sal) IS
(139.1) PT Cells+RH Ctrl(sal) 37
(139.110 PT Cells+RH Ctrl(sal) AHG
(141) PT CELLS(ser)+ANTI A IS
(142) PT CELLS(sal)+ANTI A IS
(143) PT CELLS+ANTI A SLIDE
(144) PT CELLS(ser)+ANTI B IS
(145) PT CELLS(sal)+ANTI B IS
(146) PT CELLS+ANTI B SLIDE
(147) PT CELLS(ser)+ANTI A,B IS
(148) PT CELLS(ser)+ANTI A,B (RT)
(149) PT CELLS(sal)+ANTI A,B (IS)
(149.1) PT CELLS(sal)+ANTI A,B (RT)
(149.11) PT CELLS+ANTI A,B SLIDE
(149.12) PT SERUM+A1 CELLS
(149.13) PT SERUM+B CELLS
(151) INTERPRETATION OF ABO TESTING
(152) ABO TESTING COMMENT
(153) INTERPRETATION ABO GROUP(cell)
(154) INTERPRETATION ABO GROUP(ser)
(2) EM (Subfile 63.02)
(.01) DATE/TIME SPECIMEN TAKEN
   (.011) SPECIMEN SUBMITTED BY
   (.012) SPECIMEN (Subfile 63.202)
     (.01) SPECIMEN
     (1)    EPON BLOCK (Subfile 63.2021)
       (.01)  EPON BLOCK
       (.02)  DATE/TIME BLOCK PREPARED
       (.03)  BLOCK COUNTED
       (1)    EM PROCEDURE (Subfile 63.20211)
         (.01)  EM PROCEDURE
         (.02)  SECTIONS PREPARED(#)
         (.04)  DATE/TIME SECTIONS PREPARED
         (.05)  DATE/TIME SECTIONS EXAMINED
         (.06)  SECTIONS COUNTED(#)
         (.07)  NEW SECTIONS
         (.08)  SECTIONS EXAMINED(#)
         (.09)  EXAMINED SECTIONS COUNTED(#)
```

```
          (.1)   PRINTS MADE(#)
          (.11)  DATE/TIME PRINTS MADE
          (.12)  PRINTS COUNTED(#)
   (.013) BRIEF CLINICAL HISTORY (Subfile 63.213)
     (.01)  BRIEF CLINICAL HISTORY
   (.014) PREOPERATIVE DIAGNOSIS (Subfile 63.214)
     (.01)  PREOPERATIVE DIAGNOSIS
   (.015) OPERATIVE FINDINGS (Subfile 63.205)
     (.01)  OPERATIVE FINDINGS
   (.016) POSTOPERATIVE DIAGNOSIS (Subfile 63.206)
     (.01)  POSTOPERATIVE DIAGNOSIS
   (.02)  PATHOLOGIST
   (.021) RESIDENT OR EMTECH
   (.03)  DATE REPORT COMPLETED
   (.06)  ACCESSION #
   (.07)  PHYSICIAN
   (.08)  PATIENT LOCATION
   (.09)  TYPIST
   (.1)   DATE/TIME SPECIMEN RECEIVED
   (.11)  REPORT RELEASE DATE
   (.13)  RELEASED BY
          (.14)  TC CODE
   (.15)  ORIGINAL RELEASE DATE
   (.99)  COMMENT (Subfile 63.208)
     (.01)  COMMENT
   (1)    GROSS DESCRIPTION (Subfile 63.201)
     (.01)  GROSS DESCRIPTION
   (1.1)  MICROSCOPIC EXAM/DIAGNOSIS (Subfile 63.211)
     (.01)  MICROSCOPIC EXAM/DIAGNOSIS
   (1.2)  SUPPLEMENTARY REPORT (Subfile 63.207)
    (.01)  SUPPLEMENTARY REPORT DATE/TIME
     (.02)  RELEASE SUPPLEMENTARY REPORT
     (1)    DESCRIPTION (Subfile 63.218)
(.01)  DESCRIPTION
   (4)    DATE MICRO EXAM/DX MODIFIED (Subfile 63.242)
     (.01)  DATE MICRO EXAM/DX MODIFIED
     (.02)  PERSON MODIFYING TEXT
     (1)    PREMODIFICATION TEXT (Subfile 63.243)
       (.01)  PREMODIFICATION TEXT
   (9)    QA CODE (Subfile 63.029)
     (.01)  QA CODE
   (10)   EM ORGAN/TISSUE (Subfile 63.212)
     (.001) NUMBER
     (.01)  EM ORGAN/TISSUE
     (1)    FUNCTION (Subfile 63.285)
       (.01)  FUNCTION
     (1.5)  PROCEDURE (Subfile 63.282)
       (.01)  PROCEDURE
       (.02)  RESULT
     (3)    DISEASE (Subfile 63.215)
       (.01)  DISEASE
     (4)    MORPHOLOGY (Subfile 63.216)
       (.01)  MORPHOLOGY
       (1)    ETIOLOGY (Subfile 63.217)
         (.01)  ETIOLOGY
     (5)    SPECIAL STUDIES (Subfile 63.219)
       (.01)  SPECIAL STUDIES
       (.02)  DATE
       (.03)  ID #
       (1)    DESCRIPTION (Subfile 63.221)
```

```
        (.01)  DESCRIPTION
   (80)   ICD9CM CODE (Subfile 63.203)
     (.01)  ICD9CM CODE
 (4)    CHEM, HEM, TOX, RIA, SER, etc. (Subfile 63.04)
   (.01)  DATE/TIME SPECIMEN TAKEN
   (.02)  DATE/TIME OBTAINED INEXACT
   (.03)  DATE REPORT COMPLETED
   (.04)  VERIFY PERSON
   (.05)  SPECIMEN TYPE
   (.06)  ACCESSION
   (.07)  *VOLUME
   (.08)  METHOD OR SITE
   (.09)  SUM REPORT NUM.
   (.1)   REQUESTING PERSON
   (.11)  REQUESTING LOCATION
   (.12) NEW PERSON CONVERSION
   (.99)  COMMENT (Subfile 63.041)
     (.01)  COMMENT
     (1)    PERSON
```

Site Definable Fields

```
 (5)    MICROBIOLOGY (Subfile 63.05)
  (.01)  DATE/TIME SPECIMEN TAKEN
   (.02)  DATE/TIME OBTAINED INEXACT
   (.03)  DATE REPORT COMPLETED
   (.04)  VERIFY PERSON
    (.05)  SITE/SPECIMEN
    (.055) COLLECTION SAMPLE
    (.06)  MICROBIOLOGY ACCESSION
    (.07)  PHYSICIAN
    (.08)  WARD
    (.09)  AMENDED REPORT
    (.1)   DATE/TIME RECEIVED
    (.99)  COMMENT ON SPECIMEN
    (1)    PRELIMINARY BACT COMMENT (Subfile 63.06)
      (.01)  PRELIMINARY BACT COMMENT
    (1.5)  BACTERIOLOGY TEST(S) (Subfile 63.061)
      (.01)  BACTERIOLOGY TEST(S)
    (11)   BACT RPT DATE APPROVED
    (11.5) BACT RPT STATUS
    (11.51) STERILITY CONTROL
    (11.52) STERILITY RESULTS (Subfile 63.292)
      (.001) NUMBER
      (.01)  STERILITY RESULTS
    (11.55) BACT PERSON
    (11.56) MIC PERSON
    (11.57) URINE SCREEN
    (11.58) SPUTUM SCREEN
    (11.6) GRAM STAIN (Subfile 63.29)
      (.01)  GRAM STAIN
    (11.7) BACTERIOLOGY SMEAR/PREP (Subfile 63.291)
      (.01)  BACTERIOLOGY SMEAR/PREP
    (12)   ORGANISM (Subfile 63.3)
      (.001) ISOLATE NUMBER
      (.01)  ORGANISM
      (1)    QUANTITY
      (1.3)  SIT #1
      (1.4)  SBT #1
      (1.5)  DRAW TIME #1 (SIT,SBT)
      (1.6)  SIT #2
      (1.7)  SBT #2
```

```
  (1.8)  DRAW TIME #2 (SIT,SBT)
  (2)    COMMENT (Subfile 63.31)
   (.01)  COMMENT
  (5)    NEOMYCIN
  (5.1)  NEOMYCIN INTERP
  (5.2)  NEOMYCIN SCREEN
  (10)   BACITRACIN
  (10.1) BACITRACIN INTERP
  (10.2) BACITRACIN SCREEN
  (15)   PENICILLIN
  (15.1) PENICILLIN INTERP
  (15.2) PENICILLIN SCREEN
  (157)  CEFUROXIME
  (157.1) CEFUROXIME INTERP
  (157.2) CEFUROXIME SCREEN
  (158)  CEFTIZOXIME
  (158.1) CEFTIZOXIME INTERP
  (158.2) CEFTIZOXIME SCREEN
  (159)  SPECTINOMYCIN
  (159.1) SPECTINOMYCIN INTERP
  (159.2) SPECTINOMYCIN SCREEN
  (160)  TRIMETHOPRIM
  (160.1) TRIMETHOPRIM INTERP
  (160.2) TRIMETHOPRIM SCREEN
  (200)  ANTIBIOTIC (Subfile 63.32)
    (.01)  ANTIBIOTIC
    (1)    MIC(ug/ml)
    (2)    MBC(ug/ml)
(13)   BACT RPT REMARK (Subfile 63.33)
  (.01)  BACT RPT REMARK
(14)   PARASITE RPT DATE APPROVED
(15)   PARASITE RPT STATUS
(15.5) PARASITE ENTERING PERSON
(15.51) PARASITOLOGY SMEAR/PREP (Subfile 63.341)
  (.01)  PARASITOLOGY SMEAR/PREP
(16)   PARASITE (Subfile 63.34)
  (.001) ISOLATE NUMBER
  (.01)  PARASITE
  (1)    STAGE (Subfile 63.35)
   (.01)  STAGE
    (1)    QUANTITY
    (2)    COMMENT (Subfile 63.351)
      (.01)  COMMENT
(16.4) PARASITE TEST(S) (Subfile 63.361)
  (.01)  PARASITE TEST(S)
(16.5) PRELIMINARY PARASITE COMMENT (Subfile 63.1)
  (.01)  PRELIMINARY PARASITE COMMENT
(17)   PARASITE RPT REMARK (Subfile 63.36)
  (.01)  PARASITE RPT REMARK
(18)   MYCOLOGY RPT DATE APPROVED
(19)   MYCOLOGY RPT STATUS
(19.5) MYC PERSON
(19.6) MYCOLOGY SMEAR/PREP (Subfile 63.371)
  (.01)  MYCOLOGY SMEAR/PREP
(20)   FUNGUS/YEAST (Subfile 63.37)
  (.001) ISOLATE NUMBER
  (.01)  FUNGUS/YEAST
  (1)    QUANTITY
  (2)    COMMENT (Subfile 63.372)
    (.01)  COMMENT
```

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    (20.4) MYCOLOGY TEST(S) (Subfile 63.111)
      (.01)  MYCOLOGY TEST(S)
    (20.5) PRELIMINARY MYCOLOGY COMMENT (Subfile 63.11)
      (.01)  PRELIMINARY MYCOLOGY COMMENT
    (21)   MYCOLOGY RPT REMARK (Subfile 63.38)
      (.01)  MYCOLOGY RPT REMARK
    (22)   TB RPT DATE APPROVED
    (23)   TB RPT STATUS
    (24)   ACID FAST STAIN
    (25)   QUANTITY
    (25.5) TB ENTERING PERSON
    (26)   MYCOBACTERIUM (Subfile 63.39)
      (.001) ISOLATE NUMBER
      (.01)  MYCOBACTERIUM
      (1)    QUANTITY
      (2)    COMMENT (Subfile 63.4)
        (.01)  COMMENT
     (5)    STR
     (10)   PAS
     (15)   INH
     (20)   ETH
     (25)   RIF
     (30)   KANAMYCIN
     (35)   CAPREOMYCIN
     (40)   CYCLOSERINE
     (45)   ETHIONAMIDE
     (50)   PYRAZINAMIDE
     (55)   MIOMYCIN
   (26.4) TB TEST(S) (Subfile 63.181)
     (.01)  TB TEST(S)
   (26.5) PRELIMINARY TB COMMENT (Subfile 63.18)
     (.01)  PRELIMINARY TB COMMENT
   (27)   TB RPT REMARK (Subfile 63.41)
     (.01)  TB RPT REMARK
   (28)   ANTIBIOTIC LEVEL (Subfile 63.42)
     (.01)  ANTIBIOTIC(for SERUM LEVEL)
     (1)    DRAW TIME
     (2)    CONC(ug/ml)
  (33)   VIROLOGY RPT DATE
   (34)   VIROLOGY REPORT STATUS
   (35)   VIROLOGY ENTERING PERSON
   (36)   VIRUS (Subfile 63.43)
     (.001) ISOLATE NUMBER
     (.01)  VIRUS
   (36.4) VIROLOGY TESTS (Subfile 63.432)
     (.01)  VIROLOGY TESTS
   (36.5) PRELIMINARY VIROLOGY COMMENT (Subfile 63.431)
     (.01)  PRELIMINARY VIROLOGY COMMENT
   (37)   VIROLOGY RPT REMARK (Subfile 63.44)
     (.01)  VIROLOGY RPT REMARK
   (38)   NEW PERSON CONVERSION
 (8)    SURGICAL PATHOLOGY (Subfile 63.08)
   (.01)  DATE/TIME SPECIMEN TAKEN
   (.011) SPECIMEN SUBMITTED BY
   (.012) SPECIMEN (Subfile 63.812)
     (.01)  SPECIMEN
     (.02)  SURGICAL WORKLOAD PROFILE
     (.03)  GROSS DESCRIPTION/CUTTING DATE
     (.04)  GROSS DESCRIPTION/CUTTING TYPE
     (.05)  GROSS DESCRIPTION COUNTED
```

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    (1)    PARAFFIN BLOCK (Subfile 63.8121)
      (.01)  PARAFFIN BLOCK ID
      (.02)  DATE/TIME BLOCK PREPARED
      (.03)  BLOCK COUNTED
      (1)    STAIN/PROCEDURE (Subfile 63.8122)
        (.01)  STAIN/PROCEDURE
        (.02)  SLIDES PREPARED (#)
        (.03)  CONTROL SLIDES (#)
        (.04)  DATE/TIME SLIDES STAINED
        (.05)  DATE/TIME SLIDES EXAMINED
        (.06)  SLIDES COUNTED (#)
        (.07)  LABELS TO PRINT
    (2)    PLASTIC BLOCK (Subfile 63.822)
      (.01)  PLASTIC  BLOCK ID
      (.02)  DATE/TIME BLOCK PREPARED
      (.03)  BLOCK COUNTED
      (1)    PLASTIC STAIN/PROCEDURE (Subfile 63.823)
        (.01)  PLASTIC STAIN/PROCEDURE
        (.02)  PLASTIC SLIDES PREPARED (#)
        (.03)  CONTROL SLIDES (#)
        (.04)  DATE/TIME SLIDES STAINED
        (.05)  DATE/TIME SLIDES EXAMINED
        (.06)  SLIDES COUNTED (#)
        (.07)  LABELS TO PRINT
    (3)    FROZEN TISSUE BLOCK (Subfile 63.824)
      (.01)  FROZEN  TISSUE ID
      (.02)  DATE/TIME FROZEN PREPARED
      (.03)  FROZEN COUNTED
      (.04)  FROZEN TISSUE BLOCK TYPE
      (1)    STAIN/PROCEDURE (Subfile 63.825)
        (.01)  STAIN/PROCEDURE
        (.02)  SLIDES PREPARED (#)
        (.03)  CONTROL SLIDES (#)
        (.04)  DATE/TIME SLIDES STAINED
        (.05)  DATE/TIME SLIDES EXAMINED
        (.06)  SLIDES COUNTED (#)
        (.07)  LABELS TO PRINT
  (.013) BRIEF CLINICAL HISTORY (Subfile 63.813)
    (.01)  BRIEF CLINICAL HISTORY
  (.014) PREOPERATIVE DIAGNOSIS (Subfile 63.814)
    (.01)  PREOPERATIVE DIAGNOSIS
  (.015) OPERATIVE FINDINGS (Subfile 63.815)
    (.01)  OPERATIVE FINDINGS
  (.016) POSTOPERATIVE DIAGNOSIS (Subfile 63.816)
    (.01)  POSTOPERATIVE DIAGNOSIS
  (.02)  PATHOLOGIST
  (.021) RESIDENT PATHOLOGIST
  (.03)  DATE REPORT COMPLETED
  (.06)  SURGICAL PATH ACC #
  (.07)  SURGEON/PHYSICIAN
  (.08)  PATIENT LOCATION
  (.09)  TYPIST
  (.1)   DATE/TIME SPECIMEN RECEIVED
  (.11)  REPORT RELEASE DATE/TIME
  (.13)  RELEASED BY
  (.14)  TC CODE
  (.15)  ORIGINAL RELEASE DATE
  (.99)  COMMENT (Subfile 63.98)
    (.01)  COMMENT
  (1)    GROSS DESCRIPTION (Subfile 63.81)
```

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    (.01)  GROSS DESCRIPTION
  (1.1)  MICROSCOPIC EXAM/DIAGNOSIS (Subfile 63.811)
    (.01)  MICROSCOPIC EXAM/DIAGNOSIS
  (1.2)  SUPPLEMENTARY REPORT (Subfile 63.817)
    (.01)  SUPPLEMENTARY REPORT DATE/TIME
    (.02)  RELEASE SUPPLEMENTARY REPORT
    (1)    DESCRIPTION (Subfile 63.818)
      (.01)  DESCRIPTION
  (1.3)  FROZEN SECTION (Subfile 63.801)
    (.01)  FROZEN SECTION
  (4)    DATE MICRO EXAM/DX MODIFIED (Subfile 63.84)
    (.01)  DATE MICRO EXAM/DX MODIFIED
    (.02)  PERSON MODIFYING TEXT
    (1)    PREMODIFICATION TEXT (Subfile 63.841)
      (.01)  PREMODIFICATION TEXT
  (9)    QA CODE (Subfile 63.089)
    (.01)  QA CODE
  (10)   ORGAN/TISSUE (Subfile 63.12)
    (.001) NUMBER
    (.01)  ORGAN/TISSUE
    (1)    FUNCTION (Subfile 63.85)
      (.01)  FUNCTION
    (1.5)  PROCEDURE (Subfile 63.82)
      (.01)  PROCEDURE
      (.02)  RESULT
    (2)    WEIGHT (gm)
    (3)    DISEASE (Subfile 63.15)
      (.01)  DISEASE
     (4)   MORPHOLOGY (Subfile 63.16)
      (.01)  MORPHOLOGY
      (1)    ETIOLOGY (Subfile 63.17)
        (.01)  ETIOLOGY
    (5)    SPECIAL STUDIES (Subfile 63.819)
     (.01)  SPECIAL STUDIES
      (.02)  DATE
      (.03)  ID #
    (1)    DESCRIPTION (Subfile 63.821)
        (.01)  DESCRIPTION
  (80)   ICD DIAGNOSIS (Subfile 63.88)
    (.01)  ICD DIAGNOSIS
(9)    CYTOPATHOLOGY (Subfile 63.09)
  (.01)  DATE/TIME SPECIMEN TAKEN
  (.011) SPECIMEN SUBMITTED BY
  (.012) SPECIMEN (Subfile 63.902)
    (.01)  SPECIMEN
    (.02)  WORKLOAD PROFILE
    (1)    SMEAR PREP (Subfile 63.9121)
      (.01)  SMEAR PREP
      (1)    STAIN/PROCEDURE (Subfile 63.9122)
        (.01)  STAIN/PROCEDURE
        (.02)  SLIDES PREPARED (#)
        (.03)  CONTROL SLIDES (#)
        (.04)  DATE/TIME SLIDES STAINED
        (.05)  DATE/TIME SLIDES EXAMINED
        (.06)  SLIDES COUNTED (#)
        (.07)  LABELS TO PRINT
        (.08)  SLIDES SCREENED (#)
    (2)    CELL BLOCK (Subfile 63.922)
      (.01)  CELL BLOCK
     (1)    CELL BLOCK STAIN (Subfile 63.923)
```

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        (.01)  CELL BLOCK STAIN
        (.02)  SLIDES PREPARED (#)
        (.03)  CONTROL SLIDES (#)
        (.04)  DATE/TIME SLIDES STAINED
        (.05)  DATE/TIME SLIDES EXAMINED
        (.06)  SLIDES COUNTED (#)
        (.07)  LABELS TO PRINT
        (.08)  SLIDES SCREENED (#)
    (3)    MEMBRANE FILTER (Subfile 63.924)
      (.01)  MEMBRANE FILTER
      (1)    MEMBRANE FILTER STAIN (Subfile 63.9241)
        (.01)  MEMBRANE FILTER STAIN
        (.02)  SLIDES PREPARED (#)
        (.03)  CONTROL SLIDES (#)
        (.04)  DATE/TIME SLIDES STAINED
        (.05)  DATE/TIME SLIDES EXAMINED
        (.06)  SLIDES COUNTED (#)
        (.07)  LABELS TO PRINT
        (.08)  SLIDES SCREENED (#)
    (4)    PREPARED SLIDES (Subfile 63.9024)
      (.01)  PREPARED SLIDES
      (1)    PREPARED SLIDES STAIN (Subfile 63.90241)
        (.01)  PREPARED SLIDES STAIN
        (.02)  SLIDES PREPARED (#)
        (.03)  CONTROL SLIDES (#)
        (.04)  DATE/TIME SLIDES STAINED
        (.05)  DATE/TIME SLIDES EXAMINED
        (.06)  SLIDES COUNTED (#)
        (.07)  LABELS TO PRINT
        (.08)  SLIDES SCREENED (#)
    (5)    CYTOSPIN (Subfile 63.9025)
      (.01)  CYTOSPIN
      (1)    CYTOSPIN STAIN (Subfile 63.90251)
        (.01)  CYTOSPIN STAIN
        (.02)  SLIDES PREPARED (#)
       (.03)  CONTROL SLIDES (#)
        (.04)  DATE/TIME SLIDES STAINED
        (.05)  DATE/TIME SLIDES EXAMINED
        (.06)  SLIDES COUNTED (#)
        (.07)  LABELS TO PRINT
        (.08)  SLIDES SCREENED (#)
  (.013) BRIEF CLINICAL HISTORY (Subfile 63.913)
    (.01)  BRIEF CLINICAL HISTORY
  (.014) PREOPERATIVE DIAGNOSIS (Subfile 63.914)
    (.01)  PREOPERATIVE DIAGNOSIS
  (.015) OPERATIVE FINDINGS (Subfile 63.905)
    (.01)  OPERATIVE FINDINGS
  (.016) POSTOPERATIVE DIAGNOSIS (Subfile 63.906)
    (.01)  POSTOPERATIVE DIAGNOSIS
  (.02)  PATHOLOGIST
  (.021) CYTOTECH
  (.03)  DATE REPORT COMPLETED
  (.04)  LOG-IN PERSON
  (.05)  SITE/SPECIMEN
  (.055) COLLECTION SAMPLE
  (.06)  ACCESSION #
  (.07)  PHYSICIAN
  (.08)  PATIENT LOCATION
  (.09)  TYPIST
  (.1)   DATE/TIME SPECIMEN RECEIVED
```

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(.101) REVIEWED BY PATHOLOGIST
(.11)  REPORT RELEASE DATE/TIME
(.13)  RELEASED BY
(.14)  TC CODE
(.15)  ORIGINAL RELEASE DATE
(.99)  COMMENT (Subfile 63.908)
  (.01)  COMMENT
(1)    GROSS DESCRIPTION (Subfile 63.91)
  (.01)  GROSS DESCRIPTION
(1.1)  MICROSCOPIC EXAM/DIAGNOSIS (Subfile 63.911)
  (.01)  MICROSCOPIC EXAM/DIAGNOSIS
(1.2)  SUPPLEMENTARY REPORT (Subfile 63.907)
  (.01)  SUPPLEMENTARY REPORT DATE/TIME
  (.02)  RELEASE SUPPLEMENTARY REPORT
  (1)    DESCRIPTION (Subfile 63.918)
    (.01)  DESCRIPTION
(2)    MORPHOLOGY (Subfile 63.091)
  (.01)  MORPHOLOGY
  (1)    ETIOLOGY (Subfile 63.092)
    (.01)  ETIOLOGY
(3)    DISEASE (Subfile 63.093)
  (.01)  DISEASE
(4)    DATE MICRO EXAM/DX MODIFIED (Subfile 63.94)
  (.01)  DATE MICRO EXAM/DX MODIFIED
  (.02)  PERSON MODIFYING TEXT
  (1)    PREMODIFICATION TEXT (Subfile 63.941)
    (.01)  PREMODIFICATION TEXT
(5)    DATE DIAGNOSIS MODIFIED (Subfile 63.025)
  (.01)  DATE DIAGNOSIS MODIFIED
  (.02)  PERSON MODIFYING TEXT
   (1)  PREMODIFICATION TEXT (Subfile 63.0251)
    (.01)  PREMODIFICATION TEXT
 (7)    DATE GROSS DESCRIPTION CHANGED (Subfile 63.02721)
   (.01)  DATE GROSS DESCRIPTION CHANGED
  (.02)  PERSON MODIFYING TEXT
   (1)  PREMODIFICATION TEXT (Subfile 63.0251)
   (.01)  PREMODIFICATION TEXT
(9)    QA CODE (Subfile 63.099)
  (.01)  QA CODE
(10)   CYTOPATH ORGAN/TISSUE (Subfile 63.912)
  (.001) NUMBER
  (.01)  CYTOPATH ORGAN/TISSUE
  (1)    FUNCTION (Subfile 63.985)
    (.01)  FUNCTION
 (1.5)  PROCEDURE (Subfile 63.982)
    (.01)  PROCEDURE
    (.02)  RESULT
  (3)    DISEASE (Subfile 63.915)
    (.01)  DISEASE
  (4)    MORPHOLOGY (Subfile 63.916)
    (.01)  MORPHOLOGY
    (1)    ETIOLOGY (Subfile 63.917)
      (.01)  ETIOLOGY
  (5)    SPECIAL STUDIES (Subfile 63.919)
    (.01)  SPECIAL STUDIES
    (.02)  DATE
    (.03)  ID #
    (1)    DESCRIPTION (Subfile 63.921)
      (.01)  DESCRIPTION
(20)   DESCRIPTION (Subfile 63.91)
```

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    (.01)  GROSS DESCRIPTION
  (80)   ICD DIAGNOSIS (Subfile 63.901)
    (.01)  ICD DIAGNOSIS
(11)   AUTOPSY DATE/TIME
(12)   DATE/TIME OF DEATH
(12.1) PHYSICIAN
(12.5) AGE AT DEATH
(13)   DATE AUTOPSY REPORT COMPLETED
(13.01) AUTOPSY TYPIST
(13.1) DATE FINAL AUTOPSY DIAGNOSES
(13.5) RESIDENT PATHOLOGIST
(13.6) SENIOR PATHOLOGIST
(13.7) AUTOPSY TYPE
(13.8) AUTOPSY ASSISTANT
(14)   AUTOPSY #
(14.1) LOCATION
(14.5) SERVICE
(14.6) TREATING SPECIALTY AT DEATH
(14.7) AUTOPSY RELEASE DATE/TIME
(14.8) AUTOPSY RELEASED BY
(14.9) PROVISIONAL ANAT DX DATE
(16)   BODY HEIGHT (in)
(17)   BODY WT (lb)
(18)   LUNG,RT (gm)
(19)   LUNG,LT (gm)
(20)   LIVER (gm)
(21)   SPLEEN (gm)
(22)   KIDNEY,RT (gm)
(23)   KIDNEY,LT (gm)
(24)   HEART (gm)
(25)   BRAIN (gm)
(25.1) PITUITARY GLAND (gm)
(25.2) THYROID GLAND (gm)
(25.3) PARATHYROID, LEFT  UPPER (gm)
(25.4) PARATHYROID, LEFT  LOWER (gm)
(25.5) PARATHYROID, RIGHT UPPER (gm)
(25.6) PARATHYROID, RIGHT LOWER (gm)
(25.7) ADRENAL, LEFT (gm)
(25.8) ADRENAL, RIGHT (gm)
(25.9) PANCREAS (gm)
(25.91) TESTIS, LEFT (gm)
(25.92) TESTIS, RIGHT (gm)
(25.93) OVARY, LEFT (gm)
(25.94) OVARY, RIGHT (gm)
(26)   TRICUSPID VALVE (cm)
(27)   PULMONIC VALVE (cm)
(28)   MITRAL VALVE (cm)
(29)   AORTIC VALVE (cm)
(30)   RIGHT VENTRICLE (cm)
(31)   LEFT VENTRICLE (cm)
(31.1) PLEURAL CAVITY, LEFT (ml)
(31.2) PLEURAL CAVITY, RIGHT (ml)
(31.3) PERICARDIAL CAVITY (ml)
(31.4) PERITONEAL CAVITY (ml)
(32)   AUTOPSY ORGAN/TISSUE (Subfile 63.2)
 (.001) NUMBER
  (.01)  AUTOPSY ORGAN/TISSUE
  (1)    FUNCTION (Subfile 63.25)
    (.01)  FUNCTION
  (1.5)  PROCEDURE (Subfile 63.24)
```

```
     (.01)  PROCEDURE
     (.02)  RESULT
   (3)    DISEASE (Subfile 63.21)
    (.01)  DISEASE
   (4)    MORPHOLOGY (Subfile 63.22)
     (.01)  MORPHOLOGY
     (1)    ETIOLOGY (Subfile 63.23)
       (.01)  ETIOLOGY
  (5)    SPECIAL STUDIES (Subfile 63.26)
     (.01)  SPECIAL STUDIES
     (.02)  DATE
     (.03)  ID #
     (1)    DESCRIPTION (Subfile 63.27)
       (.01)  DESCRIPTION
 (32.1) AUTOPSY COMMENTS (Subfile 63.97)
   (.01)  AUTOPSY COMMENTS
 (32.2) CLINICAL DIAGNOSES (Subfile 63.322)
   (.01)  CLINICAL DIAGNOSES
 (32.3) PATHOLOGICAL DIAGNOSES (Subfile 63.323)
   (.01)  PATHOLOGICAL DIAGNOSES
 (32.4) AUTOPSY SUPPLEMENTARY REPORT (Subfile 63.324)
   (.01)  SUPPLEMENTARY REPORT DATE
   (1)    DESCRIPTION (Subfile 63.3241)
     (.01)  DESCRIPTION
 (33)   AUTOPSY SPECIMEN (Subfile 63.033)
   (.01)  AUTOPSY SPECIMEN
   (1)    PARAFFIN BLOCK (Subfile 63.331)
     (.01)  PARAFFING BLOCK ID
     (.02)  DATE/TIME BLOCK PREPARED
     (.03)  BLOCK COUNTED
     (1)    STAIN/PROCEDURE (Subfile 63.3311)
       (.01)  STAIN/PROCEDURE
       (.02)  SLIDES PREPARED (#)
       (.03)  CONTROL SLIDES (#)
       (.04)  DATE/TIME SLIDES STAINED
       (.05) DATE/TIME SLIDES EXAMINED
       (.06)  SLIDES COUNTED (#)
       (.07)  LABELS TO PRINT
 (80)   AUTOPSY ICD9CM CODE (Subfile 63.808)
   (.01)  AUTOPSY ICD9CM CODE
 (83.1) MAJOR DIAGNOSTIC DISAGREEMENT
 (83.2) CLINICAL DIAGNOSIS CLARIFIED
(99)   AUTOPSY QA CODE (Subfile 63.999)
   (.01)  AUTOPSY QA CODE
 (100)  ARCHIVE REFERENCE (Subfile 63.99)
   (.01)  ARCHIVE REFERENCE
```

Fields Description

NOTE: Due to the number of fields in LAB DATA file (#63) a complete description of fields will not be included in this section. Please refer to the FileManager manual for instruction on how to print a Data Dictionary.

ARCHIVED LR DATA file (#63.9999)

☛**WARNING:** This file requires no editing by the user.

The ARCHIVED LR DATA file (#63.9999) is where patient lab data are stored during the archive process. It has the same data definitions as the Subfile #63.04 in LAB DATA file (#63).

Refer to the sections, Force Cumulative to Permanent Page and Archiving Data for additional information.

Field List

```
(.01) LRDFN
(.02) PARENT FILE
(.03) NAME
(4) CHEM, HEM, TOX, RIA, SER, etc. (Subfile 63.999904)
(.01) Date/Time Specimen Taken
(.02) Date/Time Taken Not Exact
(.03) Date Report Completed
(.04) Verify Person
(.05) Specimen Type
(.06) Accession
(.07) *Volume
(.08) Method Or Site
(.09) Sum Report Num.
(.1) Requesting Person
(.11) Requesting Location
(.12) New Person Conversion
(.99) Comment (Subfile 63.041)
(.01) Comment
```
Duplicates of LAB DATA test names - see File #63
```
(5) MICROBIOLOGY (Subfile 63.999905)
(.01) Microbiology
```
(38) NEW PERSON CONVERSION

Fields Description

NOTE: Due to the number of fields in ARCHIVED LR DATA file (#63.9999) a complete description of fields will NOT be included in this section. Please refer to the VA FileManager manual for instruction on how to print a Data Dictionary.

WKLD CODE file (#64)

This file contains the list of WKLD Codes, which are used to compile Laboratory workload statistics. This file is exported with data from the most current test listings. However, all instrumentation suffixes are not included. The data for this file is supplied in this LRINIT. The WKLD codes which refer to specific methods (i.e., suffixed codes) are created at the local site level. They are created either by manual entry via a special option or automatically during verification. Certain fields in this file cannot be edited. It is a standardized national file with specific information and specific internal file numbers.

Field List

```
(.01) PROCEDURE   (Entries can not be deleted)
(.02) DESCRIPTION (Subfile 64.04)
(.01) Description
(.04) Print Name
(1) WKLD CODE  (Entries can not be edited)
(2) WKLD UNIT WEIGHT
(4) BILLABLE PROCEDURE
(5) Reserve 1
(6) UNIT FOR COUNT
(7) COST
(8) Reserve 2
(9) SORTING GROUP
(11) Reserve 3
(12) MANUFACTURER
(13) WKLD CODE LAB SECTION
(14) Reserve 4
(15) ACTIVATE WKLD CODE
(16) BATCH ANALYZER
(18) CPT CODE
(19) SYNONYM (Subfile 64.019)
   (.01) Synonym
(20) SPECIMEN (Subfile 64.01)
   (.01) Specimen
   (1) Cost
```

Fields Description

☛**WARNING:** Certain fields should NOT be edited directly by the user. Utilities are provided for editing certain fields only. Entries should NOT be deleted. Additional entries will be distributed via global tape when necessary.

(.01) PROCEDURE: This is the name of the procedure or test name. Answer must be 2-50 characters in length. Entries can not be deleted. The names contained in this file are derived from a national list of laboratory procedures. This file will be updated as needed from VACO Pathology. When attempting to look up data in this file, do not use commas, dashes, hyphens, or slashes.

(.02) DESCRIPTION (Subfile): This is a word processing field used to further describe the procedure if required.

(**.01) Description:** This field used to further describe the procedure if required.

(.04) Print Name: This field contains a condensed version of the name. Answer must be 2-20 characters in length.

(**1) WKLD CODE:** The code number of the Workload report for the procedure. **Entries can not be edited.**

(2) WKLD UNIT WEIGHT: The Workload unit weight. This field can be edited using FileMan, but it is not being used in any existing reports.

(4) BILLABLE PROCEDURE: If test is considered to be a billable LMIP procedure enter yes to this prompt. These procedures will be cumulated and sent to the national database for LMIP reporting. On certain reports a (+) will appear in front of the name of the procedure to indicate it is defined as billable. Type 1 for "YES" and 0 for "NO". This field can be edited using FileMan.

(5) Reserve 1: This field is not presently used at this time. The field is not obsolete but will be converted to other functions in a later version.

(6) UNIT FOR COUNT: E.g., case, plate, bottle, test, spec, etc. This field can be edited using FileMan.

(7) COST: The cost of the procedure being done.

(8) Reserve 2: This field is not presently used at this time. The field is not obsolete but will be converted to other functions in a later version.

(9) SORTING GROUP: If the site would like to attach some arbitrary sorting code to this code, it may be done with this field. The system makes no use of this field. It is designed solely for the site use.
(11) Reserve 3: This field is not presently used by the system. It will be converted to other uses in a later software versions.

(12) MANUFACTURER: This field is used to identify the vender/manufacturer of this particular procedure or instrument. This field is not presently being used in the existing reports.

(13) WKLD CODE LAB SECTION: This field is a nationally defined category. This field will provide a method of group data on the national level. This field cannot be edited.

(14) Reserve 4: This field is not presently used at this time. It is not an obsolete field. Later versions may make use of this field.

(15) ACTIVATE WKLD CODE: If the workload code has ever been used by this institution, this field will be set to "YES" by the software.

(16) BATCH ANALYZER: If this procedure code is for a batch analyzer, this field should be set to "YES".

(18) CPT CODE: This field is to be used to link WKLD code to a CPT code. Not all WKLD codes should have a CPT code. Only the LMIP reportable procedures should have a CPT code entered. Laboratory Version 5.2 is exported with this field empty. It will be updated in a later release. Answer must be 1-20 characters in length. The 4 nodes will be reserved for CPT code related function.

(19) SYNONYM (Subfile): This field contains alternate names or inverted combination to allow easier lookup.

(.01) Synonym: This field contains alternate names or inverted combination to allow easier lookup. Answer must be 2-50 characters in length.

(20) SPECIMEN (Subfile): Specimen associated with the test. This field is not used by the existing software.

(.01) Specimen: Specimen associated with the procedure.

(1) Cost: Type a dollar amount between 0 and 1000 2 Decimal digits.

WKLD LOG file (#64.03)

The WKLD LOG file (#64.03) contains an entry for each WKLD related activity. This file can be used for special costing projects to track a Laboratory site. This file would be suitable for down loading to spread sheets since there are no multiple fields (a flat file). There are options provided for managing the data going in and purging of data. This file is automatically gathered and requires no editing.

Field List

(.01) SEQ NUMBER
(1) PROVIDER
(2) PATIENT NAME
(3) DATE COMPLETE
(4) REPORTING SITE
(5) LOCATION TYPE
(6) ACCESSION AREA
(7) LAB TEST NAME
(8) URGENCY OF TEST
(9) TREATING SPECIALTY
(10) WKLD
(11) LRIDT
(12) DATE COLLECTED
(13) DATE ORDERED
(14) HOSPITAL LOCATION
(15) ACCESSION FILE INDEX
(16) SPECIMEN

Fields Description

(.01) SEQ NUMBER: This field is to index the file. This is an arbitrary number.

(1) PROVIDER: This is a pointer to the NEW PERSON file (#200). It does not have a screen for the provider security number.

(2) PATIENT NAME: This field may also contain names of controls, referrals, and other names not just patients names.

(3) DATE COMPLETE: This is the date the test/WKLD procedure was completed. Each verified lab test may have more than one WKLD Code associated with it.

(4) REPORTING SITE: This is the institution where the test was verified. It is the user's DUZ(2). Several institutions can be recorded for a single lab test, but only one per WKLD procedure.

(5) LOCATION TYPE: This is the classification of the ordering location.

(6) ACCESSION AREA: This is the accession area where the test is to be performed.

(7) LAB TEST NAME: This is the name of the lab test ordered. It can be a single test or a panel. The WKLD Code is associated with this lab test.

(8) URGENCY OF TEST: This is the requested urgency of the lab test. WKL represents a test WKLD Code which was generated solely because of the program workload logic. This test was not actually ordered but artificially generated to support workload functions. A WKL urgency can not be requested by users.

(9) TREATING SPECIALTY: This is not the PTF treating specialty.

(10)WKLD CODE: If the WKLD Code was generated by the workload software, the name will have a "~" (tilde) in the name, and the internal file number will be greater than 9999.

(11) LRIDT: This number is 9999999-(accession date/time) or reverse date time. This number is used as node subscript in the ^LR file to store the results of the lab test. Answer must be 7-15 characters in length.

(12) DATE COLLECTED: This field contains the date the specimen was collected.

(13) DATE ORDERED: This is the original date the lab test was ordered.

(14) HOSPITAL LOCATION: This is the location from which the lab test was ordered. This field can also be used to determine the PTF treating specialty.

(15) ACCESSION FILE INDEX: This is a compound field used to navigate back into the ACCESSION file (#68). Each subscript is separated by vertical bars "|", the structure is as follows: | Accession area Pointer|Accession date|Accession number|Lab Test pointer|.

(16) SPECIMEN: Specimen associated with this workload procedure.

NON-WORKLOAD PROCEDURES file (#64.05)

Non workload activities Procedure List is NOT to be added to weighted work load. The NON-WORKLOAD PROCEDURES file (#64.05) is not implemented with Laboratory V. 5.2. A later version will make use of this file.

Field List

```
(.01) PROCEDURE
(1) WKLD CODE
(2) ASSIGNMENT CODE
(3) INSTITUTION (Subfile 64.06)
(.01) Institution
(1) DATE (Subfile 64.61)
(.01) Date
(1) Hrs.
```

Fields Description

(.01) PROCEDURE: This contains the procedure name.

(1) WKLD CODE: If there is a code number associated with this procedure, enter it in this field. Answer must be 5 characters in length.

(2) ASSIGNMENT CODE: This field contains which section the code belongs to.

(3) INSTITUTION (Subfile): Institution which this code should be associated with.

(.01) Institution: Institution which this code should be associated with.

(1) DATE (Subfile): 1;0 Date multiple #64.61 (Add new entry without asking).

(.01) Date: 0;1 Date (Multiple asked)

(1) Hrs.: Type a number between 0 and 500, 2 Decimal Digits.

WKLD DATA file (#64.1)

The WKLD DATA file (#64.1) contains the Laboratory workload data.

NOTE: This file contains the Laboratory workload data. This file should NOT be edited through FileMan.

Field List

```
(.01)  INSTITUTION
(.03)  DATE (Subfile 64.11)
     (.01)  DATE
     (.03)  DATA REPORTED
(1)  WKLD CODE (Subfile 64.111)
```

```
      (.01)  WKLD CODE
      (.03)  UNIT WEIGHT
      (.04)  CONSTITUENT WT
      (1)    ACCESSION WKLD CODE TIME (Subfile 64.1111)
        (.01)  ACCESSION WKLD CODE TIME
        (1)    LAB TEST
        (2)    WEIGHT MULTIPLIER
        (5)    LAB DIVISION
        (6)    MAJ. SECT.
        (7)    SUBSECTION
        (7.5) WORK AREA
        (8)    ACC NO.
        (9)     PATIENT
        (10)   ORIGINAL ACC DATE
        (11)   DATE ORDERED
        (12)   SPECIMEN NO.
        (13)   Reserved field 1
        (14)   REPORT ROUTING LOCATION
        (15)   PRACTITIONER
        (16)   TREATING SPECIALTY
        (17)   LOG IN PERSON
        (18)   LOCATION TYPE
        (19)   COUNT FOR WORKLOAD
        (20)   ORDERING LOCATION
        (21)   INVERSE DATE COMPLETED
        (22)   URGENCY
        (23)   VERIFY TECH.
        (24)   COMPUTED WEIGHT
      (2)    STANDARDS
      (3)    QC
      (4)    REPEATS
      (5)    MANUAL INPUT WORKLOAD
(2)   TODAY S COMMENTS (Subfile 64.112)
   (.01)  TODAY S COMMENTS
(1)    GENERAL COMMENTS (Subfile 64.12)
   (.01)  GENERAL COMMENTS
(2)    WKLD CODE COMMENTS (Subfile 64.13)
   (.01)  WKLD CODE
(1)    COMMENTS (Subfile 64.131)
      (.01)  COMMENTS
```

Fields Description

(.01) INSTITUTION: This is the medical center which will be credited with the work completed.

(.03) DATE (Subfile): This is the date the result was completed.

(.01) Date: This field contains data for this date.

(.03) Data Reported: After the data has been extracted by Step #1 of LMIP reporting process, this field is set to "YES" after being compiled into the LAB MONTHLY WORKLOADS file (#67.9).

(1) WKLD CODE (Subfile): This is a multiple field which contains information about the WKLD code.

(.01) WKLD Code: This field points to the WKLD CODE file (#64). This file contains all of the specific information for the code. The WKLD CODE file is up dated by the developing ISC. All official code will be exported by the package.

(.03) Unit Weight: This field is automatically filled in.

(.04) Constituent Wt: This field is automatically filled in.

(1) ACCESSION WKLD CODE TIME (Subfield): This is a multiple field which contains information about the accession.

(.01) Accession WKLD Code Time: This is the hour and minutes when the test was verified.

(1) Lab Test: This is the test in LABORATORY TEST file (#60) which was verified.

(2) Weight Multiplier: This number is used to multiply the weight of the WKLD code. This should be used if the test requires the same WKLD code more than once. This number is taken from the old field in ^LAB(60 under WKLD code called default WKLD code. If this field is blank, the software assumes a value of 1 to be used.

(5) Lab Division: This is the overall area to which this workload is to be credited. This should be the largest administrative/functional area of the Laboratory Service. This will be either Anatomic or Clinical.

(6) Maj. Sect.: This should be the next smallest area of the laboratory service after the MAJ. SECT. This field is used to further break down the workload. Generally this will be he accession area into which the order was accessioned. However, this may not be always true. To allow for flexibility in this matter, this field is controlled by the worklist used during the verification process. Even if the verification method used itself, does not require a work list, one can control this field via that worklist. There are two new fields in the LOAD/WORK LIST file (#68.2). One of these fields is Major Accession Area. What ever value is entered here will be used to tabulate the workload for this test. If none is entered the test accession area will be used.

(7) Subsection: This field represents the smallest functional unit of the laboratory service. If there is a area smaller than the MAJ. ACC AREA, enter that area here. Not all laboratories will have a smaller work area. If the field is blank the MAJ. ACC AREA will be used. For example the MAJ. ACC AREA can be CHEMISTRY and the LAB SUBSECTION could be STAT LAB, of course these must exist in the ACCESSION file (#68) and may be used only for this purpose. This field is also works like the MAJ. ACC AREA, in that it is attached to a Load/Work List. It is controlled by selecting a worklist during verification.

(7.5) Work Area: Select only accession areas identified as work areas.

(8) Acc No.: This is the printable accession number CH 0101 1.

(9) Patient: This field contains the file and the entry number for the accession specimen. If this field is manually edited, knowledge of variable pointer format is required.

(10) Original Acc Date: The date the specimen originally accessed. Used this date to compute turn around times.

(11) Date Ordered: This date is when the test was ordered. This is the date in the LAB ORDER ENTRY file (#69). This can be used to look for specific order information.

(12) Specimen No.: This is the internal file number for the order date in LAB ORDER ENTRY file (#69).

(13) Reserved field 1: Specimen which was collected for this test.

(14) Report Routing Location: This is the abbreviation of the reporting location, which is not to be confused with the ordering location.

(15) Practitioner: The doctor who ordered the lab test.

(16) Treating Specialty: This is the treating specialty of the ordering location. As you know, outpatient locations do not have treating specialties assigned in the HOSPITAL LOCATION file (#44). Therefore, this field may be blank.

NOTE: DO NOT USE THIS FIELD FOR SORTING THE FILE.

(17) Log In Person: This is the person who logged the specimen into the laboratory.

(18) Location Type: The ordering location type. The default is OTHER. This field also describes the workload source (e.g., inpatient, outpatient, or blood bank).

(19) Count For Workload: This field is used by the software during report generation. It indicates that this data has already been tabulated.

(20) Ordering Location: This is the ordering location. This can be used to address hospital location test request. This field is different from Report Routing Location field.

(21) Inverse Date Completed: This is the number which was used to store the verified value in the ^LR(LRDFN,"CH",INVERSE DATE COMPLETED)=VALUE.

(22) Urgency: Urgency.

(23) Verify Tech.: The first technologist to verify the test results. This field is not updated during editing for errors or other tests which are a part of the original test.

(24) Computed Weight: Computed field.

(2) Standards: This field will contain the number of standards used in any one day. Since standards are not accessioned, this is the only way to record their number. After a verify session, the technologist may be prompted for the number of standards this run. That number is recorded here.

(3) QC: This field contains the number of QC which were done on this date. This field is similar to the STANDARDS field, except it also contained Quality Control which was accessioned and verified in the normal manner.

(4) Repeats: Type a number from 1000 to 10000, 0 decimal digits.

(5) Manual Input Workload: Type a number from 10000 to 999999, 0 decimal digits.

(2) Today's Comments (Subfile): This is a word processing field.

(.01) Today's Comments : This field is comments about today's workload.

(1) GENERAL COMMENTS (Subfile): General comments relating to this code can be entered in this field. These comment are used only by the site at this time. They are not transmitted by Laboratory V. 5.2 to the national data base. They are entered using FileMan.

(.01) GENERAL COMMENTS: General comments relating to this code can be entered in this field. These comments are used only by the site at this time. They are not transmitted by Version 5.2 to the National Data Base Center.

(2) WKLD CODE COMMENTS (Subfile): If there are specific comments about this WKLD Code the site wishes to record for their own purposes, they can be entered in this field. These comments are not included in any national rolled up data.

(.01) WKLD Code: Pointer to the WKLD CODE file (#64).

(1) COMMENTS (Subfile): This is a word processing field.

(.01) Comments: This field comments about workload.

ARCHIVED WORKLOAD WKLD DATA file (#64.19999)

The ARCHIVED WORKLOAD WKLD DATA file #64.19999) contains Laboratory archive workload data.

Field List

```
(.01)  INSTITUTION
(.03)  DATE (Subfile 64.11)
   (.01)  DATE
   (.03)  DATA REPORTED
   (1)    WKLD CODE (Subfile 64.111)
     (.01)  WKLD CODE
     (.03)  UNIT WEIGHT
     (.04)  CONSTITUENT WT
     (1)    ACCESSION WKLD CODE TIME (Subfile 64.1111)
       (.01)  ACCESSION WKLD CODE TIME
       (1)    LAB TEST
       (2)    WEIGHT MULTIPLIER
       (5)    LAB DIVISION
       (6)    MAJ. SECT.
       (7)    SUBSECTION
       (7.5)  WORK AREA
       (8)    ACC NO.
       (9)    PATIENT
       (10)   ORIGINAL ACC DATE
       (11)   DATE ORDERED
       (12)   SPECIMEN NO.
```

```
        (13)   Reserved field 1
        (14)   REPORT ROUTING LOCATION
        (15)   PRACTITIONER
        (16)   TREATING SPECIALTY
        (17)   LOG IN PERSON
        (18)   LOCATION TYPE
        (19)   COUNT FOR WORKLOAD
        (20)   ORDERING LOCATION
        (21)   INVERSE DATE COMPLETED
        (22)   URGENCY
        (23)   VERIFY TECH.
        (24)   COMPUTED WEIGHT
      (2)    STANDARDS
      (3)    QC
      (4)    REPEATS
      (5)    MANUAL INPUT WORKLOAD
    (2)    TODAY S COMMENTS (Subfile 64.112)
      (.01)  TODAY S COMMENTS
  (1)    GENERAL COMMENTS (Subfile 64.12)
    (.01)  GENERAL COMMENTS
  (2)    WKLD CODE COMMENTS (Subfile 64.13)
    (.01)  WKLD CODE
    (1)    COMMENTS (Subfile 64.131)
      (.01)  COMMENTS
```

Fields Description

NOTE: This file is a duplicate of WORKLOAD WKLD DATA file (#64.1). A complete description of fields will not be included in this section. Please refer to the FileManager manual for instruction on how to print a Data Dictionary.

WKLD SUFFIX CODES file (#64.2)

☛**WARNING:** This file should NOT be edited locally.

The WKLD SUFFIX CODES file (#64.2) contains a listing of National approved Workload Suffix Codes. This file contains suffixes used in conjunction with the WKLD codes from WKLD CODES file (#64). These include methodologies, instrumentation, and reference laboratories. These codes are published by the Pathology & Laboratory Medicine Service Department Of Veterans Affairs Central Office. As new procedures and instrumentation become available, additional entries will be distributed to all VAMC sites.

For additional codes not found in the WKLD SUFFIX CODES file (#64.2), forward all requests to:

Department Of Veterans Affairs Central Office
Pathology & Laboratory Medicine Service
Atten: Assistant Director for DHCP Affairs

Field List

```
(.01) NAME
```

(.05) SYNONYM (Subfile 64.23)
(.01)Synonym
(1) WKLD SUFFIX CODE
(2) UNIT WEIGHT
(4) REPORTABLE PROCEDURE
(5) Reserved 1
(6) UNIT FOR COUNT
(7) COST
(8) Reserved 2
(9) SORTING GROUP
(10) SPECIAL CODE
(11) MANUFACTURER
(12) WKLD CODE LAB SECTION
(13) Reserved 3
(15) ACTIVATE WKLD CODE
(16) BATCH ANALYZER
(18) PRINT NAME

Fields Description

(.01) NAME: These are the names of the methods to be used in LIMP workload recording. The starting database was obtained from the College of American Pathologist (CAP) Manual for Laboratory Workload Recording Method by permission of the CAP. However the CAP codes have been expanded and new numbering scheme developed by Department of Veterans Affairs. These entries support the Workload recording file design to allow automated collection and reporting of laboratory workload.

(.05) SYNONYM (Subfile): This field is used for a short name or alternate identifier.

(.01)Synonym: This field is used for a short name or alternate identifier.

(1) WKLD SUFFIX CODE: Enter the four digit suffix code, including the decimal point for this instrument and manufacturer.

(2) UNIT WEIGHT: The numerical value assigned to this suffix can be entered in this field. This field is not used at the present time by the package.

(**4) BILLABLE PROCEDURE:** This procedure is reportable with respect to CLIA-88 interpretation of total number of (billable/reportable) test count. Use this field to determine if this procedure should be included in the total number of reportable test(s) performed on patients. Not all procedures are done on patient(s) specimens or result in a reportable clinical value.

(5) Reserved 1: Reserved for future use.

(6) UNIT FOR COUNT: This field defines for each procedure what is to be counted to obtain the raw count.

(7) COST: If the site wishes to assign a locally derived cost figure for this suffix it can be entered into this field. Type a dollar amount from 0 to 10000, 2 decimal digits.

(8) *Reserved 2: This field is not used by Laboratory Version 5.2.

(9) SORTING GROUP: This field is intended to be used by the local site. This field is not used by the WKLD package, but this field could be used to enable the site to sort by this field using VA FileMan.

(10) SPECIAL CODE: If this suffix code is an experimentally assigned value, enter "YES".

(11) MANUFACTURER: Enter the manufacturer of the instrument having this WKLD Code suffix.

(12) WKLD CODE LAB SECTION: This field contains the nationally assigned section for this suffix. This field will be used during national roll up.

(13) Reserved 3: This field is not used by V. 5.2. A later version may make use of this field.

(15) ACTIVATE WKLD CODE: If this suffix has been used by the site for reporting of workload, this field will be set to "YES" by the software.

(16) BATCH ANALYZER: If this particular suffix is for a batch analyzer, set this field to "YES".

(18) PRINT NAME: This is the print name of the test.

WKLD CODE LAB SECT file (#64.21)

The WKLD CODE LAB SECT file (#64.21) contains the lab section to be used. The entry in this field is not the lab section which is used at the local site. This file should not be edited locally.

Field List

(.01) NAME
(1) ABBREV.
(2) SYNONYM
(3) LAB SECTION

Fields Description

(.01) NAME: This field contains the name of this national lab section. Name must be 3-30 characters, not numeric or starting with punctuations.

(1) ABBREV.: This field contains the short name for this lab section. Answer must be 1-5 characters in length.

(2) SYNONYM: If this lab section is also known by another name, it should be entered in this field. Answer must be 1-2 characters in length.

(3) LAB SECTION: This field contains the major lab section which a WKLD code is associated with.

WKLD ITEM FOR COUNT file (#64.22)

☛**WARNING:** This file should NOT be edited locally.

The WKLD ITEM FOR COUNT file (#64.22) contains all of the approved item descriptions used for counting workload data. This file is pointed to by the Item for Count field in WKLD CODE file (#64). Suitable selection of item for workload count (for example Tube, Specimen, Block).

Field List

(.01) ABBREV
(1) Full Name

Fields Description

(.01) ABBREV: This field contains a short name for this item. Answer must be 2-10 characters in length.

```
(1) Full Name: This field has the full name for this item. Answer must be 2-30
characters in length.
```

WKLD INSTRUMENT MANUFACTURER file (#64.3)

☛**WARNING:** This file should Not Be Edited locally.

The WKLD INSTRUMENT MANUFACTURER file (#64.3) contains an approved list of Venders/Manufacturers of Laboratory equipment of test reagents. This file is pointed to by the Manufacturer field in WKLD SUFFIX CODES file (#64.2).

Field List

```
(.01) NAME
```

Fields Description

```
(.01) NAME: This field contains the name of the manufacturer.
```

LAB REPORTS file (#64.5)

The LAB REPORT file (#64.5) contains the information necessary to produce or generate the output formats for patient data found on the cumulative reports and the supervisory reports for lab use. All of the subfields under Report Name field repeat or loop back through the same sequence for each different type of report name entered in the file. When editing this field with VA FileManager at a later date, only the LAST report name entered will appear. Use a ? to get a full listing of the entries in this field. If there is not a date/time in both starting and ending time, the Reprint Cumulative option will reply “Printing of the cumulative is not yet complete.”

Individual tests may be arranged to allow for printing of the results in a variety of formats: horizontal or vertical columns of results, the medical center name and designation on the top or bottom of each page of results, and a choice of forward or reverse (inverse) chronological order in which to display the results. The default column width is 10 spaces. You can have column widths up to 15 characters for lab tests under horizontal minor headers. There are as many columns as will fit in the defined margins of the output device in the DEVICE file (#3.5).

Vertical displays work best with large profiles such as Chem 20, urinalysis, differential, etc. You are limited to only one vertical display per major header (section or functional area within the lab).

The horizontal display puts the test name(s) across the tops of the page from left to right with units and reference ranges. It is suggested the test field length be at least nine to allow for the reference ranges. Multiple horizontal displays are possible within a single major header, but no mixing of display formats should occur within a single major header. Failure to follow this restriction will cause incorrect temporary/permanent cumulative page numbering for that major header. All laboratory tests which are not defined to a particular profile (minor header) will end up on a header termed “Miscellaneous page.” It is suggested that most, if not all, of the tests used at your lab be put on a minor header. This file is supplied with some default entries so that it will work immediately upon implementation.

This file has a number of functions, including:

• Defining a printer or printers that the cumulative report will be printed on. Each printer needs to have a range of hospital (patient) locations defined to print on that particular device.

NOTE: If you change printer device ($I) ports, be sure that the new printer device has the same column width as the old printer device. Failure to do so may result in undesirable output format.

• Defining the appearance or format of the printout by choosing the appropriate field entries.

• Defining the tests which should be grouped together on certain pages to make finding and reading the results quick and easy.

• Defining which of the groups of tests (above) will be alternately grouped together onto specific supervisory reports when printed as Daily Summary Reports.

Field List

```
(.01) NAME
(1) IN/OUT PATIENT
(2) REPORT NAME (Subfile 64.56)
(.01) Report Name
(1) Device
(2) Manual Print
(3) File Room Report
(5) Starting Location
(10) Ending Location
(15) Last Location
(17) Last Patient
(18) Last LRDFN
(25) Starting Time
(26) Ending Time
(3) MICRO REPORTS
(3.5) BLOOD BANK REPORTS
(4) FILE ROOM
(5) TOP/BOTTOM
(6) SEPARATE REPORT LOCATION (Subfile 64.57)
(.01) Separate Report Location
(1) Alternate File Room
(7) REPORT DATE
(8) COMPLETED DATE
(9) MED CENTER NAME (MISC HEADER)
(10) MAJOR HEADER (Subfile 64.51)
(.001) Order
(.01) Major Header
(5) Medical Center
(10) Minor Header (Subfile 64.52)
(.001) Order
(.01) Minor Header
(1) Profile Site/Specimen
(2) Type Of Display
(3) Locale Field(10) Lab Test (Subfile 64.53)
(.001) Order
(.01) Lab Test
```

```
(1) Test Field Length
(2) Print Test Name
(3) Test Print Code
(4) Test Location
(5) Decimal Places
(11) MICRO APPROVAL METHOD
(14) SORT BY PATIENT
(15) DAILY SUMMARY REPORTS (Subfile 64.54)
(.01) Daily Summary Reports
(1) Header (Subfile 64.55)
(.01) Header
```

(2) Previous Summary Data

(16) FILE ROOM REPORT DATE
(17) SEPARATE FILE ROOM

Fields Description

(.01) NAME: This single entry field contains the name of the entire report named Cumulative in the exported version of this file. Do not delete or change this entry.

(1) IN/OUT PATIENT: The entry in this field determines whether cumulative reports will be generated for all patients (leave null or blank), inpatients only (enter 1), or outpatients only (enter 2). It is strongly recommended that all patient cumulatives be printed and charted.

(2) REPORT NAME (Subfile): This is a free text field (2-20 characters) which allows you to enter an arbitrary name for a range of hospital locations to define a section of the cumulative reports. This is a multiple field and it allows you to split the range of locations for the cumulative reports to one or more printers. You should ALWAYS use a Report name which begins with an alpha character.

(.01) Report Name: This is an arbitrary report name.

Example: If you have ten wards in your hospital for which you will be printing cumulatives and wish to split them onto two different printers, you could designate a Report name of WARDS 1-5 for the first device and a Report name of WARDS 6-10 for the second device.

(1) Device: This entry is the printer device number or name (as defined in the DEVICE file (#3.5)) onto which you will be printing the report name for the specific location ranges defined below.

NOTE: Each device can have more than one Report name assigned to it.

You may also choose to name these reports after the name of the device you will be printing them on.

Example: If the printer you will be using is named in the DEVICE file (#3.5) as GEORGE, you could enter a Report name of GEORGE for the range of reports which will print on that device. Each report name defined will contain the following information (subfield entries for each Report name field entry):

Example: You could have both reports name WARDS 1-5 and the report name WARDS 6-10 defined to print on the device name GEORGE. The second report (or section of the cumulative) would print on GEORGE after the first report has finished printing. The device (printer) parameters must be set up correctly in order for the queuing functions for the cumulative reports to work properly. Your site manager will be able to do this by editing the DEVICE file (#3.5).

(2) Manual print: If this subfield contains a "YES" entry, the locations defined for this report name will not print when the cumulative reports are automatically queued. The manual queuing option [LRAC MANUAL], must be used to print any report names designated as manual print "YES".

(3) FILE ROOM REPORT: This field is used to designate a report to print a file room location. It is used in conjunction with File Room fields (#4) and Separate File Room field (#17). It allows the cumulative to identify those reports which should be run when a site wishes to print the file room reports and they are doing so on a schedule separate from the regular cumulative.

(5) Starting location: Enter the hospital location (ward or clinic) which will be the first location to print on this device for this report name. If you are only using ONE printer for your entire cumulative report, you do not need to specify a starting location, unless you wish to start printing the cumulative on (for) a different location. The first location to print will be the lowest numbered location (e.g., 1 East) or the lowest alphabetic location (e.g., ENT Clinic). If your locations contain both numeric and alpha names, the numeric ones print first, followed by the alpha ones (e.g., 1 East followed by 2 East followed by ENT Clinic followed by Oncology, etc.) If you are defining a range of locations for the report name above, enter the starting location for the report here.

(10) Ending location: Enter the hospital location (ward or clinic) which will be the last location to print on this device for this report name, if you are specifying a range of locations for this particular report name. If you are using only ONE printer for your entire cumulative report, enter ZZZZ to specify that the report should stop printing after it prints all locations lower than the location of ZZZZ, which would be all numeric and all alpha locations at your site.

(15) Last Location: DO NOT EDIT the entries in these fields.

(17) Last Patient: This field is used by the cumulative routines to specify the last printed patient for this device. **Do not fill in this field as part of the initial file set up.**

(18) Last LRDFN: This field is used by the cumulative routines to specify the last printed DFN. **Do not fill in this field as part of the initial file set up.**

(25) Starting Time: This field is used by the cumulative routines to give the starting time of the cumulative for this device. **Do not fill in this field as part of the initial file set up.**

(26) Ending time: This field is used by the cumulative routines to give the ending time of the cumulative for this device. **Do not fill in this field as part of the initial file set up.**

(3) MICRO REPORTS: The entry in this field determines if microbiology reports will be included with the cumulative reports, when printed. Enter an F if only final (verified by supervisor) reports should be included. Enter a P to allow only preliminary (has a report date approved entered) reports to be included. A null or blank entry signifies that **no** micro reports will be printed as part of the cumulative reports. (Also see Field #11).

(3.5) BLOOD BANK REPORTS: Enter "YES" if blood bank results are to be printed along with the cumulative report.

(4) FILE ROOM: Enter a "YES" in this field to force all the clinic hospital locations (as defined by the Medical Administration Service in the HOSPITAL LOCATION file (#44) to print their cumulatives to a location called FILE ROOM for later filing, rather than each clinic s reports being titled and printed separately.

(5) TOP/BOTTOM: Enter either TOP or BOTTOM to designate where the official VAMC site name will appear on the cumulative report pages.

(6) SEPARATE REPORT LOCATION (Subfile): Outpatient locations entered in this field will be excepted from the file room print, generating a separate cumulative report for the location.

> **(.01) Separate Report Location:** Outpatient locations entered in this field will be excepted from the file room print, generating a separate cumulative report for the location.

> **(1) Alternate File Room:** This field is used to designate those locations which a site wishes to print to a FILE ROOM location but which they do not wish to be a standard file room. This could be sites which have satellite clinics which have their own file rooms. The name entered here will cause this location to be sorted to a location called "FILE ROOM_ alternate file room name" followed by a "1" or "2". The patients will be sorted in terminal digit order similar to the regular file room. This requires that the site has FILE ROOM set to "YES" to sort non inpatients to location FILE ROOM.

(7) REPORT DATE: DO NOT EDIT this field. The system uses this field to keep a record of the date of the last time the cumulative was printed.

(8) COMPLETED DATE: DO NOT EDIT this field. The system uses this field to keep a record of the date of the last time the cumulative was run to completion.

(9) MED CENTER NAME (MISC. HEADER): Enter the name that appears on miscellaneous pages of the cumulative. This should be the same as Medical Center Name on the Major Header(s).

(10) MAJOR HEADER (Subfile): The entry in this field (free text; 2-80 characters) will assign a name to a particular grouping of tests you want to appear on the same formatted page of the cumulative report. This may be either a functional area of the lab which performs those tests, or the page (header) may be named to indicate to the physician what urgency the tests were ordered as or what type of specimen or sample the group of tests were performed on. The order in which major header names are added to this file determines part of the numbering scheme which appears on each report page and determines how the header will be filed in the patient s chart. The pages are numbered in the format of X : Y, where X comes from the sequence used to enter the header name into the file, and Y is the page number for that header name.

Example: If CHEM is the fourth header name you have entered into the file, and the test Albumin is found on the group of tests within that header, then Albumin test results will always be found on a page numbered with 4 (4:1, 4:2, 4:13, etc.) The page numbers (Y) increment each time a previous page becomes permanent. A permanent page is one that is filled and will not allow any more results to be printed on that page. (So when page 4:1 becomes full or permanent, a new page is started labeled 4:2.)

All of the subfields associated with a particular Major header repeat or loop back through the same sequences for Lab test (within each minor header) and Minor header (within each major header) to allow for multiple lab test name or minor header entries for each major header defined in this file. When editing any of these fields (with VA FileManager) at a later date, only the LAST name entered will appear. To see a complete list of entries in those fields, enter a "?".

Each major header name defined will contain the following information (subfield entries for each Major header field entry):

(.001) Order: Enter a number (whole number from 1 to 999) which determines the order of the major header pages.

(.01) Major Header: This is the major or general heading of the report.

(5) Medical Center: This is the official name of the facility which is performing the tests. The site name must appear on every report page used by your lab in order to meet hospital accreditation agency requirements. Since a separate Medical Center entry is required for each major header, you can use this field to indicate that a certain group of tests appearing on a particular major header called SEND-OUT (for example) was performed at another VAMC (enter the name of the other facility here).

(10) Minor Header (Subfile): This field is used to further define the groupings of tests to be displayed on a particular major header page. It is a multiple field ONLY IF you specify the Type of display for the minor header as HORIZONTAL. Each major header is allowed to have multiple horizontal minor headers. Each major header is restricted to ONLY ONE minor header if the Type of display is defined as VERTICAL.

(.001) Order: Type a whole number from 1 to 999.

(.01) Minor Header: The minor or subheading.

You then have three possible combinations of minor headers which may be included on any major header:

a) one VERTICAL minor header

b) one HORIZONTAL minor header

c) more than one HORIZONTAL minor header

If you have chosen a VERTICAL format, then you will be allowed to display only ONE header per major header page, and thus, only ONE type of specimen per major header page. You may, however, define one type of specimen (e.g., serum) to a HORIZONTAL minor header and define a different type of specimen (e.g., urine) to another HORIZONTAL minor header, and combine the two horizontal headers on the same major header page. For each minor header defined, the following information will be required: (Subfield entries for each

Minor header field entry): (Define the horizontal headers first, then enter the vertical header last.)

(1) Profile Site/Specimen: This entry defines a single site/specimen type for each minor header.

(2) Type of Display: This field determines the type of formatted display you will see on the minor header (H for HORIZONTAL tests listed across the page in rows, or V for VERTICAL; tests listed down the page in columns).

(3) Locale Field: The software will print the hospital location (ward or clinic) from which the test was requested when you enter a "YES" in this field. This only pertains to the particular Minor header you are defining here.

(10) Lab Test (Subfile): This field allows entry of the individual test names (not panels!) to be displayed under this minor header. The specimen type of the test(s) entered here must match the Profile site/specimen field entry. This field points to valid entries in the LABORATORY TEST file (#60), so any test names entered here must first be defined as single tests in File #60. Each lab test name defined will contain the following information (subfield entries for each Lab test field entry):

(.001) Order: Enter a whole number from 1 to 999 used to determine the order in which the test names will be displayed in the minor header subgroup on the major header page.

(.01) Lab Test: This is the name of the laboratory test as found in LABORATORY TEST file (#60).

(1) Test Field Length: Enter a number (between 1 and 15) to designate the width of the columns to be used when printing the test result. If you choose the VERTICAL format, the system will automatically enter the number 10 here. Be sure to include spaces between results and their corresponding units and spaces to reserve for H, and L, and * flags when determining the column width needed for each set of results.

(2) Print Test Name: This field (two to seven characters) is triggered by the Print name field entry for the particular test in LABORATORY TEST file (#60). You may modify the print name here if you wish.

(3) Test Print Code: This field is triggered by the Print code field entry for the particular test in File #60. DO NOT attempt to modify or edit this field unless you are familiar with MUMPS code!

(4) Test Location: This field is triggered by the Lab test field entry for the particular test in the minor header, and denotes the internal location of the test in the LAB DATA file (#63). This field should not be edited.

(5) Decimal Places: Enter the number of decimal places to be used in the output of the test results. Leave this field blank if no decimal places are to be used in the result. Also leave this field blank if the entry of MUMPS code in the Test print code field allows or specifies the number of decimal places to be used.

NOTE: Any tests which your Laboratory performs that have not been formatted or assigned to one of the Minor headers in this file will print out on the cumulative report MISCELLANEOUS pages. The

MISCELLANEOUS pages print immediately following the last formatted major header page for each patient s cumulative.

(11) MICRO APPROVAL METHOD: This field allows you to enter the method used to release micro results for printing to the cumulative. Results will only be replaced for Cumulative when approved using selected options. Choose from: RE-Result Entry, VT-Verification by Tech, or VS-Verification by Supervisor. A null entry will prevent the report from printing on the CUME (also see Field #3).

(14) SORT BY PATIENT: Enter a "YES" in this field if the supervisor s summary should be printed in patient name order instead of by patient location.

(15) DAILY SUMMARY REPORTS (Subfile): This name (2-50 characters) is an arbitrary name you may assign to a specified group of the previously formatted header pages to be printed for supervisory review. This name may be the actual name of the supervisor or the functional responsibility area for which a supervisor must review results on a daily basis. Each daily summary report defined will contain the following information (subfield entries for each Daily summary report field entry).

(15) Daily Summary Reports: This report is built from the cumulative.

(1) Header (Subfile): Enter the name(s) of the previously formatted major header pages from this file which you choose to include as part of this specialized report.

Example: The Daily summary report named CHEM SUPERVISOR may include the headers CHEM, BLOOD GASES, TOX, etc. The reports defined here can be generated by using the Supervisor's report [LRAC MANUAL] option, which is exported as part of the Supervisor menu options.

(.01) Header: The headings for the summary report.

(2) Previous Summary Data: An entry of 1 for "YES" will enable the two most recent sets of a patient's previous data to print out on the supervisor's summary report along with the current set of data (results).

NOTE: Please refer to the Reports chapter of this manual to obtain more specific information as to how to define the LAB REPORTS file (#64.5) and the impact that entries in this file have on the reports at your VAMC.

(16) FILE ROOM REPORT DATE: This field is used if the site wishes to print the FILEROOM location on a different schedule than the regular Cumulate print. If this feature is utilized, the last date the FILEROOM location(s) were printed is stored in this field.

(17) SEPARATE FILE ROOM: This field is used to designate the FILE ROOM Cumulative being printed on a schedule different from the regular cumulative. To utilize this feature the following needs to be setup.

1. Set File Room field (#4) to "YES" - this sorts all non-inpatients to two locations, FILE ROOM1 and FILE ROOM2, based on terminal digit of SSN.

2. Set Separate File Room field (#17) to "YES" - this tells the cumulative that you are printing the FILE ROOM on a schedule different from the regular cumulative schedule.

3. For regular FILE ROOM patients, set up one or two reports as follows:
If one report starting location: FILE ROOM1
ending location: FILE ROOM2

If two reports:
first report starting location: FILE ROOM1
ending location: FILE ROOM1

second report starting location: FILE ROOM2
ending location: FILE ROOM2

Define the other fields as with a regular report.

4. If you also want to print certain locations to an alternate file room, such as a file room at a satellite clinic then in addition to #3 above, perform the following:

A. Enter the location(s) that you want to print as a separate report location by entering them in the Separate Report Location, field (#6).

B. Enter in Alternate File Room field (#1), the name to use for this file room. This name will be concatenated with FILE ROOM. For example, DALLAS OPC would result in file rooms "FILE ROOM_DALLAS OPC1" and "FILE ROOM_DALLAS OPC2".

NOTES:
1. The "_", underscore is used to insure that these locations sort after the regular file room locations.

2. Two locations for each file room would be created based on terminal digit of SSN or identifier (non PATIENT file (#2)) similar to the regular file rooms. These locations will print on the same schedule as regular file rooms. Either set up separate reports to print these locations or utilize reports defined in Step #3 above and alter the ending location to include these locations.

5. On each report set the File Room Report field (#3), in the Report Name field (#2) multiple to "YES".

The cumulative software will check when attempting to print a cumulative for a location that contains the name "FILE ROOM". If the Separate File Room field (#17) is set to "YES" and the report being run is not set to "YES" in the File Room Report field (#3), then the cumulative software will skip running the cumulative for that location. This is to prevent another report which may print locations "A" thru "Z" from printing the file room unintentionally.

INTERIM REPORTS file (#64.6)

The INTERIM REPORTS file (#64.6) is used to define whether or not your site will be generating interim reports of patient lab values and to what locations these reports will be sent or routed. Interim reports are defined as hard copy printouts of a patient's test results which are generated between the times that the permanent chart copy (cumulative) is printed and made available. The entries in the fields of this file also let you determine whether or not to generate these interim reports automatically upon verification of the results in the lab, and specify the device (printer) for any of the reports to print on at a given location.

In order to have any location receive automatically generated interims, you must fill in the Queue verified test(s) notice field in the LABORATORY SITE file (#69.9) with "YES". (See the file description for File #69.9.).

Field List

```
(.01) LOCATION
(1) IMMEDIATELY TRANSMIT RESULTS
(2) INTERIM REPORTING
(3) DEVICE
(4) URGENCY CUTOFF
(5) LOCATION ABBREVIATION
```

Fields Description

(.01) LOCATION: A pointer to the HOSPITAL LOCATION file (#44). This is a required entry Enter the name of the ward or clinic location which will be receiving interim reports.

(1) IMMEDIATELY TRANSMIT RESULTS: Choose "YES" or "NO". If "YES", interim reports will be generated automatically when the results are verified in the lab. If "NO", then the only way this location will be able to get interim reports will be by requesting them manually (through options by patient, by selected tests, by location, or by physician) OR by having interims tasked daily by TaskMan.

NOTE: You must also have answered "YES" in the Queue verified test(s) notice field of the LABORATORY SITE file (#69.9) in order to transmit these automatic interims.

(2) INTERIM REPORTING: Choose "YES" or "NO". In order for the location to receive any tasked interim reports, you must choose "YES".

(3) DEVICE: This is a required field which points to the DEVICE file (#3.5) that specifies what device (printer) the interim reports will be printed on.

NOTE: More than one location can have interim reports generated on the same printer (e.g., all clinic interims can be directed to one or two centrally located printers.)

(4) URGENCY CUTOFF: For automatically (immediately) generated interim reports, this field entry determines what urgencies will be printed/ reported to the ward. All urgencies will print if left blank (null). If an urgency is entered from the URGENCY file (#62.05), reports having that urgency or higher will be transmitted immediately; lower urgencies will not.

(5)LOCATION ABBREVIATION: This field contains the printable short name for the location.

NOTE: For specifics on how to use interim reports at your site, consult the Reports section of this manual.

CUMULATIVE file (#64.7)

The CUMULATIVE file (#64.7) stores temporary pages of the cumulative report. The data in this file is maintained by the cumulative routines.

NOTE: Because patient care can be effected if the cumulative report has incomplete lab results, you should NOT edit this file or data contained within it. Contact your ISC for technical support if problems arise.

Field List

```
(.01)  LRDFN
 (1)    PRINT DATE
 (10)   MAJOR HEADER (Subfile 64.701)
   (.01)  MAJOR HEADER
   (.5)   NEW DATA
   (1)    PAGE NUMBER
   (10)   MINOR HEADER (Subfile 64.703)
     (.01)  MINOR HEADER
     (1)    TOPOGRAPHY
     (2)    NUMBER OF TESTS
     (3)    FORMAT
     (10)   COLLECTION DATE/TIME (Subfile 64.704)
       (.01)  COLLECTION DATE/TIME
       (1)    LOCATION
       (2)    VERIFY DATE/TIME
       (3)    ACCESSION
       (4)    INVERSE DATE/TIME
       (10)   RESULTS (Subfile 64.705)
         (.01)  RESULTS
         (1)    FLAG
         (2)    TEST LOCATION
       (11)   COMMENTS (Subfile 64.706)
         (.01)  COMMENTS
 (11)   MISCELLANEOUS (Subfile 64.702)
   (.01)  MISCELLANEOUS
   (.5)   NEW DATA
   (1)    PAGE
   (10)   COLLECTION DATE/TIME (Subfile 64.707)
     (.01)  INVERSE DATE/TIME
```

```
  (1)    COLLECTION DATE/TIME
  (2)    VERIFY DATE/TIME
  (3)    ACCESSION
  (10)   RESULT (Subfile 64.708)
    (.01)  RESULT
    (1)    TOPOGRAPHY
    (2)    TEST
    (3)    FLAG
    (4)    TEST LOCATION
  (11)   COMMENTS (Subfile 64.709)
(.01) COMMENTS
```

Fields Description

(.01) LRDFN: This is the internal entry in the LAB DATA file.

(1) PRINT DATE: This is the date the report is printed.

(10) MAJOR HEADER (Subfile): These are the major or general headings of the report.

(.01) Major Header: These are the major or general headings of the report.

(.5) New Data: This field is a set of codes, 0 For "NO" and 1 For "YES".

(1) Page Number: Type a whole number from 0 to 999999.

(10) MINOR HEADER (Subfile): Answer must be 1-30 characters in length.

(.01) Minor Header: Answer must be 1-30 characters in length.

(1) Topography: This field is a pointer to the TOPOGRAPHY FIELD file (#61).

(2) Number Of Tests: Number of tests on this minor header.

(3) Format: Answer must be 1-3 characters in length.

(10) COLLECTION DATE/TIME (Subfile): This is a date/time field.

(.01) Collection Date/Time: This is a date/time field.

(1) Location: Answer must be 1-30 characters in length.

(2) Verify Date/Time: This is a date field.

(3) Accession: This is a free text field.

(4) Inverse Date/Time: This is a date field and can not be altered except by programmer.

(10) RESULTS (Subfile): This is a free text field.

(.01) Results: This is a free text field.

(1) Flag: This is a free text field. Answer must be one - four characters in length.

(2) Test Location: Type a whole number between 0 and 999999999.

(11) COMMENTS (Subfile): This is a word processing field.

(.01) Comments: This is a word processing field.

(11) MISCELLANEOUS (Subfile): These are test (s) not defined under a major header.

(.01) Miscellaneous: These are test (s) not defined under a major header.

(.5) New Data: This field is a Set of Codes, 0 For "NO" and 1 For "YES".

(1) Page: Type a whole number between 0 and 99999.

(10) COLLECTION DATE/TIME (Subfile): This is a date field and can not be altered except by programmer.

(.01) Inverse Date/Time: This is a date field and can not be altered except by programmer.

(1) Collection Date/Time: This is a date field and can not be altered except by a programmer.

(2) Verify Date/Time: This is a date field.

(3) Accession: This is a free text field. Answer must be 1-15 characters in length.

(10) RESULT (Subfile): This is a free text field.

(.01) Result: This is a free text field.

(1) Topography: This field is a pointer to the TOPOGRAPHY FIELD file (#61).

(2) Test: This is a pointer to the LABORATORY TEST file (#60).

(3) Flag: This is a free text field. Answer must be one - four characters in length.

(4) Test Location: Type a whole number between 0 and 999999999.

(11) COMMENTS (Subfile): This is a word processing field.

(.01) Comments: This is a word processing field.

BLOOD INVENTORY file (#65)

The BLOOD INVENTORY file (#65) stores data associated with units of blood/blood components, also known as blood products. Units may be entered into this file via one of two routes. Units received from outside blood centers are logged in upon receipt. Units drawn by the facility are automatically transferred from BLOOD DONOR file (#65.5) once processing and labeling have been completed and the units released. Do not edit file using FileMan. Use the option provided in the Supervisor's menu on the Blood Bank menu.

Field List

(.01) UNIT ID
(.02) SOURCE
(.03) INVOICE#
(.04) COMPONENT (
(.05) DATE/TIME RECEIVED
(.06) EXPIRATION DATE/TIME
(.07) ABO GROUP
(.08) RH TYPE
(.09) LOG-IN PERSON
(.1) COST
(.11) VOLUME (ml)
(.12) TYPING CHARGE
(.13) SHIPPING INVOICE#
(.14) RETURN CREDIT
(1.1) BAG LOT # (F), [1;1]
(2) PATIENT XMATCHED/ASSIGNED (Multiple-65.01),
  (.01) PATIENT XMATCHED/ASSIGNED
  (.012) PARENT FILE
  (.02) DATE/TIME UNIT ASSIGNED
  (.03) LAST SPECIMEN DATE XMATCHED
  (1) BLOOD SAMPLE DATE/TIME (Multiple-65.02)
    (.01) BLOOD SAMPLE DATE/TIME
    (.02) TREATING SPECIALITY
    (.03) PHYSICIAN
    (.04) XMATCH RESULT
    (.05) XMATCH TECH
    (.06) PATIENT SAMPLE ACC #
    (.07) TREATING SPECIALTY NUMBER
    (.08) PROVIDER NUMBER
    (.09) DATE/TIME CROSSMATCHED
    (.1) RELEASE REASON
    (1) MAJOR XMATCH METHOD (Multiple-65.0911)
      (.01) MAJOR XMATCH METHOD
      (.02) TECHNIQUE (S)
      (.03) INTERPRETATION
      (.04) IS
      (.05) 37 C
      (.06) AHG
      (.07) CONTROL CELL
      (.08) ROOM TEMP
      (.09) 12-18 C

(.1) 4 C
(2) MINOR XMATCH METHOD (Multiple-65.0912)
(.01) MINOR XMATCH METHOD
(.02) TECHNIQUE
(.03) INTERPRETATION
(.04) IS
(.05) 37 C
(.06) AHG
(.07) CONTROL CELL
(.08) ROOM TEMP
(.09) 12-18 C
(.1) 4 C
(3) CROSSMATCH COMMENT (Multiple-65.0913)
(.01) CROSSMATCH COMMENT
(3) DATE/TIME UNIT RELOCATION (Multiple-65.03)]
(.01) DATE/TIME UNIT RELOCATION
(.02) INSPECTION
(.03) TECH INSPECTING
(.04) LOCATION
(.05) ISSUED TO/REC D FROM
(.06) FOR PATIENT
(.07) VA PATIENT NUMBER
(4.1) DISPOSITION
(4.2) DISPOSITION DATE
(4.3) DISPOSITION ENTERING PERSON
(4.4) POOLED/DIVIDED UNITS
(4.5) SHIP TO (FX)
(5) DISPOSITION COMMENT (Multiple-65.06)
(.01 DISPOSITION COMMENT
(6.1) PATIENT TRANSFUSED
(6.12) PARENT FILE
(6.15) TRANSFUSED PATIENT ABO
(6.16) TRANSFUSED PATIENT RH
(6.2) PHYSICIAN
(6.3) TREATING SPECIALTY
(6.4) TRANSFUSION RECORD NUMBER
(6.5) TRANSFUSION REACTION
(6.6) PROVIDER NUMBER
(6.7) TREATING SPECIALTY NUMBER
(6.8) TRANSFUSION REACTION TYPE
(7) TRANSFUSION COMMENT (Multiple-65.07)
(.01 TRANSFUSION COMMENT
(8) RESTRICTED FOR (FXO)
(8.1) POS/INCOMPLETE SCREENING TESTS
(8.3) DONATION TYPE (S)
(9) MODIFIED TO/FROM (Multiple-65.091)
(.001) NUMBER
(.01) MODIFIED TO/FROM
(.02) UNIT ID
(.03) FROM/TO
(10) ABO INTERPRETATION
(10.2) TECH ENTERING-ABO INTERP
(10.3) ABO TESTING COMMENT
(10.4) ABO MOVED FROM DONOR FILE

(11) RH INTERPRETATION
(11.2) TECH ENTERING-RH INTERP
(11.3) RH TESTING COMMENT
(11.4) RH MOVED FROM DONOR
(15) DATE RE-ENTERED (Multiple-65.15)
(.01) DATE RE-ENTERED
(.02) PREVIOUS DISPOSITION
(.03) PREVIOUS DISPOSITION DATE
(.04) PREVIOUS DISP ENTERING PERSON
(.05) PREVIOUS SHIPPING INVOICE
(.06) PREVIOUS RECEIVING INVOICE
(.07) PREVIOUS LOG-IN PERSON
(.08) PREVIOUS DATE LOGGED-IN
(.09) PREVIOUS SHIP TO
(16) PEDIATRIC ALIQUOT MADE (Multiple-65.16)
(.01) PEDIATRIC ALIQUOT MADE (MF)
(.02) VOLUME (ml) (RNJ3,0)
(60) RBC ANTIGEN PRESENT (Multiple-65.04)
(.01) RBC ANTIGEN PRESENT (M*P61.3 X)
(.02) RBC ANTIGEN PRESENT COMMENT
(70) RBC ANTIGEN ABSENT (Multiple-65.05)
(.01) RBC ANTIGEN ABSENT (M*P61.3 X)
(.02) RBC ANTIGEN ABSENT COMMENT
(80) HLA ANTIGEN PRESENT (Multiple-65.08)
(.01) HLA ANTIGEN PRESENT (M*P61.3 X)
(.02) HLA ANTIGEN PRESENT COMMENT
(90) HLA ANTIGEN ABSENT (Multiple-65.09),
(.01) HLA ANTIGEN ABSENT (M*P61.3 X)
(.02) HLA ANTIGEN ABSENT COMMENT
(91) CMV ANTIBODY (S)
(121) DONOR CELLS+ANTI D(slide rgt)
(122) DONOR CELLS+RH CTRL(slide rgt)
(123) DONOR CELLS+ANTI D (37)
(124) DONOR CELLS+RH CTRL (37)
(125) DONOR CELLS+ANTI D
(126) DONOR CELLS+RH CTRL
(127) DONOR CELLS+ANTI D
(128) DONOR CELLS+RH CTRL CC
(141) DONOR CELLS+ANTI A(slide)
(142) DONOR CELLS+ANTI B(slide)
(143) DONOR CELLS+ANTI A,B(slide)
(144) DONOR PLASMA+A1 CELLS
(145) DONOR PLASMA+B CELLS
(200) DIRECT AHG
(500) TEST/PROCEDURE (Multiple-65.3)
(.01) TEST/PROCEDURE
(1) COMPLETE DATE/TIME (Multiple-65.31)
(.01) COMPLETE DATE/TIME (MDX)
(.02) TECH
(.03) INSTITUTION
(.04) MAJOR SECTION
(.05) SUBSECTION
(1) WKLD CODE (Multiple-65.311)
(.01) WKLD CODE

(.02) WKLD CODE COUNT
(.03) WKLD CODE COUNTED
(999) DATA CHANGE DATE (Multiple-65.099)
(.01) DATA CHANGE DATE
(.02) PERSON CHANGING DATA
(.03) DATA ELEMENT
(.04) OLD VALUE (F)
(.05) NEW VALUE (F)

Fields Description

(.01) UNIT ID: The unit identification on the blood product label.

(.02) SOURCE: Collecting facility

(.03) INVOICE#: Number on invoice accompanying unit

(.04) COMPONENT: Name of blood product

(.05) DATE/TIME RECEIVED: Date/time component received. Allows current and past times but disallows future times.

(.06) EXPIRATION DATE/TIME: Expiration date/time of unit.

(.07) ABO GROUP: ABO blood group of unit. If ABO group is not applicable to the unit or component (ex. a mixed pool of compatible ABO types) enter NA for N/A (not applicable).

(.08) RH TYPE: Rh type of unit. If RH TYPE not applicable to the unit or component enter NA for N/A (not applicable or necessary).

(.09) LOG-IN PERSON: Person entering unit in file.

(.1) COST: Cost of unit.

(.11) VOLUME (ml): Volume of unit or component.

(.12) TYPING CHARGE: Charge assigned by organization performing antigen typing.

(.13) SHIPPING INVOICE#: Invoice (order) number identified with returned shipment to supplier.

(.14) RETURN CREDIT: Credit given for returning unit to supplier or sending unit elsewhere

(1.1) BAG LOT#: You may enter the bag lot number if preparing a component from a unit in inventory.

(2) PATIENT XMATCHED/ASSIGNED (Subfile): Number to left of NAME is the internal number in the Lab results file. Number to right of NAME is last characters of patient SSN.

(.01) Patient Xmatched/Assigned: Number to left of NAME is the internal number in the lab results file. Number to right of NAME is last characters of patient SSN.

(.012) Parent File: File where demographic data is stored for patient crossmatched

(.02) Date/Time Unit Assigned: Date/time unit is crossmatched for each patient. If unit is released from crossmatch for a specific patient the date/time is deleted.

(.03) Last Specimen Date Xmatched: Date/time of specimen unit was last xmatched with.

(1) BLOOD SAMPLE DATE/TIME (Subfile): Date/time of blood sample used for pretransfusion testing.

(.01) Blood Sample Date/Time: Date/time of blood sample used for pretransfusion testing.

(.02) Treating Specialty: Medical specialty treating patient.

(.03) Physician: Patient physician.

(.04) Xmatch Result: Interpretation of major crossmatch.

(.05) Xmatch Tech: Person performing crossmatch.

(.06) Patient Sample Acc #: Blood bank accession number for patient sample.

(.07) Treating Specialty Number: If treating specialty is an entry in the TREATING SPECIALTY file (#42.4) the pointer number is stored here.

(.08) Provider Number : If the physician is an entry in the NEW PERSON file (#200) the pointer number is stored here.

(.09) Date/Time Crossmatched: The date/time of the blood sample crossmatch

(.1) Release Reason: Reason unit is released from xmatch.

(1) MAJOR XMATCH METHOD (Subfile): Crossmatch methods. LISH=low ionic strength high molecular weight.

(.01) Major Xmatch Method: Crossmatch methods. LISH=low ionic strength high molecular weight.

(.02) Technique: Method used in the crossmatch.

(**.03) Interpretation:** Major crossmatch interpretation.

(.04) IS: This is the immediate spin.

(.05) 37 C: This is 37 degrees centigrade.

(.06) AHG: This is anti-human globulin.

(.07) Control Cell: This is antibody coated control cell.

(.08) Room Temp: This is 22-24 degrees centigrade.

(.09) 12-18 C: This is 12-18 degrees centigrade.

(.1) 4 C: This is 4 degrees centigrade.

(2) MINOR XMATCH METHOD (Subfile): Data stored here for minor crossmatch if used. LISH=low ionic strength high molecular weight.

(.01) Minor Xmatch Method: Data stored here for minor crossmatch if used. LISH=low ionic strength high molecular weight.

(.02) Technique: Method used in the crossmatch.

(.03) Interpretation: Crossmatch interpretation.

(.04) IS: This is immediate spin.

(.05) 37 C: This is 37 degree centigrade.

(.06) AHG: This is antihuman globulin.

(.07) Control Cell: This is antibody coated control cell.

(.08) Room Temp: This is 22-24 degree centigrade.

(.09) 12-18 C: This is 12-18 degrees centigrade.

(.1) 4 C: This is 4 degrees centigrade.

(3) CROSSMATCH COMMENT (Subfile): Comment(s) relating to the crossmatch of the specific donor unit.

(.01) Crossmatch Comment: Comment(s) relating to the crossmatch of the specific donor unit.

NOTE: These comments become part of the permanent transfusion record of the patient if the unit is subsequently transfused to that patient.

(3) DATE/TIME UNIT RELOCATION (Subfile): Date/time unit is relocated from one location to another, ex. from blood bank to surgery or from surgery to blood bank.

(.01) Date/Time Unit Relocation: Date/time unit is relocated from one location to another, ex. from blood bank to surgery or from surgery to blood bank.

(.02)Inspection: Interpretation of unit inspection for color and appearance immediately before issue/relocation.

(.03) Tech Inspecting: Person inspecting unit.

(.04) Location: Location to which unit of blood is being relocated.

(.05) Issued To/Recd From: Person taking unit from or returning unit to the blood bank.

(.06) For Patient: The patient the unit of blood is being relocated for.

(.07) VA Patient Number: If the patient is an entry in the PATIENT file (#2) the pointer number is stored here.

(4.1) DISPOSITION: Final disposition of the unit.

(4.2) DISPOSITION DATE: Date of final disposition.

(4.3) DISPOSITION ENTERING PERSON: Person entering final disposition.

(4.4) POOLED/DIVIDED UNITS: Number of units in pool OR number of aliquots into which a unit of blood/blood component has been divided.

(4.5) SHIP TO: If unit is returned to sender or shipped elsewhere enter name/location of facility where sent.

(5) DISPOSITION COMMENT: Final disposition comment(s).

(.01) Disposition Comment: Final disposition comment(s).

(6.1) PATIENT TRANSFUSED: Name of patient transfused

(6.12) PARENT FILE: This is the file whose demographic data is stored for the patient transfused.

(6.15) TRANSFUSED PATIENT ABO: This is the transfused patient ABO.

(6.16) TRANSFUSED PATIENT RH: This is the transfused patient Rh type.

(6.2) PHYSICIAN: Physician of patient transfused

(6.3) TREATING SPECIALTY: Treating specialty to which the patient is assigned at the time the unit was transfused.

(6.4) TRANSFUSION RECORD NUMBER: Internal number in Subfile #63.085 Transfusion Record.

(6.5) TRANSFUSION REACTION: Answer "YES" if the patient experienced an adverse reaction as a result of transfusion of designated blood/blood component.

(6.6) PROVIDER NUMBER: If the physician is an entry in the NEW PERSON file the pointer number is stored here.

(6.7) TREATING SPECIALTY NUMBER: If the treating specialty is an entry in the treating specialty file the pointer number is stored here.

(6.8) TRANSFUSION REACTION TYPE: Indicates the type of transfusion reaction.

(7) TRANSFUSION COMMENT (Subfile): Comments regarding the transfusion of the specific unit, including whether only a part of the unit was transfused and the reason(s).

> **(.01) Transfusion Comment:** Comments regarding the transfusion of the specific unit, including whether only a part of the unit was transfused and the reason(s).

(8) RESTRICTED FOR: The patient indicated here is the only one who may be transfused with this unit.

(8.1) POS/INCOMPLETE SCREENING TESTS: If autologous donor has a positive syphilis serology, HBsAg, or HIV antibody test "YES" is entered. This flag is intended to warn NOT to transfuse this unit to anyone other than the DONOR !

(8.3) DONATION TYPE: This field indicates which type of donation will be used to log this unit.

(9) MODIFIED TO/FROM (Subfile): If a unit is modified this identifies what products are made and what are the new units IDs. If a unit is a pool this identifies what product was pooled and what units are in the pool.

> **(.001) Number:** A number from 1 to 20.
>
> **(.01) Modified To/From:** If a unit is modified this identifies what products are made and what are the new units ID's. If unit is a pool this identifies what product was pooled and what units are in the pool.

(.02) Unit Id: If the unit is to be modified the I.D. of the new unit is entered here. If the unit is a modified unit the old unit I.D. is entered.

(.03) From/To: If a entry is from another unit a 1 is entered. If a entry is to become or be apart of another unit a 2 is entered. Several of the entries may have been entered to form a pool and each entry will have a 1 entered. Then the pool may be modified to another unit and then the entry will have a 2 entered.

(10) ABO INTERPRETATION: Interpretation of ABO testing.

(10.2) TECH ENTERING-ABO INTERP: Person performing ABO testing.

(10.3) ABO TESTING COMMENT: Comment related to ABO testing.

(10.4) ABO MOVED FROM DONOR FILE: This field is a Set of Codes, 1 For "YES".

(11) RH INTERPRETATION: Interpretation of Rh testing.

(11.2) TECH ENTERING-RH INTERP: Person performing Rh testing.

(11.3) RH TESTING COMMENT: Comment related to Rh testing.

(11.4) RH MOVED FROM DONOR FILE: This field is a set of codes.

(15) DATE RE-ENTERED (Subfile): Re-entry date of the unit in the file.

(.01) Date Re-Entered: If receiving a unit that was previously returned or sent elsewhere enter the date re-entering the unit in INVENTORY file (#4).

(.02) Previous Disposition: The previous disposition.

(.03) Previous Disposition Date: The date of the previous disposition.

(.04) Previous Disp Entering Person: The name of the person entering the previous disposition.

(.05) Previous Shipping Invoice: The previous shipping invoice.

(.06) Previous Receiving Invoice: The previous receiving invoice.

(.07) Previous Log-In Person: The name of the previous log in person.

(.08) Previous Date Logged-In: Date of the previous log in.

(.09) Previous Ship To: The name of the previous ship to area.

(16) PEDIATRIC ALIQUOT MADE: If portions of unit taken for pediatric units enter the pediatric unit IDs here.

(.01)Pediatric Aliquot Made: If portions of unit taken for pediatric units enter the pediatric unit IDs here.

(.02) Volume (Ml): Volume in milliliters of pediatric aliquot made from this unit.

(60) RBC ANTIGEN PRESENT (Subfile): Select Antigens.

(.01) RBC Antigen Present: Antigen(s) present on red blood cells of the unit (If applicable).

(.02) RBC Antigen Present Comment: Comment to RBC antigen presence.

(70) RBC ANTIGEN ABSENT: Antigen(s) absent on red blood cells of unit (If applicable)

(.01) RBC Antigen Absent: Antigen(s) absent on red blood cells of unit (If applicable)

(.02) RBC Antigen Absent Comment: Comment to RBC antigen absence.

(80) HLA ANTIGEN PRESENT: HLA antigen(s) present on the appropriate cells.

(.01) HLA Antigen Present: HLA antigen(s) present on the appropriate cells.

(.02) HLA Antigen Present Comment: Comment to HLA antigen presence.

(90) HLA ANTIGEN ABSENT: HLA antigen(s) absent on the appropriate cells.

(.01) HLA Antigen Absent: HLA antigen(s) absent on the appropriate cells.

(.02) HLA Antigen Absent Comment: Comment to HLA antigen absence.

(91) CMV ANTIBODY: This field is a set of codes, 0 FOR NEG and 1 FOR POS.

(121) DONOR CELLS+ANTI D(slide rgt): This field is a set of codes, N FOR NEG and P FOR POS.

(122) DONOR CELLS+RH CTRL(slide rgt): This field is a set of codes, N FOR NEG and P FOR POS.

(123) DONOR CELLS+ANTI D (37): This is a free text field and can not be altered except by programmer.

(124) DONOR CELLS+RH CTRL (37): This is a free text field and can not be altered except by programmer.

(125) DONOR CELLS+ANTI D (AHG): This is a free text field and can not be altered except by programmer.

(126) DONOR CELLS+RH CTRL (AHG): This is a free text field and can not be altered except by programmer.

(127) DONOR CELLS+ANTI D (AHG) CC: This is a free text field and can not be altered except by programmer.

(128) DONOR CELLS+RH CTRL CC: This field is a set of codes, N FOR NEG and P FOR POS.

(141) DONOR CELLS+ANTI A(slide): This field is a set of codes, N FOR NEG and P FOR POS.

(142) DONOR CELLS+ANTI B(slide): This field is a set of codes, N FOR NEG and P FOR POS.

(143) DONOR CELLS+ANTI A,B(slide): This field is a set of codes, N FOR NEG and P FOR POS.

(144) DONOR PLASMA+A1 CELLS: This field is a set of codes, N FOR NEG and P FOR POS.

(145) DONOR PLASMA+B CELLS: This field is a set of codes, N FOR NEG and P FOR POS.

(200) DIRECT AHG(BS): This field is a set of codes, N FOR NEG and P FOR POS.

(500) TEST/PROCEDURE (Subfile): This field is used to keep track of test/procedures for WKLD workload.

(.01) Test/Procedure: This field is used to keep track of test/procedures for WKLD workload.

(1) COMPLETE DATE/TIME: The completion date/time of the test/procedure.

(.01) Complete Date/Time: The completion date/time of the test/procedure.

(.02) Tech: The name of the technician completing the test/procedure.

(.03) Institution: The name of the institution from the INSTITUTION file (#4).

(.04) Major Section: The name of the major section from the ACCESSION file (#68).

(.05) Subsection: The name of the subsection from the ACCESSION file (#68).

(1) WKLD CODE: The name of the workload code from the WKLD CODE file (#64).

(.01) WKLD Code: The name of the workload code from the WKLD CODE file (#64).

(.02) WKLD Code Count: The count of the workload code entry.

(.03) WKLD Code Counted: This field is a set of code, answer "YES" or "NO" whether the workload code was counted.

(999) DATA CHANGE DATE (Subfile): This field contains the date the reported value was changed.

(.01) Data Change Date: This field contains the date the reported value was changed.

(.02) Person Changing Data: This field contains the person that alter the reported value.

(.03) Data Element: This field indicated what result name the data was altered.

(.04) Old Value: This field contains the value before it was altered.

(.05) New Value: This field contains the new value after the field was altered.

BLOOD BANK UTILITY file (# 65.4)

This file contains donor affiliation groups, collection sites, items related to donor history, and transfusion reaction types.

Field List

```
(.01) NAME
(.02) SCREEN
(.03) FULL NAME
(1.1) ADDRESS LINE 1
(1.2) ADDRESS LINE 2
(1.3) ADDRESS LINE 3
(1.4) CITY
(1.5) STATE
(1.6) ZIP CODE
(1.7) PHONE 1
(1.8) PHONE 2
(1.9) GROUP LEADER
(2) DONOR HISTORY (Subfile 65.41)
(.001) Preference Number
(.01) Donor History
(3) COMMENT (Subfile 65.42)
(.01) Comment
```

Fields Description

(.01) NAME: Enter the name of the collection site, group affiliation, or coded item related to donor history.

(.02) SCREEN: This designates the type of donor utility.

(.03) FULL NAME: This is the name of the donor.

(1.1) ADDRESS LINE 1: This is the first line of the donor address.

(1.2) ADDRESS LINE 2: This is the second line of the donor address.

(1.3) ADDRESS LINE 3: This is the third line of the donor address.

(1.4) CITY: This is the city field of the donor address.

(1.5) STATE: This is the state part of the donor address.

(1.6) ZIP CODE: This is the zip code part of the donor address.

(1.7) PHONE 1: This is the phone number of the donor.

(1.8) PHONE 2: This is the other phone number of the donor.

(1.9) GROUP LEADER: This is the person coordinating the collection site or group affiliation.

(2) DONOR HISTORY: These are the comments on donor history.

(.001) PREFERENCE NUMBER: This is the entry number of the donor history.

(.01) DONOR HISTORY: This is the donor history.

(3) COMMENT: This is the comment on donor history.

BLOOD DONOR file (#65.5)

The BLOOD DONOR file (#65.5) stores all of the data for each blood donor and each donation attempt, including donor demographics, collection and component preparation information, processing test results, and labeling/release information.

Field List

```
(.01)  NAME
(.02)  SEX
(.03)  DOB
(.031) AGE
(.04)  APHERESIS CODE
(.05)  ABO GROUP
(.06)  RH TYPE
(.07)  CUMULATIVE DONATIONS
(.08)  TOTAL AWARDS
(.085) GIVE NEW AWARD
(.09)  DEMOG ENT/EDIT BY
(.1)   PERMANENT DEFERRAL
(.11)  DATE REGISTERED/EDITED
(.12)  DEFERRAL ENTER/EDIT BY
(.13)  SSN
(.14)  MILITARY RANK
(.16)  PERMANENT DEFERRAL DATE CHANGE
(1.1)  ADDRESS LINE 1
(1.2)  ADDRESS LINE 2
(1.3)  ADDRESS LINE 3
(1.4)  CITY
(1.5)  STATE
(1.6)  ZIP CODE
(1.7)  HOME PHONE
(1.8)  WORK PHONE
(2)    GROUP AFFILIATION (Subfile 65.51)
   (.01)  GROUP AFFILIATION
   (.02)  FULL NAME
(3)    DONOR SCHEDULING (Subfile 65.52)
   (.01  BLOOD DONOR COMMENTS
(4)    DONOR SCHEDULING/RECALL (Subfile 65.53)
   (.01)  DONOR SCHEDULING/RECALL
(5)    DONATION OR DEFERRAL DATE (Subfile 65.54)
   (.01)  DONATION OR DEFERRAL DATE
   (.011) DONATION ENTERED/EDIT BY
   (.02)  COLLECTION SITE
   (.03)  DONATION GROUP
   (.13)  ARRIVAL/APPT TIME
   (.14)  ENTRY VIA OLD RECORDS
   (1)    DONATION/DEFERRAL CODE
   (1.1  DONATION TYPE
   (1.2  RESTRICTED FOR
   (2)    DEFERRAL REASON (Subfile 65.55)
     (.01)  DEFERRAL REASON
   (3)    DONOR REACTION CODE
   (4)     UNIT ID
   (4.1)   PRIMARY BAG
   (4.11)  ANTICOAGULANT
   (4.15)  BAG LOT #
   (4.2)   DATE/TIME COLLECTION STARTED
```

```
 (4.3)   DATE/TIME COLLECTION COMPLETED
 (4.4)   DATE/TIME PROCESSED
 (4.5)   COLLECTED PRIMARY UNIT WT (gm)
 (4.6)   EMPTY PRIMARY UNIT WT (gm)
 (4.7)   COLLECTION VOL (ml)
 (4.8)   PROCESSING TECH
 (5)     PATIENT CREDIT
 (6)     PHLEBOTOMIST
 (6.1)   COLLECTION DISPOSITION
(6.2)   COLLECTION DISPOSITION COMMENT (Subfile 65.546)
   (.01)   COLLECTION DISPOSITION COMMENT
 (7)     RBC TYPING METHOD (Subfile 65.61)
   (.01)   RBC TYPING METHOD
   (.02)   TECHNIQUE
   (.03)  TECHNOLOGIST
   (1)     ANTISERUM (Subfile 65.62)
     (.01)   ANTISERUM
     (.02)   LOT #
     (.03)   INTERPRETATION
     (.04)   IS
     (.05)   37 C
     (.06)   AHG
     (.07)   CONTROL CELL
     (.08)   ROOM TEMP
     (.09)  12-18 C
     (.1)   4 C
 (8.1)  DONOR CELLS+ANTI A
 (8.2)  DONOR CELLS+ANTI B
 (8.3)  DONOR CELLS+ANTI A,B
 (8.4)  DONOR PLASMA/SERUM+A1 CELLS
 (8.5)  DONOR PLASMA/SERUM+B CELLS
 (9.1)  DONOR CELLS+ANTI D
 (9.2)  DONOR CELLS+RH CONTROL
 (9.3)  DONOR CELLS+ANTI D (37 C)
 (9.4)  DONOR CELLS+RH CTRL (37 C)
 (9.5)  DONOR CELLS+ANTI D (AHG)
 (9.6)  DONOR CELLS+RH CTRL (AHG)
 (10)   ABO INTERPRETATION
 (10.2)  TECH ENTERING-ABO INTERP
 (10.3)  ABO TESTING COMMENT
 (10.4)  ABO INTERPRETATION RECHECK
 (10.5)  TECH ENTERING-ABO RECHECK
 (10.6)  ABO RECHECK COMMENT
 (11)    RH INTERPRETATION
 (11.2)  TECH ENTERING-RH INTERP
 (11.3)  RH TESTING COMMENT
 (11.4)  RH  INTERPRETATION RECHECK
 (11.5)  TECH ENTERING-RH RECHECK
 (11.6)  RH TESTING RECHECK COMMENT
 (12)    SYPHILIS SEROLOGY
 (12.2)  TECH-SYPHILIS SEROLOGY
 (12.3)  SYPHILIS SEROLOGY COMMENT
 (13)    HBsAg
 (13.2)  TECH-HBsAg
 (13.3)  HBsAg COMMENT
 (14)    HIV ANTIBODY
 (14.2)  TECH-HIV
 (14.3)  HIV TESTING COMMENT
 (15)    ANTIBODY SCREEN RESULT
 (15.2)  TECH-ANTIBODY SCREEN
```

```
   (15.3)  ANTIBODY SCREEN COMMENT
   (16)    HBcAb
   (16.2) TECH-HBcAb
   (16.3)  HBcAb TEST COMMENT
   (17)    ALT
   (17.2)  TECH-ALT
   (17.3)  ALT TEST COMMENT
   (18)    HTLV-I ANTIBODY
  (18.2)  TECH-HTLV-I
   (18.3)  HTLV-I TESTING COMMENT
   (19)    HCV ANTIBODY
   (19.2)  TECH-HCV ANTIBODY
   (19.3)  HCV ANTIBODY TESTING COMMENT
   (66)    BLOOD COMPONENT (Subfile 65.66)
     (.01)   BLOOD COMPONENT
     (.02)   COMPONENT DISP DATE/TIME
     (.03)   DATE/TIME STORED
     (.04)   EXPIRATION DATE
     (.05)   COMPONENT VOL (ml)
     (.06)   TECH LABELING
     (.07)   DISPOSITION TECH
     (.08)   COMPONENT DISPOSITION
     (1)     COMPONENT DISPOSITION COMMENT (Subfile 65.67)
       (.01)   COMPONENT DISPOSITION COMMENT
     (2)     SEDIMENTING AGENT
     (3)     DRUG
   (70)    GENERAL APPEARANCE
   (71)    VENIPUNCTURE SITE
   (72)    ORAL TEMPERATURE
   (73)    BLOOD PRESSURE
   (74)    PULSE
   (74.3)  PULSE COMMENT
   (75)   WEIGHT (lb)
   (80)   HEMOGLOBIN
   (81)   HEMATOCRIT
   (82)   TOTAL SERUM PROTEIN
   (83)   SERUM PROTEIN ELECTROPHORESIS (Subfile 65.6)
     (.01)  SERUM PROTEIN ELECTROPHORESIS
   (84)   IgG
   (85)   IgM
   (86)   WBC
   (87)   POLYS
   (88)   EOSINOPHILS
   (89)   BASOPHILS
   (90)   LYMPHOCYTES
   (91)   MONOCYTES
   (92)   PLATELET COUNT
   (500)  WORKLOAD TEST/PROCEDURE (Subfile 65.599)
     (.01)  WORKLOAD TEST/PROCEDURE
     (1)    COMPLETE DATE/TIME (Subfile 65.5991)
       (.01)  COMPLETE DATE/TIME
       (.02)  TECH
       (1)    WKLD CODE (Subfile 65.59911)
         (.01)  WKLD CODE
         (.02)  WKLD CODE COUNT
         (.03)  WKLD CODE COUNTED
(6.1)  RBC ANTIGEN PRESENT (Subfile 65.56)
   (.01)  RBC ANTIGEN PRESENT
   (1)    COMMENT
(6.2)  RBC ANTIGEN ABSENT (Subfile 65.57)
```

```
   (.01)  RBC ANTIGEN ABSENT
   (1)    COMMENT
(6.3)  HLA ANTIGEN PRESENT (Subfile 65.58)
   (.01)  HLA ANTIGEN PRESENT
   (1)    COMMENT
(6.4)  HLA ANTIGEN ABSENT (Subfile 65.59)
   (.01)  HLA ANTIGEN ABSENT
  (1)    COMMENT
(6.5)  CMV ANTIBODY
(9)    BLOOD DONOR COMMENTS (Subfile 65.52)
   (.01)  BLOOD DONOR COMMENTS
(63)   LABORATORY REFERENCE
(99)   PERMANENT DEFERRAL REASON (Subfile 65.99)
   (.01)  PERMANENT DEFERRAL REASON
```

Fields Description

NOTE: Due to the number of fields in the BLOOD DONOR file (#65.5) a complete description of fields will not be included in this section. Please refer to the FileManager manual for instruction on how to print a Data Dictionary.

LAB LETTER file (#65.9)

The LAB LETTER file (#65.9) stores Lab consultations and blood donor letters.

Field List

```
(.01) NAME
(.02) SCREEN
(.03) TOP MARGIN OF PAGE
(.04) BOTTOM MARGIN OF PAGE
(.05) LEFT LETTER TEXT MARGIN
(.06) RIGHT LETTER TEXT MARGIN
(.07) DOUBLE SPACE
(.08) RIGHT JUSTIFY TEXT
(.09) ACCESSION AREA
(1.1) SENDER LINES LEFT MARGIN
(1.2) SENDER LINE 1
(1.3) SENDER LINE 2
(1.4) SENDER LINE 3
(1.5) SENDER LINE 4
(1.6) SENDER LINE 5
(2) LETTER TEXT (Subfile 65.91)
(.01) Letter Text
(3.1) Sender Name Line 1
(3.2) Sender Name Line 2
(3.3) Lines From Text To Sender Name
(4) PARAGRAPH 1 (Subfile 65.94)
(.01) Paragraph 1
(5) PARAGRAPH 2 (Subfile 65.95)
(.01) Paragraph 2
(6) PARAGRAPH 3 (Subfile 65.96)
(.01) Paragraph 3
(7) PARAGRAPH 4 (Subfile 65.97)
```

(.01) Paragraph 4

Fields Description

(.01) NAME: The name of the lab letter entered.

(.02) SCREEN: Screens entries for pre and post donor visits, consults, and letters.

(.03) TOP MARGIN OF PAGE: Number of blank lines from top of page to first line of print.

(.04) BOTTOM MARGIN OF PAGE: Number of lines to be blank from last line of letter text to bottom of page.

(.05) LEFT LETTER TEXT MARGIN: The number of columns to indent to the right of the left edge of the page.

(.06) RIGHT LETTER TEXT MARGIN: The number of columns to indent to the left of the right side of the page.

(.07) DOUBLE SPACE: This field indicates if double spacing should be used when printing this letter.

(.08) RIGHT JUSTIFY TEXT: Right-justify the letter text over to the right margin.

(.09) ACCESSION AREA: This field contains which accession area this letter is associated with.

(1.1) SENDER LINES LEFT MARGIN: This field is used to set up the left margin of the letter during printing.

(1.2) SENDER LINE 1: Line 1 name where letter is sent.

(1.3) SENDER LINE 2: Line 2 where letter is sent.

(1.4) SENDER LINE 3: Line 3 where letter is sent.

(1.5) SENDER LINE 4: Line 4 where letter is sent.

(1.6) SENDER LINE 5: Line 5 where letter is sent.

(2) LETTER TEXT (Subfile): This field contains the text (body) of the letter.

(3.1) Sender Name Line 1: Name of sender of line 1.

(3.2) Sender Name Line 2: Name of sender of line 2.

(3.3) Lines From Text To Sender Name: The number of blank lines from the bottom of the letter to the name of the sender.

(4) PARAGRAPH 1: Text of first paragraph.

(5) PARAGRAPH 2: Text of second paragraph.

(6) PARAGRAPH 3: Text of third paragraph.

(7) PARAGRAPH 4: Text of fourth paragraph.

ARCHIVED BLOOD INVENTORY file (#65.9999)

The ARCHIVED BLOOD INVENTORY file (#65.9999) contain the units of various blood components - THIS IS AN ARCHIVE FILE.

Field List

(.01) UNIT ID
(.02) SOURCE
(.03) INVOICE#
(.04) COMPONENT
(.05) DATE/TIME RECEIVED
(.06) EXPIRATION DATE/TIME
(.07) ABO GROUP
(.08) RH TYPE
(.09) LOG-IN PERSON
(.1) COST
(.11) VOLUME (ml)
(.12) TYPING CHARGE
(.13) SHIPPING INVOICE#
(.14) RETURN CREDIT
(1.1) BAG LOT #
(2) PATIENT XMATCHED/ASSIGNED
(.01) PATIENT XMATCHED/ASSIGNED
(.012) PARENT FILE
(.02) DATE/TIME UNIT ASSIGNED
(.03) LAST SPECIMEN DATE XMATCHED
(1) BLOOD SAMPLE DATE/TIME
(.01) BLOOD SAMPLE DATE/TIME
(.02) TREATING SPECIALITY
(.03) PHYSICIAN

(.04) XMATCH RESULT
(.05) XMATCH TECH
(.06) PATIENT SAMPLE ACC #
(.07) TREATING SPECIALTY NUMBER
(.08) PROVIDER NUMBER
(.09) DATE/TIME CROSSMATCHED
(.1) RELEASE REASON
(1) MAJOR XMATCH METHOD
(.01) MAJOR XMATCH METHOD
(.02) TECHNIQUE
(.03) INTERPRETATION
(.04) IS
(.05) 37 C
(.06) AHG
(.07 CONTROL CELL
(.08) ROOM TEMP
(.09) 12-18 C
(.1) 4 C
(2) MINOR XMATCH METHOD
(.01) MINOR XMATCH METHOD
(.02) TECHNIQUE
(.03) INTERPRETATION
(.04) IS
(.05) 37 C
(.06) AHG
(.07) CONTROL CELL
(.08) ROOM TEMP
(.09) 12-18 C
(.1) 4 C
(3) CROSSMATCH COMMENT
(.01) CROSSMATCH COMMENT
(3) DATE/TIME UNIT RELOCATION
(.01) DATE/TIME UNIT RELOCATION
(.02) INSPECTION
(.03) TECH INSPECTING
(.04) LOCATION
(.05) ISSUED TO/REC D FROM
(.06) FOR PATIENT
(.07) VA PATIENT NUMBER
(4.1) DISPOSITION
(4.2) DISPOSITION DATE
(4.3) DISPOSITION ENTERING PERSON
(4.4) POOLED/DIVIDED UNITS
(4.5) SHIP TO
(5) DISPOSITION COMMENT
(.01) DISPOSITION COMMENT
(6.1) PATIENT TRANSFUSED
(6.12) PARENT FILE
(6.15) TRANSFUSED PATIENT ABO
(6.16) TRANSFUSED PATIENT RH
(6.2) PHYSICIAN
(6.3) TREATING SPECIALITY
(6.4) TRANSFUSION RECORD NUMBER
(6.5) TRANSFUSION REACTION

(6.6) PROVIDER NUMBER
(6.7) TREATING SPECIALITY NUMBER
(6.8) TRANSFUSION REACTION TYPE
(7) TRANSFUSION COMMENT
(.01) TRANSFUSION COMMENT
(8) RESTRICTED FOR
(8.1) POS/INCOMPLETE SCREENING TESTS
(8.3) DONATION TYPE
(9) MODIFIED TO/FROM
(.001) NUMBER
(.01) MODIFIED TO/FROM
(.02) UNIT ID
(.03) FROM/TO
(10) ABO INTERPRETATION
(10.2) TECH ENTERING-ABO INTERP
(10.3) ABO TESTING COMMENT
(10.4) ABO MOVED FROM DONOR FILE
(11) RH INTERPRETATION
(11.2) TECH ENTERING-RH INTERP
(11.3) RH TESTING COMMENT
(11.4) RH MOVED FROM DONOR FILE
(15) DATE RE-ENTERED
(.01) DATE RE-ENTERED
(.02) PREVIOUS DISPOSITION
(.03) PREVIOUS DISPOSITION DATE
(.04) PREVIOUS DISP ENTERING PERSON
(.05) PREVIOUS SHIPPING INVOICE
(.06) PREVIOUS RECEIVING INVOICE
(.07) PREVIOUS LOG-IN PERSON
(.08) PREVIOUS DATE LOGGED-IN
(.09) PREVIOUS SHIP TO
(16) PEDIATRIC ALIQUOT MADE
(.01) PEDIATRIC ALIQUOT MADE
(.02) VOLUME (ml)
(60) RBC ANTIGEN PRESENT
(.01) RBC ANTIGEN PRESENT
(.02) RBC ANTIGEN PRESENT COMMENT
(70) RBC ANTIGEN ABSENT
(.01) RBC ANTIGEN ABSENT
(.02) RBC ANTIGEN ABSENT COMMENT
(80) HLA ANTIGEN PRESENT
(.01) HLA ANTIGEN PRESENT
(.02) HLA ANTIGEN PRESENT COMMENT
(90) HLA ANTIGEN ABSENT
(.01) HLA ANTIGEN ABSENT
(.02) HLA ANTIGEN ABSENT COMMENT
(91) CMV ANTIBODY
(121) DONOR CELLS+ANTI D(slide rgt)
(122) DONOR CELLS+RH CTRL(slide rgt)
(123) DONOR CELLS+ANTI D (37)
(124) DONOR CELLS+RH CTRL (37)
(125) DONOR CELLS+ANTI D (AHG)
(126) DONOR CELLS+RH CTRL (AHG)
(127) DONOR CELLS+ANTI D (AHG) CC

(128) DONOR CELLS+RH CTRL CC
(141) DONOR CELLS+ANTI A(slide)
(142) DONOR CELLS+ANTI B(slide)
(143) DONOR CELLS+ANTI A,B(slide)
(144) DONOR PLASMA+A1 CELLS
(145) DONOR PLASMA+B CELLS
(200) DIRECT AHG(BS)
(500) TEST/PROCEDURE
(.01) TEST/PROCEDURE
(1) COMPLETE DATE/TIME
(.01) COMPLETE DATE/TIME
(.02) TECH
(.03) INSTITUTION
(.04) MAJOR SECTION
(.05) SUBSECTION
(1) WKLD CODE
(.01) WKLD CODE
(.02) WKLD CODE COUNT
(.03) WKLD CODE COUNTED
(999) DATA CHANGE DATE
(.01) DATA CHANGE DATE
(.02) PERSON CHANGING DATA
(.03) DATA ELEMENT
(.04) OLD VALUE
(.05) NEW VALUE

Fields Description

NOTE: A complete description of fields will not be included in this section. Please refer to the FileManager manual for instruction on how to print a Data Dictionary.

BLOOD PRODUCT file (#66)

The BLOOD PRODUCT file (#66) holds the site specific information related to each blood component/derivative. It is the most critical element in whether the Blood Bank module reflects the policies and procedures of each institution.

Field List

```
(.01)  NAME
(.02)  ABBREVIATION
(.03)  CAN BE MODIFIED
(.04)  IDENTIFIER
(.05)  PRODUCT CODE
(.055) DOD CODE
(.06)  MODIFICATION CRITERIA
(.07)  PATIENT/PRODUCT ABO
```

```
(.08)  PATIENT/PRODUCT RH
(.09)  PATIENT/PRODUCT REQUIREMENT
(.1)   VOLUME (ml)
(.11)  DAYS LEFT
(.12)  ANTICOAGULANT
(.13)  COLLECTION/PREP HOURS
(.135) MAXIMUM STORAGE DAYS
(.14)  MODIFIED BEFORE RELEASE
(.15)  CAN BE REQUESTED
(.16)  PATIENT SPECIMEN AGE ALLOWED
(.18)  RETYPE AFTER PREPARATION
(.19)  CONTAINS RED BLOOD CELLS
(.21)  MAX AGE FOR PEDIATRIC USE
(.22)  PEDIATRIC PRODUCT
(.23)  SPECIFIC GRAVITY
(.24)  MAXIMUM INFUSION TIME(MIN)
(.25)  AUTOLOGOUS/DIRECTED COMPONENT
(.26)  ADMINISTRATIVE CATEGORY
(.27)  POOLED PRODUCT
(.28)  ASK BAG LOT #
(1)    DESCRIPTION (Subfile 66.09)
   (.01)  DESCRIPTION
(2)    SYNONYM (Subfile 66.021)
   (.01)  SYNONYM
(3)    MODIFY TO (Subfile 66.03)
   (.001) NUMBER
   (.01)  MODIFY TO
   (.02)  NOT ONLY ONE ALLOWED
 (4)    SUPPLIER (Subfile 66.01)
   (.001) Preference number
   (01)  SUPPLIER
   (.02)  COST
   (.03)  ADDRESS LINE 1
   (.04)  ADDRESS LINE 2
   (.05)  ADDRESS LINE 3
   (.06)  CITY
   (.07)  STATE
   (.08)  ZIP CODE
   (.09)  PHONE
   (.1)   SUPPLIER PREFIX NUMBER
   (.11)  REGISTRATION NUMBER
   (.12)  UNIT LABEL NON-STANDARD
   (1)    LOT # (Subfile 66.02)
     (.01)  LOT #
     (.02)  EXPIRATION DATE
(5)    CRITERIA FOR USE (Subfile 66.05)
   (.01)  CRITERIA FOR USE
(6)    TESTS TO CHECK (Subfile 66.04)
   (.01)  TESTS TO CHECK
   (.02)  SPECIMEN
   (.03)  > OR < TEST VALUE
(7)    REQUISITION INSTRUCTIONS (Subfile 66.07)
   (.01)  REQUISITION INSTRUCTIONS
(8)    PREOP TESTS TO CHECK (Subfile 66.08)
   (.01)  PREOP TESTS TO CHECK
   (.02)  SPECIMEN
   (.03)  > OR < TEST VALUE
(500)  WKLD CODE (Subfile 66.06)
 (.01) WKLD CODE
```

Fields Description

NOTE: Entries can be added or modified, but none of the supplied entries should be deleted.

(.01) NAME: Name of blood component, reagent or service supplied to blood bank.

(.02) ABBREVIATION: The abbreviation of the ITEM.

(.03) CAN BE MODIFIED: If product can be modified (divided, washed, frozen, pooled, made leukocyte poor, rejuvenated, or deglycerolized) answer prompt with "YES".

(.04) IDENTIFIER: Identifies if entry is a blood component for transfusion, a reagent used in blood banking or a product for manufacturing use only.

(.05) PRODUCT CODE: Product code conforms to the uniform labeling of blood and blood components described in Uniform Labeling Of Blood And Blood Components: Users Guide September 1982. Reference: Guidelines for the Uniform Labeling of Blood and Blood Components available from the Dockets Management Branch of the FDA (Docket #80N-0120), or the American Blood Commission. The guidelines provide detailed information on the ABC Symbol (modified Coda bar TM) label and printing specifications and were issued by FDA as an integral supplement to the agency proposal to require nationwide use of uniform blood labels.

(.055) DoD CODE: Product codes for the purpose of shipping blood component inventory by Department of Defense (DoD) facilities.

(.06) MODIFICATION CRITERIA: If this product can be made in inventory, enter appropriate response. If selection is D (DIVIDED) a single letter suffix will be appended (from A-E) to the unit I.D. depending upon the number of aliquots up to five. This field is used to trigger the appropriate prompts if the new product(s) will be divided units or a pool.

(.07) PATIENT/PRODUCT ABO: Either the patient and product ABO group must match or be compatible.

(.08) PATIENT/PRODUCT RH: Either the patient and product RH type must match or be compatible.

(.09) PATIENT/PRODUCT REQUIREMENT: If the product requires a crossmatch enter CROSSMATCH. If the product requires patient plasma compatibility enter PLASMA/PATIENT COMPATIBILITY.

(.1) VOLUME (ml): Enter the usual volume in milliliters (ml) of the component.

(.11) DAYS LEFT: If this product made from another one in INVENTORY enter number of days left before the newly made component will expire.

(.12) ANTICOAGULANT: Enter the anticoagulant mixed with the component.

(.13) COLLECTION/PREP HOURS: The maximum hours allowed between blood collection and preparation of component. If no entry no checking will be done. If maximum hours exceeded component cannot be prepared.

(.135) MAXIMUM STORAGE DAYS: Maximum storage time from time of donation or preparation.

(.14) MODIFIED BEFORE RELEASE: If component must be further modified before release (ex. frozen RBC must be deglycerolized before transfusion) a "YES" is entered.

(.15) CAN BE REQUESTED: If component can be requested for a patient a "YES" is entered.

(.16) PATIENT SPECIMEN AGE ALLOWED: If a patient specimen is required for the blood component the maximum hours allowed before a new specimen is required is entered here.

(.18) RETYPE AFTER PREPARATION: If units of component must be retyped then enter "YES". If units do not require.

(.19) CONTAINS RED BLOOD CELLS: If component contains mainly red blood cells enter "YES".

(.21) MAX AGE FOR PEDIATRIC USE: Maximum age (in days) allowed for making pediatric units.

(.22) PEDIATRIC PRODUCT: This is the pediatric component that the present component can be made into.

(.23) SPECIFIC GRAVITY: Weight of component in grams per ml.

(.24) MAXIMUM INFUSION TIME(MIN): The maximum time in minutes from issue to completion of transfusion of transfusion.

(.25) AUTOLOGOUS/DIRECTED COMPONENT: This field is used to autologous, directed or neither type of donation.

(.26) ADMINISTRATIVE CATEGORY: Used to define category for administrative data and workload.

(.27) POOLED PRODUCT: If product is pooled enter "YES". The entry is used when running the integrity check for BLOOD INVENTORY file (#65).

(.28) ASK BAG LOT#: Entering "YES" will result in prompting the user for the bag lot # when this component is prepared from a unit in inventory.

(1) DESCRIPTION: Description of product.

(2) SYNONYM (Subfile): Enter a synonym for the blood product.

(.01) Synonym: Enter a synonym for the blood product.

(3) MODIFY TO (Subfile): These are components this product can produce.

(.001) Number: The internal file number in the BLOOD PRODUCT file (#66) that the current blood product is modified to.

(.01) Modify To: If this product IN INVENTORY, can be made into other components, list the components here.

(.02) Not Only One Allowed: If yes other products can be made from the same unit (e.g., packed RBC and plasma can be made from a unit of whole blood.)

(4) SUPPLIER (Subfile): This is a multiple field. Contains information about all suppliers of this item.

(.001) Preference number: The order of preference for the supplier of this blood product. The lowest number will be the default answer when components are entered via inventory log-in.

(.01) Supplier: The name of the source.

(.02) Cost: Cost of the item.

(.03) Address Line 1: Address of supplier.

(.04) Address Line 2: 2nd Address line of supplier.

(.05) Address Line 3: 3rd Address line of supplier.

(.06) City: City of the supplier.

(.07) State: State of the supplier.

(.08) Zip Code: Zip code of the supplier.

(.09) Phone: Phone number of the supplier.

(.1) Supplier Prefix Number: An eye readable only (not bar coded) prefix which might be present as part of the unique unit I.D.# specific for a given collection facility.

(.11) Registration Number: Unique number assigned by the Food & Drug Administration to each facility.

(.12) Unit Label Non-Standard: If the barcoded blood component unit ID# is not the standard barcode (Codabar(tm)) then enter "YES".

(1) LOT # (Subfile): Lot # of the item.

(.01) Lot # : Lot # of the item.

(**.02) Expiration Date:** Expiration Date of the item.

(5) CRITERIA FOR USE (Subfile): Suggested criteria for transfusion of blood component can be listed here.

(.01) Criteria For Use: Suggested criteria for transfusion of blood component can be listed here.

(**6) TESTS TO CHECK (Subfile):** When a blood component is or will be checked to see if request seems reasonable based on test values.

(.01) Tests To Check: When a blood component is or will be checked to see if request seems reasonable based on test values.

(.02) Specimen: Specimen the test is performed on. This must be a specimen entered in LABORATORY TEST file (#60) in Site/Specimen field (#100).

(.03) > Or < Test Value: The test value with a > or < as a prefix to the value for checking component requests.

(7) REQUISITION INSTRUCTIONS (Subfile): These are instructions included in the requisition.

(.01) Requisition Instructions: These are instructions included in the requisition.

(8) PREOP TESTS TO CHECK (Subfile): This field checks lab values for specified component request for surgery. Select only single chem, hem, tox, ser, etc., tests.

(.01)PreOp Tests To Check: Select only lab tests with a CH subscript.

(.02) Specimen: Specimen the test is performed on. This must be a specimen LABORATORY TEST file (#60) in the Site/Specimen (#100) field.

(.03) > Or < Test Value: This field contain the values to determine if the test result are with in specific limits.

(500) WKLD CODE (Subfile): If component is being prepared from existing unit enter the WKLD workload codes that apply.

(.01) WKLD Code: If component is being prepared from existing unit enter the WKLD workload codes that apply.

BLOOD BANK VALIDATION file (#66.2)

The BLOOD BANK VALIDATION file (#66.2) provides mechanism for documenting the mandated validation of the Blood Bank software options. Data entry in the file is NOT intended to replace the mandated documentation of the validation testing, including:
1) observations from testing (e.g., screen prints, logging files, printed reports, written transcriptions, data tapes, data disks, etc.),
2) a record/log of unusual occurrences, bugs, deviations from the BB User Manual & resolution, or
3) final approval by other responsible individuals, including the BB Medical Director and the LIM.
It can be used to replace the documentation of the review, the acceptability/outcome of the review, the date/signature of approval, and the date of implementation.

This file offers longitudinal tracking of validation of the software to include the release of new versions, the installation of patches and the installation of any local modifications.

The content and the formatting of the file is consistent with the worksheets provided in the Blood Bank User Manual which complies with the requirements of the American Association of Blood Bank and the Food and Drug Administration.

<u>Field List</u>

(.01) NAME
(.02) MENU NAME
(.03) MENU ABBREVIATION
(.04) FUNCTIONAL AREA
(.05) OPTION DESCRIPTION
(.06) LIMITED ACCESS
(.07) OPTION IN USE
(1) DATE/TIME VALIDATED (Subfile 66.21)
  (.01) DATE/TIME VALIDATED
  (.02) REASON FOR VALIDATION
  (.03) VERSION NUMBER
  (.04) PATCH NUMBER
  (.05) PERSON PERFORMING VALIDATION (Subfile 66.22)
    (.01) PERSON PERFORMING VALIDATION
    (.06) OUTCOME
    (.07) APPROVED BY
    (.08) DATE APPROVED
    (.09) DATE IMPLEMENTED
(1) COMMENT (Subfile 66.211)
  (.01) COMMENT

Fields Description

(.01) NAME: This is a required free text field. Answer must be 3 to 30 characters in length. Enter name of option being validated.

(.02) MENU NAME: This is a required free text field. Answer must be 2-50 characters in length. Enter menu text of option being validated.

(.03) MENU ABBREVIATION: This is a required free text field. Answer must be two to three characters in length.

(.04) FUNCTIONAL AREA: This field is a set of codes (Required).

1 FOR DONOR
2 FOR INVENTORY
3 FOR PATIENT
4 FOR INQUIRIES
5 FOR REPORTS
6 FOR SUPERVISOR
7 FOR INQUIRIES/WARD
8 FOR DONOR/REPORTS

(.05) OPTION DESCRIPTION: This field is a set of codes (Required).

1 FOR DATA ENTRY
2 FOR DATA EDITING
3 FOR DATA ENTRY/REVIEW
4 FOR EDIT TEMPLATE/SOFTWARE CONTROL
5 FOR FILE SETUP/SOFTWARE CONTROL
6 FOR FORM/LETTER CONTENT
7 FOR FORM/REPORT GENERATION
8 FOR PURGING DATA/FILE ENTRIES
9 FOR DATA INQUIRY ONLY

(.06) LIMITED ACCESS: This field is a set of codes (Required).

1 FOR “YES”
0 FOR “NO”
0 FOR “no”
1 FOR “yes”

(.07) OPTION IN USE: This field is a set of codes (Required). Is Option In Use at the facility? For example, if a site does not draw any type of donors, including therapeutic phlebotomy, and autologous donation the donor menu options would be set to "NO".

1 FOR "YES"
0 FOR "NO"
1 FOR "yes"
0 FOR "no"

(1) DATE/TIME VALIDATED (Subfile 66.21): DATE Multiple (#66.21).

(.01) DATE/TIME VALIDATED: DATE (Multiple asked). An option may have multiple validation dates even for the same version, depending on the outcome of the validation.

(.02) REASON FOR VALIDATION: This field is a set of codes (Required). In accordance with M-2, Part VI, Chapter 5, validation testing must be performed at these specific times.

1 FOR NEW VERSION
2 FOR PATCH
3 FOR RETROSPECTIVE
4 FOR LOCAL MODIFICATION

(.03) VERSION NUMBER: This is a free text field (Required). Answer must be 2-10 characters in length.

(.04) PATCH NUMBER: This is a free text field. Answer must be 1-12 characters in length.

(.05) PERSON PERFORMING VALIDATION (Subfile 66.22): This field is a pointer Multiple (#66.22).

(.01)Person Performing Validation: This field is a pointer to the NEW PERSON file (#200). Who performed the validation, (i.e. tested.)

NOTE: XXXX--CANNOT BE ALTERED EXCEPT BY PROGRAMMER

(.06) OUTCOME: This field is a set of codes; 1 FOR ACCEPTABLE and 2 FOR ACCEPTABLE WITH CORRECTIVE ACTION. This is a required field.

(.07) APPROVED BY: This field is a pointer to the NEW PERSON file (#200). This field contain the name of the person who reviewed the actual test results, and the record of errors/deviations from the BB User Manual, and approved implementation.

(.08) DATE APPROVED: This is a date field.

(.09) DATE IMPLEMENTED: This is a date field.

(1) COMMENT: This is a word processing subfile (#66.211).

(.01) COMMENT: This is a word processing field.

OPERATION (MSBOS) file #66.5)

This file contains operations/procedures with identified maximum surgical blood orders schedules (MSBOS).

Field List

```
(.01) NAME
(.02) SHORT NAME
(1) BLOOD COMPONENT REQUEST (Subfile 66.51)
(.01) Blood Component Request
(.02) Number Of Units
```

Fields Description

(.01) NAME: Name of the (MSBOS). Select an operation you want to have maximum surgical blood orders schedule.

(.02) SHORT NAME: This field contains a short name.

(1) BLOOD COMPONENT REQUEST (Subfile): This field contains a record of each request for blood product for a given patient. Selects only blood products.

(.01) Blood Component Request: This field allows selection of blood components for an operation.

(.02) Number Of Units: Type a number between 0 and 50, 0 decimal digits.

BLOOD COMPONENT REQUEST file (#66.9)

This file is used as a pick list of blood components available to be ordered by users wishing to make a selection from another DHCP package. This file is locally edited by the LIM.

Field List

```
(.01) NAME
(1) PRODUCTS (Subfile 66.91)
(.01) Products
(2) CRITERIA FOR USE (Subfile 66.92)
(.01) Criteria For Use
```

Fields Description

(.01) NAME: Name of the blood component. Name must be 3-30 character in length, not numeric or starting with punctuation.

(1) PRODUCTS (Subfile): This field contains a listing of products relating to this component.

(.01) Products: This field contains a listing of products relating to this component.

(2) CRITERIA FOR USE (Subfile): This field contains a special restriction or guidelines to be used with the particular component.

(.01) Criteria For Use: This field contains a special restriction or guidelines to be used with the particular component.

REFERRAL PATIENT file (#67)

This file defines the patient demographic information for referral patients for whom test values will be entered into the system. Referral patients are generally classified as those patients not included in your site's patient database [^DPT] who are being treated at your facility. It is not necessary to edit this file before implementation, if you use it at all.

NOTE: Additions to this file may be made at any time. DO NOT DELETE any entries which you have added, since they will be associated with corresponding lab test results.

Field List

(.01) NAME
(.02) SEX
(.03) DOB
(.033) AGE
(.05) MARITAL STATUS
(.08) RELIGION
(.09) IDENTIFIER
(.1) REFERRAL SOURCE
(.104) PROVIDER
(.111) STREET ADDRESS
(.112) STREET ADDRESS 2
(.113) STREET ADDRESS 3
(.114) CITY
(.115) STATE
(.116) ZIP CODE
(.131) PHONE
(.132) OFFICE PHONE
(.133) PHONE #3
(.134) PHONE #4
(.351) DATE OF DEATH
(63) LABORATORY REFERENCE

Fields Description

(.01) NAME: A required field which is the 3-30 character name of a patient (or person) whose tests have been referred to your site and is NOT already in your PATIENT file (#2).

(.02) SEX: Another required field; enter M or F.

(.03) DOB: Referral patient s date of birth.

(033) AGE: Do not edit. This field is calculated and stuffed by the system, based on the date of birth.

(.05) MARTIAL STATUS: This field contains the marital status of the referral patient.

(.08) RELIGION: This field contains there religion preference of the referral patient.

(.09) IDENTIFIER: This is a required free text field. Enter 2 to 30 characters to categorize the referral patient; commonly used to enter a social security number.

(.1) REFERRAL SOURCE: This is a free text field. Enter the source of the patient specimen (where did this sample come from? Hospital, doctor s clinic, etc.)

(.104) PROVIDER: Enter the name of provider.

(.111) STREET ADDRESS: Enter the street name of the referral patient address.

(.112) STREET ADDRESS 2: Enter the secondary street name of the referral patient address.

(.113) STREET ADDRESS 3: Enter the tertiary street name of the referral patient address.

(.114) CITY: Enter the city name of the referral patient address.

(.115) STATE: This field is a pointer to the STATE file (#5). Enter the state name of the referral patient address.

(116) ZIP CODE: Enter the zip code of the referral patient address. Enter as five numerics or five numerics dash four numerics.

(131) PHONE: Enter home phone number of referral patient.

(132) OFFICE PHONE: Enter office (work) phone number of referral patient.

(133) PHONE #3: Enter other phone number of referral patient.

(134) PHONE #4: Enter other phone number of referral patient.

(.351) DATE OF DEATH: Obviously this field is filled in **after** this patient dies; **or** it can be filled in when entering information on a referral postmortem specimen.

(63) LABORATORY REFERENCE: Patient s record number in the LAB DATA file (#63). Any changes to this entry must be made from the data entry routines.

RESEARCH file (#67.1)

This file is used to record and define the demographic information for research entities (usually research animals) for which tests will be ordered, accessioned, and test results will be entered into the system. It is not necessary to edit this file prior to implementation, and at some sites it may not be used at all.

NOTE: Additions to this file can be made at any time. DO NOT DELETE any entries which you have added, since they will be associated with corresponding lab test results.

Field List

```
(.01) NAME
(.1) LOCATION
(.104) PROVIDER
(2) SEX
(3) DOB
(9) IDENTIFIER
(63) LABORATORY REFERENCE
```

Fields Description

(.01) NAME: Enter the name of a research entity (e.g., animal, tissue, patient, etc.).

(.1) LOCATION: Enter the location of the research animal or entity (1-10 character room number, etc.)

(.104) PROVIDER: Enter the name of a provider.

(2) SEX: Choose either “M” or “F” to represent the research animal sex.

(3) DOB: Enter the date of birth of the animal.

(9) IDENTIFIER: Enter a brief description of the research animal s category (e.g., the name of the particular research project or study). This entry will appear in the SSN portion of accession labels.

(63) LABORATORY REFERENCE: Might not be seen when adding a new entry. This field points to the LAB DATA file (#63). Do NOT Edit.

STERILIZER file (#67.2)

This file is used to define and record demographic information for sterilizers (i.e., autoclaves, gas sterilizers) and any other equipment on which sterility testing by spore strip (or other method) is performed. It is not necessary to edit this file prior to implementation, and at some sites it may not be used at all. Additions to the file may be made at any time. DO NOT DELETE any entries which you have added, since they will be associated with corresponding lab test results.

Field List

```
(.01) NAME
(.1) LOCATION
(.104) PROVIDER
(3) DATE INSTALLED
(9) IDENTIFIER
(63) LABORATORY REFERENCE
```

Fields Description

(.01) NAME: The name of the sterilizer (3-30 character). This is a required field.

(.1) LOCATION: The location of the sterilizer (building, room number, etc.).

(.104) PROVIDER: Enter the name of a provider.

(3) DATE INSTALLED: Enter the installation date of the sterilizer. This field does not require an entry, so if the precise date is not known, do not worry.

(9) IDENTIFIER: Enter a brief description of the sterilizer to indicate type or category (1-30 characters).

(63) LABORATORY REFERENCE: Might not be seen when adding an entry. This field is a pointer to the LAB DATA file (#63). Do not edit.

ENVIRONMENTAL file (#67.3)

This file is used to define and record demographic information on any type of environmental source which will be accessioned for Lab testing and will have results entered into the system. These entries might include inanimate sources such as air or food samples, water fountain samples, ice machine cultures, etc. It is not necessary to edit this file prior to implementation, and at some sites it may not be used at all.

NOTE: Additions to the file may be made at any time. DO NOT DELETE any entries which you have added, since they will be associated with corresponding lab test results.

Field List

```
(.01) NAME
(.1) LOCATION
(.104) PROVIDER
(9) IDENTIFIER
(63) LABORATORY REFERENCE
```

Fields Description

(.01) NAME: The name of the environmental entity to be tested (i.e., dialysis machine, water fountain, etc.) 3-30 characters; required entry.

(1) LOCATION: Enter the location from which the sample will be taken (i.e., room number of the dialysis machine) 1-20 characters long.

(.104) PROVIDER: Enter the name of a provider.

(9) IDENTIFIER: A short description of the environmental name entry. This field can also be used to categorize the required entry.

(63) LABORATORY REFERENCE: This field is a pointer to the LAB DATA file (#63) and may not be seen when adding an entry. DO NOT EDIT.

NOTE: See the Microbiology section for suggestions on how to edit this file for specific uses.

NON PATIENT WORKLOAD file (#67.4)

This file will be developed in a later version to support non workload functions.

Field List

```
(.01) NAME
```

Fields Description

(.01) NAME: The name of the non patient workload entry.

LAB MONTHLY WORKLOADS file (#67.9)

This LAB MONTHLY WORKLOADS file (#67.9) is used to collect workload data in preparation for transmission to the National Data Base each month. LMIP reportable statistics are compiled into this file. The file is reviewed by the Laboratory Approving Official. A mail message is prepared and forwarded to the user. The user in turn forwards the mail message to the appropriate Domain.

Field List

```
(.01) PRIMARY INSTITUTION
(.1) PRINT NAME PRIMARY INSTITUTION
(1) DIVISION (Subfile 67.901)
(.01) Division
(.5) Print Name Division
(1) MONTH (Subfile 67.911)
(.01) Month
(1) Certified By
(2) Date Compiled
(3) Message Number
(4) WKLD CODE (Subfile 67.9114)
(.01) WKLD Code
(.03) WKLD Code Name
(1) In Patient Cnt
(2) Out Patient Cnt
(3) Other Patient Cnt
(4) Qc Cnt
(5) In Patient Stats
(6) Tot Stats
(7) Manual Input Data
(7.5) Send Out Test
(8) TREATING SPECIALTY (Subfile 67.91148)
(.01) Treating Specialty Code
(.03) Treating Specialty Name
(1) Cnt
(9) REPORTABLE TEST COUNT
(10) LMIP BILLABLE TEST
(11) REP/STD
(12) OTHERS
```

Fields Description

(.01) PRIMARY INSTITUTION: The reporting institution for this report.

(.1) PRINT NAME PRIMARY INSTITUTION: The print name of the primary institution.

(1) DIVISION (Subfile): This field contains the division that a site is identified by. In most cases the primary and the division are one in the same. This field becomes very important at sites which have multidivisional status.

(.01) Division: This field contains what division this site is identified by. In most cases the primary and the division are one in the same. This field becomes very important at sites which have multidivisional status.

(.5) Print Name Division: This is the print name of the division.

(1) MONTH (Subfile): This multiple field contains information about the monthly data.

(.01) Month: The month that is being used to compile the data.

(1) Certified By: Person certifying the data.

(2) Date Compiled: The date that the data was compiled.

(3) Message Number: This is the number of the message.

(4) WKLD CODE (Subfile): This multiple field contains information about the WKLD codes.

(.01) WKLD Code: This is the WKLD code (a number).

(.03) WKLD Code Name: This is the actual name of the WKLD code.

(1) In Patient CNT: Number of inpatients counts.

(2) Out Patient CNT: Number of outpatients counts.

(3) Other Patient CNT: Number of other patients counts.

(4) **QC CNT:** Number of QC counts.

(5) In Patient STATS: Number of inpatients STATS.

(6) Tot STATS: Number of all STATS.

(7) Manual Input Data: Number of data put in manually.

(7.5) Send Out Test: This field contains the test which are performed by some lab other than the one filing LMIP reports. All test which are performed by some other lab than the one filing LMIP reports. All test sent of a reference/referral lab, research lab, medical

school, and commercial are included in this total. The suffix portion of the WKLD code determine if the procedure is sent out (.8000-.8999).

(8) TREATING SPECIALTY (Subfile): Multiple field containing data about the treating specialty.

(.01) Treating Specialty Code: Code for treating specialty.

(.03) Treating Specialty Name: Name for treating specialty.

(1) CNT: Number of treating specialty counts.

(9) REPORTABLE TEST COUNT: This is a computed field.

(10) LMIP BILLABLE TEST: If this procedure should be reported to the National Data Base as an LMIP defined procedure, this field will be set to "YES" by the data extracting program. This field should NOT be manually edited. To have this field set to "YES", edit the Billable Procedure field (#4) in the WKLD CODE file (#64).

(11) Rep/Std: This is the total for repeat dilutions and standards for the WKLD code.

(12) Others: This field is used for all other types of specimens not coming from the PATIENT file (#2), LAB CONTROL NAME file (#62.5), or the REFERRAL PATIENT file (#67).

ARCHIVED LAB MONTHLY WORKLOADS file (#67.99999)

This file contains archived LAB MONTHLY WORKLOADS file data. It is an exact copy of ^LRO(67.9, but is designed to be deleted from the system to free disk space. It can also be restored without overlaying current data. Not all sites will make use of this file. If this file is used then historical reports are possible. This file should be populated before the LAB MONTHLY WORKLOADS ^LRO(67.9) global is purged from the system.

<u>Field List</u>

(.01) PRIMARY INSTITUTION
(.1) PRINT NAME PRIMARY INSTITUTION
(1) DIVISION (Subfile)
    (.01) Division
    (.5) PRINT NAME DIVISION
    (1) MONTH (Subfile)
        (.01) Month
        (1) Certified By
        (2) Date Compiled
        (3) Message Number
        (4) WKLD Code (Subfile)
            (.01) WKLD Code

(.03) WKLD Code Name
(1) INPATIENT CNT
(2) OUTPATIENT CNT
(3) OTHER PATIENT CNT
(4) QC CNT
(5) INPATIENT STATS
(6) TOT Stats
(7) Manual Input Data
(7.5) Send Out Test:(8) Treating Speciality (Subfile)
    (.01) Treating Speciality Code
    (.03) Treating Speciality Name
    (1) CNT
(9) Reportable Test Count
(10) LMIP Billable Test

Fields Description

NOTE: A complete description of fields will not be included in this section. Please refer to the FileManager manual for instruction on how to print a Data Dictionary.

ACCESSION file (#68)

This file contains entries which represent the functional subdivisions or departments of the Laboratory, referred to by the Laboratory package software as accession areas. The file is used to define the site specific information needed by your laboratory for each accession area. This includes the type of accession transform (or how often the accession numbers assigned to tests performed in that area will be reset to 1), the abbreviation of the area (which becomes part of the accession identifying the specimen and test results), the order in which the data for tests performed in the area will be displayed and other specific information.

Field List

```
(.01)  AREA
(.02)  LR SUBSCRIPT
(.03)  CLEAN UP
(.04)  COMMON ACCESSION # S WITH AREA
(.05)  ACCESSION TRANSFORM
(.051) ACC CODE
(.06)  VERIFICATION CODE
(.061) VER CODE
(.07)  *IDENTITY CONTROL
(.071) *IDENT CODE
(.08)  PRINT ORDER
(.085) BYPASS ROLLOVER
(.09)  ABBREVIATION
(.095) *LAB SECTION
(.1)   RESPONSIBLE OFFICIAL
(.11)  INHIBIT AREA LABEL PRINTING
(.19)  LAB DIVISION
(.7)   Lock for load/work list build
```

```
(.9)   USER ACCESS AUTHORIZATION
(1)    INSTRUMENTATION CONTROLS (Subfile 68.09)
   (.01)  INSTRUMENTATION CONTROLS
   (1)    CONTROL NAME (Subfile 68.1)
     (.001) ACC #
     (.01)  CONTROL NAME
(2)    DATE (Subfile 68.01)
   (.01)  DATE
   (1)    ACCESSION NUMBER (Subfile 68.02)
     (.001) LOG
     (.01)  LRDFN
     (.02)  PARENT FILE
     (.03)  NAME
     (.09)  HOSPITAL ID
     (1)    FILE #
     (2)    ORIGINAL ACCN DATE
     (3)    DATE ORDERED
     (4)    SPECIMEN NUMBER
     (5)    IDENTITY
     (6)    REPORT ROUTING LOCATION
     (6.5)  PRACTITIONER
     (6.6)  TREATING SPECIALTY
     (6.7)  LOG-IN PERSON
     (8)    HARDWARE SPECIAL NUMBERS
     (9)    DRAW TIME
     (10)   DATE/TIME OBTAINED INEXACT
(11)  TESTS (Subfile 68.04)
       (.01)   TEST
       (1)    URGENCY OF TEST
       (2)    LOAD LIST ENTRY
       (3)    TECHNOLOGIST
       (4)    COMPLETE DATE
       (5)    RESULT
       (5.1)  TALLY TO WKLD
       (6)    WKLD CODE (Subfile 68.14)
         (.01)  WKLD CODE
         (.02)  TEST MULTIPLY FACTOR
         (.03)  WKLD CODE COUNTED
         (.04)  WKLD CODE TALLY
         (.05)  WKLD CODE REPEAT COUNT
         (1)    COMPLETION TIME
         (2)    USER
         (3)    INSTITUTION
         (4)    MAJOR SECTION
         (5)    LAB SUBSECTION
         (6)    WORK AREA
         (12)   MANUAL EDIT
       (7)    *IDENTITY
       (8)    WKLD SUFFIX
(12)   LAB ARRIVAL TIME
(13)   DATE/TIME RESULTS AVAILABLE
(13.5) INVERSE DATE
(13.6) COMMENT
(14)   ORDER #
(15)   ACCESSION
(50)   SPECIMEN (Subfile 68.05)
      (.01)  SPECIMEN
      (1)    COLLECTION SAMPLE
      (2)    TEST (Subfile 68.13)
         (.01)  TEST
```

```
          (1)    TISSUE BLOCK(S)
          (2)    TOTAL SLIDES

      (60)   NUMBER OF SLIDES
      (61)   PARAFFIN BLOCK(S)
      (80)   PROGRESS NOTES (Subfile 68.06)
        (.01)  PROGRESS NOTES
      (91)   CURRENT ACCESSION DATE
      (92)   LOCATION TYPE
      (93)   COUNT FOR WKLD
      (94)   ORDERING LOCATION
   (2)    CURRENT INITIALS
   (3)    CURRENT ACCESSION NUMBER
   (4)    *CURRENT IDENTITY
   (5)    CURRENT VERIFY ACC #
   (6)    BULL ALGORITHM CONTROL DATA (Subfile 68.07)
      (.01)  METHOD CONTROL DATA
      (1)    CONTROL DATA (Subfile 68.08)
        (.01)  CONTROL DATA
      (2)    MEAN DATA VALUE 1
      (3)    MEAN DATA VALUE 2
      (4)    MEAN DATA VALUE 3
   (7)    MULTI-RULE VA QC (Subfile 68.11)
      (.01)  CONTROL NAME
      (1)    CONTROL DATA (Subfile 68.12)
        (.01)  CONTROL DATA
      (2)    REJECT REASON
(3)    SPECIMEN HANDLING CODES (Subfile 68.03)
   (.01)  SPECIMEN HANDLING CODES
(5)    BAR CODE PRINT
(8)    Reserved
(9)    WORK AREA
(10)   WORKLOAD ON
```

(11) COLLECT STD/QC/REPEATS

Fields Description

(.01) AREA: The name of the accession area (2-20 characters). In most cases, this will be the department, section, area, or work bench which is responsible for performing a specified group of tests, (e.g., HEMATOLOGY for CBCs or SPECIAL CHEMISTRY for cardiac enzymes).

(.02) LR SUBSCRIPT: This field points to a particular subfile of the LAB DATA file (#63) and provides the system with information on how to process and store data from a functional area of the lab. Most accession areas are covered under CH, with Microbiology (MI) and Blood Bank (BB) as exceptions. As a general rule, use CH here. This field is a Set of Codes.

(.03) CLEAN UP: This field is not prompted for. This field is triggered by Accession Transform field in this file.

(.04) COMMON ACCESSION #s WITH AREA: This field allows you choose another accession area and have the accession numbers generated for both areas in parallel. For example, if Chemistry

and Toxicology want to use the same numbers but be in separate accession areas, filling in this field would generate CH 0123 478 and TOX 0123 478 for tests accessioned on the same specimen.

(.05) ACCESSION TRANSFORM (set of codes): this field determines how often the accession numbers for this area will clean up and rollover to 1. High volume accession areas are generally D for daily, while Microbiology uses Y for yearly accessions. Only Daily transform rolls over to the next accession day. Only Daily transforms are purged with the Purge old orders and accessions option. All others must be purged with VA FileManager. Points to the EXECUTE file (#62.07).

(.051) ACC CODE: This field is not prompted for. This field is triggered by Accession Transform field in this file.

(.06) VERIFICATION CODE: This field points to specific entries in the EXECUTE CODE file (#62.07) designated as types of verification. If you want to use either Bulls Algorithm or the VA control rules as part of this accession areas quality control, enter your choice here. If you do not want to use the QC rules and/or calculations, leave null.

(.061) VER CODE: Filled in by the system with MUMPS code; Triggered by the Verification code field of this file and is not prompted for. Points to the EXECUTE CODE file (#62.07).

(.07) *IDENTITY CONTROL: This field is no longer used, and will be deleted in later version.

(.071) *IDENT CODE: This field is no longer used, and will be deleted in later version.

(.08) PRINT ORDER: Determines the order (numerical sequence) in which the **accession area** data prints. Leave the field null, if you do not want an area to print at all!

Fill in with a number to indicate the order you will see the data print on options like Interim Report. This print order is different than the print order field found in the LABORATORY TEST file (#60) which defines the order in which **test** data will print in a given accession area.

(.085) BYPASS ROLLOVER: (double negative) Leave this field null in most cases. Leaving it blank allows any accessions which are not verified by midnight to rollover to the next day with the same date and number, if the test has been defined in the LABORATORY TEST file (#60) as a required type of test. That number will not be reassigned on the current day (help avoid duplication of accession numbers). If you fill this in with “YES”, any unverified accessions will not rollover to the next day. These accessions would not show up on any load/work or accession list for the date T, but are accessible by specifying the date T-1 when building lists or entering/verifying data with the option EM. Rollover only functions for those accession areas designated as Daily accession transform.

(.09) ABBREVIATION: This is a 2-5 character long abbreviation of the accession area name and cannot contain a space, slash, or hyphen. This creates the first portion of the accession (e.g., the CH portion of the accession CH 0501 432).

(.095) *LAB SECTION: This field has been marked for deletion in future versions. The Lab Division field (#19) will be used instead due to workload revision.

(.1) RESPONSIBLE OFFICIAL: The name of the Chief of Laboratory Service or his official designee in charge of the laboratory (2-50 characters). This prints on the Supervisor Summary List.

(.11) INHIBIT AREA LABEL PRINTING: Enter a 0 (zero) to specify "NO" if you **want** accession labels to print for this area. If you do **not want** labels to print for this area answer "YES".

(.19) LAB DIVISION: This field will be used to determine which lab division a particular accession area belongs. If this field is not filled in CP (Clinical Pathology) will be assumed.

(.7) LOCK FOR LOAD/WORK LIST BUILD: An entry of 1 for "YES" in this field locks the accession area and permits only one load/work list defined for the accession area to build at a time. Do Not Edit - this is used by the system when building the Load worklist. However, should the system crash before the building process is complete, it may be necessary to delete this entry to allow building again.

(.9) USER ACCESS AUTHORIZATION: This field points to entries in the SECURITY KEY file. If filled in, lab users must hold the same security key to use this accession area. If this field is left blank, any lab users may use this accession area.

(1) INSTRUMENTATION CONTROLS (Subfile): Select the instrument entry from the AUTO INSTRUMENT file (#62.4). Currently, it is best to use the MANUAL entry for all areas, unless you are running an instrument on line and run specific controls only on that instrument.

> **(.01) Instrumentation Controls:** Select the instrument entry from the AUTO INSTRUMENT file (#62.4). Currently, it is best to use the MANUAL entry for all areas, unless you are running an instrument on line and run specific controls only on that instrument.
>
> **(1) CONTROL NAME (Subfile):** This is a multiple field which allows you to associate the controls with specific accession numbers.
>
> **(.001) Acc #:** The number to be assigned to the control. This essentially reserves a specific accession number for that control specimen. In order for the system to automatically generate these numbers each day, the Task Manager routine [LRTASK CONJAM] must be run shortly after midnight each day after [LRTASK ROLLOVER]. Assign a high number so there will not be a conflict with a "carry over" accession.
>
> **(.01) Control Name:** This is a multiple field which allows you to associate the controls with specific accession numbers. Enter the name of the control (points to LAB CONTROL NAME file (#62.3).

(2) DATE: This is a multiple field. Do not edit this field or any of the remaining subfields, as they are filled in by the system.

(.01) Date: This is a multiple field. Do not edit this field or any of the remaining subfields, as they are filled in by the system.

NOTE: Templates created by using the search/sort and print options of VA FileManager can allow users to gather various types of information from the many subfields contained in this field. This information can be used to generate a wide variety of statistical reports, such as turnaround times and quality assurance reports.

(1) ACCESSION NUMBER (Subfile): The numeric part of the accession.

(.001) Log: The numeric part of the accession. Type a whole number from 1 to 9999.

(.01) LRDFN: The internal pointer to LAB DATA file (#63) is stored here.

(.02) Parent File: Computed field.

(.03) Name: The computed field for the entity name.

(.09) Hospital ID: The computed field for the entity's hospital ID.

(1) File #: The pointer to the file of files, File #1 (file) for the entity in Field #.01 is stored here.

(2) Original Accn Date: The date part of the original accession is stored here.

(3) Date Ordered: The date the order was placed is stored here.

(4) Specimen Number: The internal specimen number is stored here.

(5) Identity: The identity from reference labs etc. is stored here.

(6) Report Routing Location: The service/location from which the original order came. The report is routed back to this location.

(6.5) Practitioner: The internal number of the provider requesting the test(s) is stored here.

(6.6) Treating Specialty: The treating specialty of the location requesting the test.

(6.7) Log-In Person: The pointer to the person (NEW PERSON file (#200)) creating this accession is stored here.

(8) Hardware Special Numbers: Data from automated instruments may be stored here for debugging purposes.

(9) Draw Time: The date/time the specimen was taken.

(10) Date/Time Obtained Inexact: This field has a No if the draw time is estimated or unknown.

(11) TESTS (Subfile): The pointers to the LABORATORY TEST file (#60) for this accession.

(.01) Test: The pointers to the LABORATORY TEST file (#60) for this accession.

(1) Urgency Of Test: The urgency of the test being completed, (e.g., stat, routine, etc.) There is a special urgency used only for workload recording called WKL. This urgency indicates that this test was not ordered directly, but was added to the accession to support certain workload functions.

(2) Load List Entry: The load/work list location is stored here in ";" piece format load list pointer;tray;cup.

(3) Technologist: The DUZ of the person verifying the test.

NOTE: This field previously contained technologist initials. Converted with the release of V. 5.2.

(4) Complete Date: If null, the test is incomplete. Otherwise, it is the date/time of completion.

(5) *Result: This is the result of the test. This field will be deleted in later version.

(5.1) Tally To WKLD: If test was counted for WKLD DATA file (#64.1) entry is entered here. This flag prevents the test from being counted more than once. **Update to this field is automatic**.

(6) WKLD CODE (Subfile): WKLD Codes associated with test/procedure are entered here.

(.01) WKLD Code: WKLD Codes associated with test/procedure are entered here.

(.02) Test Multiply Factor: Enter the number of times the WKLD code is used for the test/procedure to obtain the correct total weight. The default value is 1. This number is used to determine the total weight to be credited for this test. This is the number of times this test has been counted.

(.03) WKLD Code Counted: This field is used by the workload compiling routine to prevent the WKLD code from being counted twice.

NOTE: This field should NOT be manually edited.

(.04) WKLD Code Tally: A WKLD code may need to be counted more than once for a given specimen or accession. Each time a count is made it is added to the WKLD code tally and the WKLD CODE COUNTED flag is set to zero. This field is used when additional work has been added to a particular WKLD code. Microbiology is a area which may require a WKLD code be counted more than once. This field then contains the total number of times the WKLD code has been multiplied.

NOTE: This field should NOT be manually edited.

(.05) WKLD Code Repeat Count: This field is not being presently used. It may be used in the future to automatically capture repeat workload. Another field in ^LRO(64.1, is being used to capture this data from manual entry.

(1) Completion Time: This field contains the completion time for this individual WKLD code procedure. It calculated at the time of verification by the routines which stuff the data into this field.

(2) User: This field contains the person (NEW PERSON file (#200)) name which verified this particular portion the of the test. This field is automatically stuffed at the time of verification.

(3) Institution: This is the institution the verifying person used when logging on to the system. This field allows the workload from Multi-Division Sites to be stored and counted separately.

(4) Major Section: This field contains the accession area which should receive credit for this workload, (i.e., CHEMISTRY).

(5) Lab Subsection: This the second level used for identifying where workload credit should be credited, (i.e., SPECIAL CHEMISTRY).

(6) Work Area: This is the lowest level used to credit workload. This field may be the same as the LAB SUBSECTION entry, (i.e., ELECTROPHORESIS).

(12) Manual Edit: If this data is entered manually via an edit template. This field would indicate if the data was not stuffed automatically.

(7) *Identity: Suffix code used to verify this test. This field will be deleted in later version.

(8) WKLD Suffix: This field contains the WKLD code suffix used to identify the method used to verify this particular test. The suffix is automatically stuffed at the time of verification. This field can be used to sort methods used to assay various test. The decimal point of the WKLD code suffix is stripped off.

(12) LAB ARRIVAL TIME: The date/time the specimen arrived at the lab.

(13) DATE/TIME RESULTS AVAILABLE: The date/time all results for the accession are available.

(13.5) INVERSE DATE: 9999999 minus the internal entry in Draw Time field (#9).

(13.6) COMMENT: A one line comment for the accession.

(14) ORDER #: The original order number is stored here.

(15) ACCESSION: The printable form of the Accession is stored here.

(50) SPECIMEN (Subfile): The site/specimen is from the TOPOGRAPHY FIELD file (#61). There may be more than one specimen for certain types of accessions.

(.01) Specimen: The site/specimen is from the TOPOGRAPHY FIELD file (#61).

(1) Collection Sample: The collection sample is from COLLECTION SAMPLE file (#62).

(2) TEST (Subfile): The procedures to be done on a particular specimen.

(.01) Test: The procedures to be done on a particular specimen.

(1) Tissue Block(s): Used for path examination.

(2) Total Slides: This field contains the number of slides used to process this specimen.

(60) NUMBER OF SLIDES: The number of slides prepared for path examination.

(61)PARAFFIN BLOCK(S): The number of paraffin blocks prepared for path examination.

(80) PROGRESS NOTES (Subfile): Progress notes on the accession.

(.01) Progress Notes: Progress notes on the accession.

(91) CURRENT ACCESSION DATE: This field is set by the roll-over routine in the original accession to point to the current accession date for accessions that have rolled over.

(92) LOCATION TYPE: This field holds the type of hospital location. $P(^SC(X,0),U,3). It is used primarily for WKLD calculations.

(93) COUNT FOR WKLD: This field is set to 1 if this accession has been counted for workload. This is set automatically by the tally routines.

NOTE: This field should not be set manually.

(94) ORDERING LOCATION: This field contains the location the order was place at for this patient.

(2) *CURRENT INITIALS: The current set of initials being used to identify the person performing the test(s) number. This field will be deleted in later version.

(3) CURRENT ACCESSION NUMBER: The last used accession number.

(4) *CURRENT IDENTITY: this field is no longer used and will be deleted in later version.

(5) CURRENT VERIFY ACC # : The last verified accession number.

(6) BULL ALGORITHM CONTROL DATA (Subfile):

(.01) Method Control Data: Data is stored here for use in Bull algorithm.

(1) CONTROL DATA (Subfile): Data from the running average of Bull algorithm is stored here.

(.01) Control Data: Data from the running average of Bull algorithm is stored here.

(2) MEAN DATA VALUE 1: The Mean Data Value 1 from the AUTO INSTRUMENT file (#62.4) is reproduced here.

(3) MEAN DATA VALUE 2: The Mean Data Value 2 from the AUTO INSTRUMENT file (#62.4) is reproduced here.

(4) MEAN DATA VALUE 3: The Mean Data Value 3 from the AUTO INSTRUMENT file (#62.4) is reproduced here.

(7) MULTI-RULE VA QC (Subfile):

(.01) Control Name: The name of the Quality Control to be used in Westgard suggested use of the Multirule Shewhart determinations.

(1) CONTROL DATA (Subfile): Data from the Multirule Shewhart determinations are stored here for intermediate computations.

(.01) Control Data: Data from the Multirule Shewhart determinations are stored here for intermediate computations.

(2) REJECT REASON: A brief description of the reason to reexamine the controls.

(3) SPECIMEN HANDLING CODES (Subfile): Enter WKLD codes which should be counted each time this specimen is processed.

(.01) Specimen Handling Codes: Enter WKLD codes which should be counted each time this specimen is processed.

(5) BAR CODE PRINT: This field is used by the label print utilities to determine if barcode labels should be printed for this accession area.

(8) Reserved: This field is reserved for future use.

(9) WORK AREA: This field contains which work area should receive credit for processing this specimen.

(10) WORKLOAD ON: This field is used to activate WKLD collection. Each accession area can be turned on independently. In order for this field to trigger WKLD collection, the WKLD Stats On field (#17) in the LABORATORY SITE file (#69.9) must also indicate ON.

(11) COLLECT STD/QC/REPEATS: If you wish to have the verification process to prompt the user for Standard, QC, and Repeats after each session enter a Yes. This will cause the counts entered to be added to all test data the user verified during that particular session. The function for entering this date can also be by the option STD/QC/REPS/MANUAL WKLD COUNT [LR WKLD STD/QC/REPS] found on the Process Menu [LR DO!].

LOAD/WORK LIST file (#68.2)

The LOAD/WORK LIST file (#68.2) contains the information needed to define each load or work list used to organize the workload in the laboratory. It must contain entries for every load or work list that you will be using at your site. Each entry must have information which tells the system what accession area to pull the specimens from to be run on the list, what tests on those specimens will be run on the list, and how the data (either automatically transmitted through an interfaced instrument or input manually) will be entered, reviewed, and verified. Also defined in this file are the types of site/specimens to be brought onto a load or work list, what types of quality control specimens will be run on the list and the placement or position of those control samples on the list as it is being built.

If you have an interfaced automated instrument, you MUST define a load/work list for the instrument that will be associated with it by an entry in the AUTO INSTRUMENT file (#62.4). (Refer to AUTO INSTRUMENT file (#62.4) and the chapter entitled Instrumentation/Interfacing for more details.)

Field List

```
(.01)  NAME
(.02)  LOAD TRANSFORM
(.03)  TYPE
(.04)  CUPS PER TRAY
(.05)  FULL TRAY S ONLY
(.06)  EXPAND PANELS ON PRINT
(.07)  INITIAL SETUP
(.08)  VERIFY BY
(.09)  SUPRESS SEQUENCE #
(.1)   INCLUDE UNCOLLECTED ACCESSIONS
(.11)  SHORT TEST LIST
(.12)  AUTO MICRO EDIT TEMPLATE
(.14)  WKLD METHOD
(.15)  WKLD CODE METHOD NAME
(.16)  WKLD CODE SUFFIX
(1)    MAJOR ACCESSION AREA
(1.5)  LAB SUBSECTION
(1.7)  WORK AREA
(2)    RUN or TRAY NUMBER (Subfile 68.21)
   (.01)  RUN or TRAY NUMBER
   (2)    DATE
   (3)    TECH.
   (4)    ACCESSION AREA
   (10)   SEQUENCE or CUP NUMBER (Subfile 68.22)
     (.01)  ACCESSION AREA
     (1)    ACCESSION DATE
     (2)    ACCESSION ENTRY
     (3)    PROFILE
     (4)    SPECIMEN
     (5)    TEST or PANEL NUMBER (Subfile 68.225)
       (.01)  TEST or PANEL NUMBER
       (1)    ISOLATE
     (9)    TESTS (Subfile 68.222)
       (.01)  TESTS
       (.02)  URGENCY OF TEST
     (21)   DOWNLOAD RECORD
```

```
(21)   DOWNLOAD PARAMETERS
(11)   DATE OF SETUP
(12)   FIRST TRAY
(13)   STARTING CUP
(14)   LAST TRAY
(15)   LAST CUP
(30)   BUILDING IN PROGRESS
(50)   PROFILE (Subfile 68.23)
   (.01)  PROFILE
   (1)    TEST (Subfile 68.24)
     (.01)  TEST
     (1)    SPECIMEN
     (2)    BUILD NAME ONLY
   (2)    ACCESSION AREA
   (3)    TRAY # FOR CONTROL (Subfile 68.25)
     (.01)  TRAY #
     (10)   CONTROL (Subfile 68.26)
       (.001) CUP or SEQUENCE #
       (.01)  CONTROL
   (4)    Specimen to EXCLUDE (Subfile 68.27)
     (.01)  Specimens to EXCLUDE!
   (5)    CONTROLS TO BEGIN WORKLIST (Subfile 68.28)
     (.001) Enter the control s rank
    (.01)  CONTROLS TO BEGIN WORKLIST
   (6)    CONTROLS TO END WORKLIST (Subfile 68.29)
     (.001) Enter the control s rank
     (.01)  CONTROLS TO END WORKLIST
(51)   USER ACCESS AUTHORIZATION
(52)   ADDITIONAL LAB TESTS (Subfile 68.3)
   (.01)  ADDITIONAL LAB TESTS
```

Fields Description

(.01) NAME: This is a required entry free text field (2-30 characters) . This is the name of the load or work list that you are editing or creating. The list name usually represents the name of the specific work area where the test is performed, (e.g., SPECIAL CHEMISTRY or MANUAL BENCH), a specific instrument used to run the list (e.g., ASTRA or EKTACHEM), or the name of the test(s) which will be run on the list (e.g., LITHIUM or CARDIAC ENZYMES).

(.02) LOAD TRANSFORM: This field points to the EXECUTE CODE file (#62.07), and has to do with specialized ways of building load or work lists predefined for certain instruments. (Look at the exported entries in File #62.07 to find out what execute codes exist for different instruments.) You may enter EXECUTE CODEs having an "L" entry:
ASTRA = 2 blank cups followed by balance of the Tray
SMAC = 8 cups per tray
Universal = has no blank space at the beginning of the Tray
Skip will build over other portions of the Tray
For more information, do a VA FileManager inquiry into the EXECUTE CODE file (#62.07).

(.03) TYPE: Enter either TRAY/CUP or SEQUENCE/BATCH. This determines whether the list will be composed of fixed number, where you would have X number of cups or positions on a tray or carrier

Example: ASTRA or SMAC would have type = TRAY/CUP or whether this list will be open-ended with no limit imposed (e.g., the Coulter or manual procedures would use type # SEQUENCE/BATCH). Refer to the section on Auto Instruments for more information.

(.04) CUPS PER TRAY: Enter the number of cups or positions per tray or carrier if you have set the previous field to TRAY/CUP.

(.05) FULL TRAYS ONLY: If your list is of the type TRAY/CUP, you may enter a "YES" in this field to indicate that you want the system to allow building of the list ONLY if there are enough pending accessions available to build a full list. Answer "NO" (leave null) if you wish to be able to generate partial load or work lists.

Lists of type SEQUENCE/BATCH should always be set to null, as this field does not apply to that type of list.

(.6) EXPAND PANELS ON PRINT: If your list is composed of or includes panels or profile tests, you may choose to expand those panels by answering "YES", so that each of the individual tests within the panel prints out on a separate line. This would allow you to use the list as a worksheet on which to record test results. The order in which those expanded tests will print is determined by the order in which they were added to the panel test name in LABORATORY file (#60) in the Lab tests field included in panel.) If you have also answered "NO" to the Build name only field below as well. If you do not want to have panels expanded, but listed only by their panel names, enter "NO" in this field.

(.07) INITIAL SETUP: Currently, this field is not used. It points to the EXECUTE CODE file (#62.07).

(.08) VERIFY BY: The entry in this field determines how the accessions that exist on the load or work list will be presented to you for verification.

The entry in most cases will match the entry you have placed in the Type field above. If the type is TRAY/CUP, you would enter a "T" (for By tray/cup number).

If the type is SEQUENCE/BATCH, you would enter a for By sequence/worklist number.

You may also have a list of type TRAY/CUP verified by "A" (by accession number) in the case of an instrument such as an ASTRA for which the lab may only use the load/lists in the morning and run the instrument by accession the rest of the day.

The fourth possible choice for this field is "M" (by machine sequence number), which allows the presentation of accessions for verification by their machine sequence number when the instrument is able to tag or identify the data stream with a machine sequence number.

When you use the verify options available on the Processing menu, the sequence of accession numbers presented to you will match the sequence that appears on your load or work list if you choose the "T" or "W" entry for this field. If you enter "A" (by accession number), the order will be by increasing accession number sequence, which may or may not match your original list sequence. If this load or work list is linked to an interfaced instrument that is able to tag the data stream it produces with an accession number (e.g., Astra), you may want to enter an A in this field so that the

AUTO INSTRUMENT file (#62.4) can refer to this file entry for that information as to how the instrument will be run.

(.09) SUPPRESS SEQUENCE #: Enter "YES" to suppress the appearance of the sequence number on the list, and "NO" to allow, the sequence number to appear on the list. Try it both ways to determine if you want this field set to "YES" or "NO". The sequence number which appears is simply an incremental count of the accessions that are placed on that list. If verifying by sequence #, do not suppress.

(1) INCLUDE UNCOLLECTED ACCESSIONS: The most common answer is "NO", which will prevent any accessions that are on the collection list but have not yet been received into the lab from building onto the list. If your workload is very heavy and it is necessary for you to build your lists before your phlebotomists have returned from their routine collection, set this field to "YES". This would then allow you to set your trays up, label your specimen cups, etc., before you know which of the accessions on your list have actually been drawn. However, it may take you as much time to find missing specimens and manipulate the lists (insert, move, and remove samples onto and off the list) to reflect the accessions which were actually collected as the time you saved by being able to build your lists, label sample cups, etc. before the receipt of the collection accessions was complete. You will probably want to keep this field set to "NO".

(.11) SHORT TEST LIST: Entry of 1 for "YES" in this field will cause a short test list, or abbreviated load/work list, to print instead of the normal format.

RUN OR TRAY NUMBER***
TRAY***
DATE***
TECH***
ACCESSION AREA***
SEQ OR CUP NUMBER***
ACCESSION DATE***
ACCESSION ENTRY***
PROFILE***
SPECIMEN***
TESTS***
URGENCY OF TEST***
DOWNLOAD RECORD***
DOWNLOAD PARAMETERS***
FIRST TRAY***
STARTING CUP***
LAST TRAY***
LAST CUP***

***DO NOT EDIT the entries in these fields. They are used by the system to record and store information regarding this load or work list, and are automatically gener ated by the system whenever a load or worklist is built. You may skip over this section by entering "^" Profile. Your next prompt will be Profile.

(.12) AUTO MICRO EDIT TEMPLATE: Enter the execute code to be used when verifying Auto Micro results.

(.14) WKLD METHOD: This field will be used as default response when setting up a WKLD code during verification. This field is updated after the technologist confirm the method for this particular verification session. The name and suffix number are automatically stuffed for the user.

(.15) WKLD CODE METHOD NAME: This field contains the subsection which receives credit for workload any time a user selects this worklist. This is triggered by the WKLD Method field.

(.16) WKLD CODE SUFFIX: This field indicates what is the standard default method used by this particular Load/Work List. This suffix is appended to prefix or procedure WKLD code for each test verified.

(1) MAJOR ACCESSION AREA: This field contains the major accession area which receives the workload credit. Anytime a user selects this worklist the entry will be used to tally workload.

(1.5) LAB SUBSECTION: This is the next level down from the Major Accession area. An example might be, chemistry is the major accession area and SP Chemistry would be the lab subsection.

(1.7) WORK AREA: This is the lowest level of work distribution. Generally this would indicate the work bench where the work is to be done. An example might be Chemistry (major accession area), Sp Chemistry (lab subsection), and Drug screens (work area).

NOTE: The default for major accession area, lab subsection, and work area is the entry above it.

The order is as follows:

1. Major accession area of the test.

2. Lab subsection default is the Major accession area.

3. Work area default is the Lab subsection.

NOTE: If none of the three fields have an entry, therefore, the default answer for all of the fields is the accession area. The accession area will not be broken down into separate areas for any management reports.

(2) RUN or TRAY NUMBER (Subfile): All data in this multiple field is computer generated.

(.01) Run Or Tray Number: Cannot be altered except by programmer.

(2) Date: The date part of the run number.

(3) Tech.: this field points to the USER file.

(4) Accession Area: You cannot select an accession area designated as a work area.

(10) SEQUENCE or CUP NUMBER (Subfile): This is where the data is stored in the LAH global.

(.01) Accession Area: The pointer to the accession area.

(1) Accession Date: The date part of the accession.

(2) Accession Entry: The numeric part of the accession.

(3) Profile: Enter the profile number used to build this cup.

(4) Specimen: This field is used by the download program.

(5) TEST or PANEL NUMBER (Subfile): This field allows the tech to select the test/panel number to be sent to the MicroScan. The number entered is from table I of the MicroScan documentation.

(.01) Test Or Panel Number: Enter the Test/Panel number of the test to be done.

(1) Isolate: This is the ISOLATE number of the test to be run. If the number is not known or might conflict with another isolate number for this accession, then leave blank and the MicroScan will assign one.

(9) TESTS (Subfile): These are tests to run on this cup.

(.01) Tests: These are tests to run on this cup.

(.02) Urgency Of Test: This field is a pointer to the URGENCY file (#62.05).

(21) Download Record: This will hold the record to be sent for a download of the test requests awaiting protocol conversion.

(21) Download Parameters: This is loaded by the download build routine.

(11) DATE OF SETUP: The date the load/work list was created is stored here.

(12) FIRST TRAY: The first tray built on the last build is stored here.

(13) STARTING CUP: The starting cup (or sequence number) on the last build is stored here.
(14) LAST TRAY: The last tray built on the last build is stored here.

(15) LAST CUP: The last cup (or sequence number) on the last build is stored here.

(30) BUILDING IN PROGRESS: This field should always be set to "NO" unless the loadlist or worklist is actually being built. During the building process, the system sets this field automatically to "YES" until the build has been completed. This prevents more than one user from building the same list at the same time.

NOTE: If for some reason you are unable to build a list, you may want to check to see if this field is set to "NO". If it is "YES", you may manually reset it to "NO" to allow you to build your list. When this happens, the user may see the prompt "WAITING FOR ANOTHER BUILD TO FINISH" when attempting to build the list. If no other user is attempting to build the same list, check to see if this field needs to be reset.

(50) PROFILE (Subfile): This is a multiple entry field in which you may define different combinations of tests to be built onto the particular load or work list. All of the subfields under Profile repeat or loop back through the same sequence for each different type of profile entered for the load or work list. When editing this field with VA FileManager at a later date, only the LAST profile name entered will appear. Use a "?" to get a full listing of the entries in this field.

(.01) Profile: Only one loadlist or worklist can exist at a time. This is the name of the profile, must be 1-30 characters in length.

Each load or worklist must have at least one profile defined. When more than one profile exists, the users will be prompted with "Build ALL profiles?" when building the list. The user may choose to build all existing profiles onto the same list, or will be allowed to specify one particular profile if desired. If only one profile is defined, the user will not see this prompt.

The simplest example of a profile might be for a single test. The loadlist/worklist name is Lithium, the profile defined is named Lithium and the only test included on the profile is Lithium. When this list is built, only lithium accessions will be built onto it.

Another example would be a Manual chemistry load/work list. You could choose to have one profile defined as Manual chemistry (for which you will include all of the tests performed in the manual section of the chemistry lab), and another profile defined as Monday/Manuals (for which you will include only those manual chemistry tests performed weekly on Mondays). You could then build the Manual chemistry list specifying the profile Monday/manuals when you run your weekly tests on Mondays, and build the list specifying the Manual chemistry profile on any other day of the week. The same type of setup can be used for instrument load/work lists, where you may do different combinations of tests based on the time of day or week, or based on panels of tests offered by your laboratory. Each profile defined will contain the following information (subfield entries for each Profile field entry).

Hint
Do not confuse the profile (the subgrouping or list of tests to be included together on the same load or work list) with the name of a panel or profile of tests as defined in the LABORATORY TEST file (#60). The FIELD: PROFILE can be named any way you choose to reflect why the tests have been brought together onto the list.

Example: The PROFILE name Monday/Manuals would refer to the group of Manual tests run only on Mondays.)

(1) Test (Subfile): This is the name of the test to be pulled onto the list when this profile is specified. This field points to the LABORATORY TEST file (#60) entries, and must match the test name listed in File #60 or one of its synonyms. Once a test has been built onto one loadlist or worklist, it cannot be pulled onto another list. If you are defining a list that contains a panel test (such as a Chem 7), you will enter the name Chem 7 in this field. It is also a good idea to list the individual test names making up the panel tests in this field, which will allow any individual tests remaining from a Chem 7 panel which has been manually entered and partially verified to build onto this list as well.

(.01) Test: These are the tests to be brought onto the load/work list from the accessions.

Hint

Be sure to include ALL of the test names which the wards will be allowed to order as well as the single tests or subgroups of tests which are also included as part of the test.

Example: If the wards will be able to order a Chem 7 (green top) as well as a Chem 7, then for the **Profile Name** CHEM 7, you would enter the following tests: Chem 7, Chem 7 (green top), and any of the individual tests or subgroups which make up the Chem 7 panel (Na, BUN, Glucose, Lytes, etc.,).

The individual tests remaining after a panel has been split apart(by verifying only some of the tests in the panel) will not build onto a loadlist or worklist unless they are defined as part of a profile for that list.

(1) Specimen: The entry of a valid site/specimen name (from the entries in the TOPOGRAPHY FIELD file (#61)) in this field limits the building of the list to the accessions which have been ordered with that single specimen type.

If a test in this profile can be performed on both serum and plasma, specifying only serum in this field will not allow any of the plasma specimens to build onto the list. When in doubt, leave this field blank. By leaving the specimen type blank, you will be able to combine different types of specimens onto the same list, which may be helpful for tests such as Creatinine clearance. The profile can then be set to accept both the serum and urine accessions involved in this test onto the same list at the same time. Expand the panel on print, and you have a ready made Creatinine clearance worksheet.

(2) Build name only: This field allows you to determine if the test name listed above will be allowed to determine the sequence of tests appearing under this profile. If you answer "YES", the test (either single or a panel) will be used only to build the profile for the loadlist/worklist. If set to "NO", (and the test is a single test), then the sequence of tests on the profile will be defined by the order in which they are added to this field. If set to "NO", and the test is a panel, the test sequence will be defined by the order in which they have been added to the panel test name in LABORATORY TEST file (#60) in the Lab tests field included in the panel.

Example: You enter a load/work list for Electrolytes, and define one profile for the list, also called Electrolytes. You will be pulling the single tests Na, K, Cl, and CO_2 in that order from LABORATORY TEST file (#60) onto this profile.

If in the profile in File #68.2 the tests are entered in this order:	and you answer the field Build name only with:	then the sequence in which the tests will appear for editing is:
K	No	K
Cl	No	Cl
CO_2	No	CO_2
Na	No	Na
Lytes	Yes	
K	Yes	Na
Cl	Yes	K
CO_2	Yes	Cl
Na	Yes	CO_2
Lytes	No	
K	No	K
Lytes	No	Na
Cl	Yes	Cl
CO_2	Yes	CO_2
Na	No	

The best way to set this field up for the profile is to have either all individual tests as "NO" and the panel name as "YES" (Example #1, above) or all the individual tests as "YES" and the all inclusive panel name as "NO" (Example #2, above). A **phantom test** can be created to be used as the panel name for this field, and will define the tests on the profile similarly to how a template would.

Example: A panel can be created in File #60 called Sequence ASTRA. This would be a type NEITHER test whose only purpose is to define the sequence of editing results from this instrument. All tests defined for the profile would be Build name only - "YES", except the phantom test Sequence, ASTRA, which would be Build name only - "NO". Follow Example #2 above to see how this would work in defining the editing sequence. Be sure to include all tests which the instrument might produce or transmit in the phantom test. This will make it easy to set up load or work lists with multiple profiles (for a few tests or a lot of tests). Simply include the phantom test on each profile as a Build name only - "NO" test and all others as Build name only - "YES". Then the editing sequence will always be the same as the sequence or order in which you have added the tests to the phantom panel in LABORATORY TEST file (#60).

(2) Accession Area: Enter the appropriate Accession Area to which the accession names are assigned to pulled data onto the loadlist/worklist that it is assigned. This field points to valid entries in the ACCESSION file (#68), so the accession area name entered here must first exist in File #68. If you wish to include accessions from more than one area on the same load or work list, leave this field blank.

(3) Tray # For Control (Subfile): If your load or work list is of the type TRAY/CUP, entries in this multiple field will allow you to define tray numbers, choose the controls you wish to be built onto the tray, and the position in the tray (or cup number) where the controls will appear. For

load or work lists of the type SEQUENCE/BATCH, you will only define the first Tray #, and always enter 1.

(.01) Tray #: Enter the specific tray number onto which the controls should build (appear). For a sequence/batch type of work list, the tray # is always 1. All of the subfields under Tray # repeat or loop back through the same sequence for each different tray number entered for the load or work list. When editing this field with VA FileManager at a later date, only the LAST tray number entered will appear. Use a "?" to get a full listing of the entries in this field.

For TRAY/CUP lists, you should predefine as many trays as you might use on your heaviest workload day, starting with tray #1. Each tray number defined will contain the following information (subfield entries for each Tray # field entry):

(10) Control (Subfile): Enter the name of the control to be placed onto the tray defined above. This field points to valid entries in the LAB CONTROL NAME file (#62.3), so the control name(s) entered here must first be defined in that file.

Be sure that the control name you choose is appropriate for the tests being pulled onto this load/work list. Each control name entry has specific tests and accession tests defined for it. Refer to the description of LAB CONTROL NAME file (#62.3), in this chapter for more information.

(.001) Cup or Sequence #: The entry here determines where the control name you have specified above will appear on the tray or carrier number you are defining.

(.01) Control: Identify the control appropriated for this tray. If you need to specify more than one of the same control, use quotation marks around the control name and the FileMan will allow you to add as many as you like.

Once you have specified the cup or sequence # of the control, you will be prompted with "Select control again", allowing you to choose another control name to be included in a different position on the same tray #. If you wish to use the same control name on the same tray #, but in different positions or cups, enter the full control name in quotation marks.

NOTE: The above two fields should not be defined for loadlist or worklists as the type SEQUENCE/BATCH.

(4) SPECIMENS TO EXCLUDE (Subfile): This multiple entry field allows you to specify any number of specimen types you wish to avoid building onto this particular profile for the list. This field points to valid entries in the TOPOGRAPHY FIELD file (#61), so the specimen names entered here must first be defined in File #61.

(.01) Specimens to EXCLUDE: If any specimens are specified here, accession of these specimen(s) will **not** be included on the work/load list.

NOTE: You may exclude different types of specimens from each profile defined for the load or work list, as in the case of needing to segregate specimen types on different runs or batches due to the linearity limitations of a particular instrument.

(5) Controls To Begin Worklist (Subfile): Enter the name of the control to be placed at the beginning of the load or work list, if it is of the type SEQUENCE/ BATCH. After entry of the control, you will be asked to specify the controls rank. The rank determines which control will appear before another if you have defined more than one control to be placed at the beginning of your list. After you specify the rank, you will be prompted with Select controls to begin worklist again. This is a multiple field and will allow you to place as many control names in the field as necessary. If you wish to add more than one of the same control at the start of each list, enter the full control name in quotes. Controls entered in this field will be accessioned on every build of this profile on the load or work list.

(.001) Enter The Controls Rank: This is the order the control appears relative to any other controls at the beginning of the work. Type a whole number from 1 to 99.

(.01) Controls To Begin Worklist: This is one of the controls to be placed at the beginning of the worklist. The rank you associate it with will determine its order relative to any other accessions at the beginning of the worklist.

(6) Controls To End Worklist (Subfile): Enter the name of the control to be placed at the end of the load or work list, if it is of the type SEQUENCE/BATCH. This multiple field will also ask you to specify each control name's rank (or order) in which they should appear at the end of the list. These controls will be accessioned on every build of this profile on the load or work list, and will always appear immediately following the last accession number sequence (patient specimen) which is built on the list.

Example: If you build a Lithium work list and generate 15 sequences of patient accessions, the control names entered in this field will always appear in the next available sequence, or, in this case, sequence #16. This is known as bracketing the accessions placed on the load or work list with controls. Both this field and the one above point to valid entries in the LAB CONTROL NAME file (#62.3), so the control names entered in these fields must first be defined in File #62.3.

(.001) Enter The Control s Rank: This is the order the control appears relative to any other controls at the end of the work. Type a whole number between 1 and 99.

(.01) Controls To End Worklist: This is one of the controls to be placed at the end of the worklist. The rank you associate it with will determine its order relative to any other controls at the end of the worklist.

NOTE: All of the above subfields designated with a single asterisk "*" are to be defined for EACH profile to be created for a particular load or work list. The subfields designated with double asterisks "**" are the specific parameters within each profile subfields which should also be defined.

(51) USER ACCESS AUTHORIZATION: This field points to entries in the SECURITY KEY file (#19.1). If filled in, lab users must hold the same security key to use this load/work list. If this field is left blank, any lab users may use this load/work list.

(52) ADDITIONAL LAB TESTS (Subfile): This field is to be used for any additional WKLD Codes used for this particular worklist.

(.01) Additional Lab Tests: If this particular load work list should have additional WKLD workload counts enter the test in the LABORATORY TEST file (#60) which contains the verify WKLD codes field (#500). These WKLD codes will be included with each verified test. An example might be instrument setup for a batch instrument. This will require setting up a phantom test in File #60 called "Instrument Setup". This test would be used as an entry on which to place the verify code Instrument Setup.

WORKLIST HEADINGS file (#68.4)

This file allows the lab to customize the short accession list. It will allow up to a ten line heading of the accession. This heading area can be separated in a maximum of four columns. Each column allows an entry that may be used to define the supervisor of an accession area, or put in a space to allow the technologist to designate the shift.

Field List

```
(.01) NAME
(1) LINE # (Subfile 68.41)
(.01) Line #
(1) Column #1
(2) Column #2
(3) Column #3
(4) Column #4
```

Fields Description

(.01) NAME: Name of accession area. Points to the ACCESSION file (#68). Programmer privileges required.

(1) LINE # (Subfile): This field contains a line number for the special heading.

(.01) Line #: This field contains a line number for the special heading. Type a whole number between 1 and 10.

(1) Column #1: This field contains the textual heading for the first column. Answer must be 1-30 characters in length.

(2) Column #2: This field contains the textual heading for the second column. Answer must be 1-30 characters in length.

(3) Column #3: This field contains the textual heading for the third column. Answer must be 1-30 characters in length.

(4) Column #4: This field contains the textual heading for the fourth column. Answer must be 1-30 characters in length.

LAB ORDER ENTRY file (#69)

The LAB ORDER ENTRY file (#69) contains the lab test orders. All ordering information is stored in the ^LRO(69 global. This file points by many other files, and supplies information for order entry and order status output. No editing of the entries should take place, as it may cause corruption or loss of ordering information. The file contains print and sort templates that are used by a variety of lab routines and options to format reports.

Field List

```
(.01) DATE ORDERED
(.5) CURRENT ORDER NUMBER
(1) SPECIMEN # (Subfile 69.01)
(.001) Specimen #
(.01) LRDFN
(.02) Parent File
(.03) Name
(1) ENTERING PERSON
(2) SPECIMEN (Subfile 69.02)
(.01) Specimen
(3) COLLECTION SAMPLE
(4) LAB,IMM OR WARD COLLECT
(5) DATE/TIME ORDERED
(5.5) EST. DATE/TIME OF COLLECTION
(6) TEST (Subfile 69.03)
(.01) Test/Procedure
(1) Urgency
(2) Accession Date
(3) Accession Area
(4) Accession Number
(5) Combined On Order
(6) OR Internal File #
(7) Panel Exploded
(7) PROVIDER
(8) REPORT ROUTING LOCATION
(9.5) ORDER #
(10) DATE/TIME OF COLLECTION
(11) DATE/TIME OBTAINED INEXACT
(12) COLLECTOR
(13) COLLECTION STATUS
(14) *VOLUME
(15) COMMENT
(16) WARD COMMENTS ON SPECIMEN (Subfile 69.04)
(.01) Ward Comments On Specimen
(20) Lab Arrival Time
(21) Date/Time Results Available
(22) Merge Order #
(23) Ordering Location
(24) Counted For Workload
(25) Institution
```

Fields Description

(.01) DATE ORDERED: Date of order.

(.5) CURRENT ORDER NUMBER: The count of the order number for the current year.

(1) SPECIMEN # (Subfile): The sequential specimen number.

(.001) Specimen #: The sequence number of individual specimens on orders for a given date.

(.01) LRDFN: The internal number in the LAB DATA file (#63).

(.02) Parent File: Computed field of the number of the parent file for the data in LAB DATA file (#63).

(.03) Name: This is a computed field for the name of the entry of the data in the LAB DATA file (#63).

(1) Entering Person: This field points to the NEW PERSON file (#200). This is automatically stored.

(2) Specimen (Subfile): Points to the specimen for the given order.

(.01) Specimen: Points to the specimen for the given order.

(3) Collection Sample: Points to the collection sample appropriate for the test(s) ordered.

(4) Lab, IMM Or Ward Collect: This designates how the sample or specimen is to reach the lab.

(5) Date/Time Ordered: Self explanatory.

(5.5) Est. Date/Time Of Collection: This is the estimated time of the collection.

(6) TEST (Subfile): The tests for the specimen.

(.01) Test/Procedure: The tests for the specimen.

(1) Urgency: Routine, Stat, etc.

(2) Accession Date: The date piece of the accession.

(3) Accession Area: The accession area where the test can be found.

(4) Accession Number: The number piece of the accession where the test can be found.

(5) Combined On Order: If the test has been combined with another order (i.e., this test is a duplication of part of another order), this points to the order with which the test has been combined.

(6) OERR Internal File #: This provides the link to the correlate entry of the test ordered as it appears in OERR.

(7) Panel Exploded: Used to determine if panel with no accession area assigned has previously been exploded and accessioned.

(7) Provider: The person signing for the order.

(8) Report Routing Location: The service or location from which the order is originating, and where the report will be returned.

(9.5) Order #: The unique assigned order number for an ordering session for one patient.

(10) Date/Time Of Collection: When the specimen was collected from the patient.

(11) Date/Time Obtained Inexact: If the time the specimen is obtained is not approximate, this field is set to "YES".

(12) Collector: The phlebotomist who is accessioning the collected order.

(13) Collection Status: This field indicates whether the order is collected or uncollected.

(14) *Volume: This field is no longer used and will be deleted in a later version.

(15) Comment: Single line comment about the order.

(16) WARD COMMENTS ON SPECIMEN (Subfile): Comments about the order.

(.01) WARD COMMENTS ON SPECIMEN: Comments about the order.

(20) Lab Arrival Time: This is the time the specimen arrives at the laboratory.

(21) Date/Time Results Available: This is the date/time ALL results for this specimen are complete.

(22) Merge Order #: If this order was merged with another order the order number for that order is entered here. This is automatically stuffed by the system.

(23) Ordering Location: This field contains the location ordering the test and to where completed results will be sent.

(24) Counted For Workload: If this accession has been tallied to WKLD totals, a yes will be stuffed into this field by the software which runs in the background.

(25) Institution: This field contains the institution entering the request for this particular test. This field becomes very important when dealing with multidivisional sites.

COLLECTION LIST file (#69.1)

This file contains the Lab collection list entries.

Field List

```
(.01) COLLECTION ROUTE
(.02) DATE
(1) TEST (Subfile 69.11)
(.01) Test
(1) Location
(2) Room/Bed
(3) LRDFN
(4) Specimen #
(5) Collection Sample
(6) Lab Collect
(7) Build Date
(8) Accession Date
(9) Accession Area
(10) Accession Number
(11) Ordering Location
```

Fields Description

(.01) COLLECTION ROUTE: This field contains the numeric order of the collection list.

(.02) DATE: This field contains the date of this collection list.

(1) TEST (Subfile): This field contains a listing of tests to be collected from this patient.

(.01) Test: This field contains a listing of tests to be collected from this patient.

(1) Location: This is the location of the patients in the hospital.

(2) Room/Bed: This is the room/bed of the patients hospital ward. Answer must be 1-20 characters in length.

(3) LRDFN: This field is a Pointer to LAB DATA file (#63).

(4) Specimen # : Type a whole number between 1 and 999,999.

(5) Collection Sample: Pointer to COLLECTION SAMPLE file (#62).

(6) Lab Collect: LC for lab collect; WC for Ward Collect.

(7) Build Date: This is the date the collection list was built.

(8) Accession Date: This is the date of the accession.

(9) Accession Area: Accession area where the test will be performed.

(10) Accession Number: Accession number for this accession.

(11) Ordering Location: This is the location that originated this order.

LAB SECTION PRINT file (#69.2)

This LAB SECTION PRINT file (#69.2) is used to define and format print headers for Anatomic Pathology reports. It is also a temporary holding file for the pathology incomplete and completed cumulatives and Blood Bank Module special report formats. It can be used for any accession area.

Field List

```
(.01) NAME
(.02) ABBREVIATION
(.03) REPORT HEADER 1
(.04) REPORT HEADER 2
(.05) PRINT SNOMED/ICD CODES
(.06) GROSS DESCRIPTION SPACING
(.07) LINES IN A LABEL
(.08) ACCESSION PREFIX
(.09) PRINT SF-515 LINES
(.1) ASK TC CODES
(.11) ROUTINE PROCEDURE 1
(.12) ROUTINE PROCEDURE 2
(.13) REPORT HEADER 3
(.14) REPORT HEADER 4
(.21) NEW PG FOR SUPPLEMENTARY RPT
(.3) SLIDE LABEL (Subfile 69.21)
   (.01) SLIDE LABEL
   (.02) PRINT NAME
(1) INCOMPLETE REPORTS QUEUE (Subfile 69.21)
(.01) LRDFN
(1) INVERSE DATE
(2) ACCESSION DATE
(2) COMPLETED REPORTS QUEUE (Subfile 69.23)
(.01) LRDFN
(1) INVERSE DATE
(2) ACCESSION DATE
(3) INTERIM REPORT NUMBER (Subfile 69.29)
(.01) INTERIM REPORT NUMBER
(1) LOCATION
(4) REPORTS ON DEMAND (Subfile 69.27)
(.01) REPORTS ON DEMAND
(.02) NAME
(.03) SEX
(.04) DOB
(.1) ID
( 5) ENTRY NUMBER (Subfile 69.24)
(.01) ENTRY NUMBER
(.02) PARENT FILE
(.03) NAME
( 6) GENERIC LIST (Subfile 69.26)
(.01) GENERIC LABEL
(.02) ITEM 2
(.03) ITEM 3
```

```
(.04) ITEM 4
(.05) ITEM 5
(7) USER REQUEST LIST (Subfile 69.28)
(.01) USER
(.02) LAST DATE USED
(1) LRDFN (Subfile 69.3)
(.01) LRDFN
(.02) PATIENT NAME
(.03) SEX
(.04) DOB
(.05) LOCATION
(.06) VA PATIENT NUMBER
(.1) ID
(1) PATIENT GROUP
(60) LAB TEST GROUP (Subfile 69.35)
(.01) LAB TEST GROUP
   (1) TEST (Subfile 69.36)
(.001) NUMBER
(.01) TEST
(8) FILE (Subfile 69.31)
(.01) FILE
(.02) START DATE
(.03) END DATE
(.04) USER
   (1) FILE ENTRY (Subfile 69.32)
(.001) NUMBER
(.01) FILE ENTRY NAME
(.02) ENTRY COMMENT
   (1) DATE (Subfile 69.321)
(.01) DATE
(.02) RELATED TEXT
(.03) MORE RELATED TEXT
(.04) DATE ENTRY PRINTED?
   (1) COMMENT (Subfile 69.3211)
(.01) COMMENT
(9) LABELS (Subfile 69.25)
(.01) LABEL ID
(.02) LINE 1
(.03) LINE 2
(.04) LINE 3
(.05) LINE 4
(10) SNOMED & TC CODING (Subfile 69.38)
(.01) SNOMED & TC CODING
(11) TOPOGRAPHY CATEGORY (Subfile 69.211)
(.01) TOPOGRAPHY CATEGORY
(.02) COMMENT
(12) MORPHOLOGY ENTRY (Subfile 69.212)
(.01) MORPHOLOGY ENTRY
(60) TEST LIST NUMBER (Subfile 69.33)
(.01) TEST LIST NUMBER
(1) TEST (Subfile 69.34)
(.001) NUMBER
(.01) TEST
(.02) SPECIMEN
(.03) VALUE
(61) TOPOGRAPHY (Subfile 69.61)
(.01) TOPOGRAPHY
(1) TEST TO DISPLAY (Subfile 69.62)
(.001) NUMBER
(.01) TEST TO DISPLAY
```

```
(.02) SPECIMEN
   (2) TEST TO PRINT (Subfile 69.63)
(.001) NUMBER
(.01) TEST TO PRINT
(.02) SPECIMEN
(999) DATA CHANGE DATE (Subfile 69.299)
(.01) DATA CHANGE DATE
(.02) PERSON CHANGING DATA
(.03) DATA ELEMENT
(.04) OLD VALUE
(.05) NEW VALUE
(.06) FILE
(.07) FILE ENTRY
(.08) INTERNAL FILE #
   (1) SUBFILE FIELD NAME (Subfile 69.37)
(.01) SUBFILE FIELD NAME
(.02) SUBFILE FIELD ENTRY
(.03) SUBFILE FIELD #
```

Fields Description

(.01) NAME: A required field pointing to the ACCESSION file (#68).

(.02) ABBREVIATION: Abbreviation to the name of the Lab section print.

(.03) REPORT HEADER 1: First header in path report after Post operative Diagnosis. The routine used is LRSPRPT (CY/EM/SP patient report).

(.04) REPORT HEADER 2: Second header in path report after Post operative Diagnosis. The routine used is LRSPRPT (CY/EM/SP patient report).

(.05) PRINT SNOMED/ICD CODES: If lower case is to be printed for SNOMED and ICD9CM codes enter 1 or LOWER CASE.

(.06) GROSS DESCRIPTION SPACING: Gross descriptions spacing for anatomic path microscopic examinations will be double spaced, otherwise single spacing will be used.

(.07) LINES IN A LABEL: This field contains the number of lines from the top of one label to the top of the next label. This is used as the default value when printing various labels.

(.08) ACCESSION PREFIX: If accession prefix is entered the path report will have the accession number printed as follows: PREFIX yr. accession # Ex. If S is entered for the accession prefix and year 87 the path report will print the accession as S87 123. If you want a space after S enter a space after the S. To eliminate the prefix and date delete the entry (e.g., S//@).

(.09) PRINT SF-515 LINES: "YES" prints all dashed lines in the SF-515 form. "NO" does not print all lines.

(.1) ASK TC CODES: This field allows coding of cases for the Tissue Committee.

(11) ROUTINE PROCEDURE 1: Number of times procedure is routinely performed. For EM the number of thick sections made per block.

(.12) ROUTINE PROCEDURE 2: Number of times routine procedure is performed. For EM the number of grids routinely made per block.

(.13) REPORT HEADER 3: Third header in path report after Post operative Diagnosis. The routine used is LRSPRPT CY/EM/SP patient report. For surgical pathology this header will be the frozen section report.

(.14) REPORT HEADER 4: Fourth header in path report after Post Operative Diagnosis. The routine used is LRSPRPT. For surgical pathology this header will be the diagnosis field.

(.21) NEW PG FOR SUPPLEMENTARY RPT: This field is a set of codes; 1 FOR "YES" and 0 FOR "NO". If a page feed is wanted before printing the supplementary report a "YES" is entered.

(.3) SLIDE LABEL (Subfile): Multiple #69.22 (add new entry without asking).

(.01) Slide Label: This is a free text field (multiple asked).

(.02) Print Name: This is a free text field (answer must be one to nine characters in length.)

(1) INCOMPLETE REPORTS QUEUE (Subfile): The temporary lists are stored here for specimens logged-in time for printing of the microscopic exam. The report will contain all past specimens with their SNOMED coding in free text form for Surg path, cytopath, and EM. If there are gross descriptions they will be part of the printout.

(.01) LRDFN: Type a whole number from 1 to 9999999999.

(1) Inverse Date: Type a number from 0 to 9999999.99999.

(2) Accession Date: This field is used when a specimen has been accessioned and stores it in an external date format. Usually, only the year will be present.

(2) COMPLETED REPORTS QUEUE (Subfile): This is a temporary list of final path reports to be printed on demand. Entries are automatically entered when the microscopic diagnoses or supplementary are entered for Surg path, Cytopath, or Electron microscopy.

(.01) LRDFN: This is a temporary list of final path reports to be printed on demand. Entries are automatically entered when the microscopic diagnoses or supplementary are entered for Surg path, Cytopath or Electron microscopy.

(1) Inverse Date: Type a number between 0 and 9999999.99999.

(2) Accession Date: When specimen accessioned. Stored in external date format. Usually only the year will be stored.

(3) INTERIM REPORT NUMBER (Subfile): This field contains the numeric sequence of this particular interim report.

(.01) Interim Report Number: This field contains the numeric sequence of a particular interim report.

(1) Location: This field allows the entry of the patient location.

(4) REPORTS ON DEMAND (Subfile): This field contains the name of the "Report On Demand" from the LAB DATA file (#63). This field cannot be altered except by programmer.

(.01) Reports On Demand: This field is a pointer to the LAB DATA file (#63).

(.02) Name: Name of patient.

(.03) Sex: This field is a Set of Codes; M for MALE and F for FEMALE.

(.04) DOB: This is the date of birth field.

(.1) ID: This field uses the SSN of the patient.

(5) ENTRY NUMBER (Subfile): Entry number to appropriate file.

(.01) Entry Number: Entry number in appropriate file.

(.02) Parent File: The file that the entry looks to (i.e., PATIENT, ENVIRONMENTAL, etc.,).

(.03) Name : This is the name of the patient.

(6) GENERIC LIST: This is the name of the Generic Label list.

(.01) Generic Label: First line label.

(.02) Item 2: Second line label.

(.03) Item 3: Third line label.

(.04) Item 4: Fourth line label.

(.05) Item 5: Fifth line label.

(7) USER REQUEST LIST (Subfile): Name of the users from the NEW PERSON file (#200).

(.01) User: Pointer to the NEW PERSON file (#200) for this list.

(.02) Last Date Used: Last date printed.

(1) LRDFN (Subfile): Cannot be altered except by programmer.

(.01) LRDFN: Internal file number in LAB DATA file (#63). Cannot be altered except by programmer.

(.02) Patient Name: Patient name.

(.03) Sex: This field is a set of codes, M for Male and F for Female.

(.04) DOB: This is a date field.

(.05) Location: Answer must be 1-30 characters in length.

(.06) VA Patient Number: If patient is entered in File #2, the internal file number (DFN) for File #2 will appear here.

(.1) ID: This field is an identifier of the patient (usually the SSN).

(1) Patient Group: To print only a specific group of patients, enter that group name here.

(60) LAB TEST GROUP (Subfile): You can have one or more groups. Each group can have up to seven tests.

(.01) Lab Test Group: You can have one or more groups. Each group can have up to seven tests.

(1) TEST (Subfile): Select chem, hem, ser, tox, and RIA tests.

(.001) Number: Type a whole number between 1 and 7.

(.01) Test: Up to seven tests allowed. The number will determine placement of the test on the display or print.

(8) FILE (Subfile): Files for temporary lists of entries.

(.01) File: List of selected entries in a file.

(.02) Start Date: Enter free text date as mm dd yyyy.

(.03) End Date: Enter free text date as mm dd yyyy.

(.04) User: Person who created list of entries.

(1) FILE ENTRY (Subfile):

(.001) Number: Number of the entry.

(.01) File Entry Name: Enter the name of the entry in the file.

(.02) Entry Comment: Description to identify the specific entry.

(1) DATE (Subfile): This is a date field.

(.01) Date: This is a date field.

(.02) Related Text: Free text field to contain a comment.

(.03) More Related Text: Free text field to contain a comment.

(.04) Date Entry Printed?: If entry was printed, then "YES" should be entered.

(1) COMMENT (Subfile):

(.01) Comment: Answer must be 2-80 characters in length.

(9) LABELS (Subfile): ID number of label.

(**.01) Label Id:** ID number of label.

(.02) Line 1: Text for line 1.

(.03) Line 2: Text for line 2.

(.04) Line 3: Text for line 3.

(.05) Line 4: Text for line 4.

(10) SNOMED & TC CODING (Subfile): Text entered here will appear on the preliminary pathology report after the cum path summary.

(11) TOPOGRAPHY CATEGORY: SNOMED coded topography categories.

(.01) Topography Category: Provides a default list of topography selections for anatomic pathology searches and reports.

Example: If 28 is a selection then all SNOMED coded topographies beginning with 28 will be listed.

(.02) Comment: Enter a comment associated with the topography category entry.

(12) MORPHOLOGY ENTRY (Subfile): A list of SNOMED morphology entries for various reports are stored here.

(.01) Morphology Entry: A list of SNOMED morphology entries for various reports are stored here. For cytopathology [LRAPCYPCT] option this is a default list for calculating % normal, a typical, suspicious, and malignant cases.

(60) TEST LIST NUMBER (Subfile): The list number for a group of selected lab test.

(.01) TEST LIST NUMBER: The list number for a group of selected lab test. Type a whole number between 1 and 99.

(1) TEST (Subfile): This field is a pointer for the LABORATORY TEST file (#60).

(.001) Number: Type a whole number between one and seven.

(.01) Test: This field is a pointer for the LABORATORY TEST file (#60).

(.02) Specimen: Specimen Test is performed on. This must be a specimen entered in the LABORATORY TEST file (#60) for the test specified.

(.03) Value: This is a free text field. Answer must be 2 to 10 characters in length. Enter <,>, [, or = followed by the value.

(61) TOPOGRAPHY (Subfile): This field contain entries of the most recent results of tests that will be associated with the preselected tests to be displayed or printed.

Example: You may want to know the results of selected chemistries for a patient who has just had a liver biopsy. Topography entered would be LIVER. For blood bank the tests entered will be displayed whenever a crossmatch is ordered or when components are displayed.

(.01) Topography: Enter the name of the specimen, organ, or tissue that will be associated with the preselected tests to be displayed or printed.

(1) TEST TO DISPLAY (Subfile): The most recent results, if any will be displayed for tests selected associated with a specified topography indicated above when the specimen, organ, or tissue is submitted to anatomic pathology.

(.001) Number: Type a whole number from 1 to 99.

(.01) Test To Display (Subfile): The most recent results, if any, will be displayed for tests selected associated with a specimen.

(.02) Specimen: This is the specimen field of the LABORATORY TEST file (#60) for this test.

(2) TEST TO PRINT (Subfile): Select only tests with the CH subscript.

(.001) Number: Type a whole number from 1 to 99.

(.01) Test To Print: This field is a pointer to the LABORATORY TEST file (#60).

(.02) Specimen: This field is a pointer to the TOPOGRAPHY FIELD file (#61).

(999) DATA CHANGE DATE (Subfile): Date of the data change.

(.01) Data Change Date: Date of the data change.

(.02) Person Changing Data: This field points to NEW PERSON file (#200).

(.03) Data Element: This is the name of the test being edited.

(.04) Old Value: This is the name of the previous test results.

(.05) New Value: This is the name of the new test results.

(.06) File: This file is where the data is stored.

(.07) File Entry: This is the file number.

(.08) Internal File#: This is the internal number where the data is stored.

(1) SUBFILE FIELD NAME (Subfile): This is a free text field.

(.01) Subfile Field Name: This is a free text field.

(.02) Subfile Field Entry: This is a free text field.

(.03) Subfile Field#: This is a free text field.

LABORATORY SITE (file #69.9)

This file holds specific information that defines certain site parameters relating to the actual functioning of the laboratory. The parameters include the official laboratory site name, whether the physician's name must be entered when ordering and/or accessioning tests, what type of accession label format (if any) the lab will be using, and scheduled hours of routine phlebotomy collection times, as well as others.

Field List

```
(.01)  SITE NAME
(.18)  BLOOD DONOR UNIT ID PREFIX
(2)    OE/RR DEFAULT PROTOCOL
(3)    DEFAULT INSTITUTION
(5.1)  IMMED LAB COLLECT DIV. (Subfile 69.9006)
   (.01)  IMMED COLLECTION DIV.
   (.03)  HOLIDAYS ?
   (.05)  IMMED LAB COLLECT PRINTER
   (.06)  MINIMUM RESPONSE TIME
   (.07)  MAXIMUM HOURS AHEAD ALLOWED
   (1)    SUNDAY
   (1.1)  SUN START TIME
   (1.2)  SUN END TIME
   (2)    MONDAY
   (2.1)  MON START TIME
   (2.2)  MON END TIME
   (3)    TUESDAY
   (3.1)  TUE START TIME
   (3.2)  TUE END TIME
   (4)    WEDNESDAY
   (4.1)  WED START TIME
   (4.2)  WED END TIME
```

```
   (5)    THURSDAY
   (5.1)  THU START TIME
   (5.2)  THU END TIME
   (6)    FRIDAY
   (6.1)  FRI START TIME
   (6.2)  FRI END TIME
   (7)    SATURDAY
   (7.1)  SAT START TIME
   (7.2)  SAT END TIME
   (8)    IMMED COLLECT ON
(8)    BLOOD BANK DEFAULTS (Subfile 69.98)
   (.001) NUMBER
   (.01)  BLOOD BANK OPTION
   (.02)  FIRST DEFAULT
   (.03)  SECOND DEFAULT
   (.04)  THIRD DEFAULT
   (.05)  FOURTH DEFAULT
   (.06)  FIFTH DEFAULT
   (.07)  SIXTH DEFAULT
   (.08)  SEVENTH DEFAULT
   (.1)   major section
   (.11)  subsection
(8.1)  BLOOD BANK INSTITUTION (Subfile 69.981)
   (.01)  BLOOD BANK INSTITUTION
   (.02)  INVENTORY MAJOR SECTION
   (.03)  INVENTORY SUBSECTION
   (.04)  DONOR MAJOR SECTION
   (.05)  DONOR SUBSECTION
(9)    HOSPITAL SITE (Subfile 69.99)
   (.01)  HOSPITAL SITE
   (1)    MAX DAYS FOR CONTINUOUS ORDERS
   (2)    CANCEL ON WARD TRANSFER
   (3)    CANCEL ON SERVICE TRANSFER
   (4)    ASK URGENCY
   (5)    DEFAULT TYPE FOR QUICK ORDERS
(10)   ASK PRACTITIONER
(11)   QUE CH,HE,etc VERIFIED TEST(S)
(11.1) ASK FROZEN SECTION
(11.5) QUE MICRO VERIFIED TESTS(S)
(12)   PRINT LABELS
(13)   ALLOW LAB TO ADD PATIENTS
(14)   CHOICE OF ACCESSION NUMBERS
(15)   GRACE PERIOD FOR ORDERS
(16)   GRACE PERIOD FOR CUMULATIVE
(17)   WKLD STATS ON
(17.1) *AMIS/CAP DEFAULT
(18)   *GRACE PERIOD FOR STATISTICS
(19)   GRACE PERIOD FOR INACTIVITY
(20)   DAYS BACK FOR DELTA CHECKS
(100)  DEFAULT BLOOD SPECIMEN
(101)  DEFAULT URINE SPECIMEN
(102)  DEFAULT SERUM SPECIMEN
(103)  DEFAULT PLASMA SPECIMEN
(104)  DEFAULT UNKNOWN SPECIMEN
(200)  MICRO SURVEY REPORT DEFAULTS (Subfile 69.9002)
   (.01)  MICRO SURVEY REPORT DEFAULTS
(201)  MICRO TREND REPORT DEFAULTS (Subfile 69.9005)
   (.01)  MICRO TREND REPORT DEFAULTS
(202)  MICRO REPORT FORMAT
(203)  MICRO DEFAULT TEMPLATE
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(204)  MICRO OTHER TEMPLATE
(210)  DOWNLOAD FULL DATA
(300)  HOLD-OVER SORT URGENCY
(301)  DEFAULT URGENCY
(302)  LABEL TYPE
(303)  LOG PRINTER FOR ROUTINE LC
(304)  RESERVED FIELD #1
(400) PHLEBOTOMY ORDER CUT-OFF TIME (Subfile 69.9001)
   (.01)  PHLEBOTOMY ORDER CUT-OFF TIME
   (1)    PHLEBOTOMY COLLECTION TIME
  ( 2)    $H FORMAT FOR COLLECTION TIME
   (3)    DIVISION
(500)  COLLECT THURSDAY ORDERS IN
(501)  COLLECT FRIDAYS ORDERS IN
(502)  COLLECT SATURDAYS ORDERS IN
(503)  COLLECT SUNDAYS ORDERS IN
(504)  COLLECT MONDAYS ORDERS IN
(505)  COLLECT TUESDAYS ORDERS IN
(506)  COLLECT WEDNESDAYS ORDERS IN
(507)  IGNORE HOLIDAYS
(509)  EXCEPTED LOCATIONS (Subfile 69.9004)
   (.01)  EXCEPTED LOCATIONS
(510)  BUILDING COLLECTION LIST
(511)  COLLECTION LIST BUILD $H
(512)  COLLECTION LIST BUILDER (DUZ)
(513)  COLLECTION LIST TIME
(514)  COLLECTION LIST PRINT COUNT
(520)  DATE ROLLOVER LAST RUN
(521)  ROLLOVER RUNNING
(530)  STANDARD LOCATIONS ONLY
(600)  ARCHIVE DATA (Subfile 69.9003)
   (.01)  LOGICAL NAME
   (1)    PHYSICAL NAME
   (2)    RUN DATE
   (3)    STATUS
  (4)    FOR DATA BEFORE DATE
(601)  DEFAULT PRACTITIONER
(602)  COMBINE TEST DURING ORDER
(603)  LAST LRDFN ARCHIVE SEARCH
(604)  LAST PURGED LRDFN FROM ARCHIVE
(605)  TAPE NUMBER
(606)  # OF DAYS FOR ERRORS
(607)  DEFAULT OPT TREATING SP.
(608)  LRNIGHT
(609)  PHLEB/STOP CODE RUNNING
(611)  CLINIC STOP CODE
(612)  COUNTING BB WORKLOAD
(613)  URGENCY ALERT
(614)  TRANSMIT CLINIC STOP CODES
(615)  VSIT ON
(616) WKLD LOG FILE DATA COLLECT
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Fields Description

(.01) SITE NAME: In the current version of the exported Laboratory package, there is only one entry allowed in this field, and is presupplied as hospital. You may delete this entry and enter it again, using the name of your VAMC, if you wish. Do not have more that one entry. (Please refer to the chapter in the manual dealing with multidivisional aspects of the Laboratory package.)

(.18) BLOOD DONOR UNIT ID PREFIX: The number of eye readable (non barcoded) characters as a prefix in the blood donor unit ID. A x-ref will be set to ^DD(65.54,4,1,3,1) for the unit ID to exclude this prefix. Type a number from one to three.

(2) OE/RR DEFAULT PROTOCOL: This is the default protocol used by lab routines when creating orders for the ORDER ENTRY package. This option can be used as a generic means of ordering lab tests. Specific orders (CHEM 7, CBC) can be set up in the PROTOCOL file for ordering. Enter the lab option that is to be used as the default with OE/RR.

(3) DEFAULT INSTITUTION: Certain workload functions are performed in the background, that is a user is not identified. In this circumstance, the system has no way of identifying the institution to which the workload should be credited. This field is the default value to be used by the system. Enter the institution which should be considered the primary reporting institution. If this site is a multi-divisional site, enter the parent institution in this field. If this field is not filled in the MailMan, domain value will be used.

(5.1) IMMED LAB COLLECT DIV. (Subfile): If your laboratory provides specimen collection service outside of the normal routine collection, use this subfile to enter data about your particular site. The parameters of Immediate Lab Collect define one institution. Therefore, multidivisional sites can have different parameters for each division.

NOTE: All time entries are 24 hours clock or military time.

(.01) IMMED Collection Div.: This field is used as a pointer to the INSTITUTION file (#4).

(.03) Holidays ?: This field is a set of codes. The number 1 is for "YES".

(.05) Immed Lab Collect Printer: This is the printer to which Immediate Lab Collect request will print. It is recommended that this printer be different than the printer used for logging routine lab collect. Enter the device where the notification of order should be printed.

(.06) Minimum Response Time: This field is used for the number of minutes lead time that is necessary for collection. Use numbers from 1 to 60.

(.07) Maximum Hours Ahead Allowed: This field is to be used to allow orders to be placed into the future. Use numbers from 1 to 96 hours.

(1) Sunday: This field is a set of codes used to designate Sundays. Use 1 for "YES".

(1.1) Sun Start Time: This is a numeric field. Type a number from 1 to 2399, 0 decimal digits.

(1.2) Sun End Time: Type a number between 1 and 2359, 0 decimal digits (and MUST be greater than Start Time).

(2) Monday: This field is a set of codes used to designate Mondays. Use 1 for "YES".

(2.1) Mon Start Time: Type a number from 0 to 2359, 0 Decimal Digits.

(2.2) Mon End Time: Type a number from 0 to 2359, 0 Decimal Digits (AND greater than start time).

(3) Tuesday: This field is a set of codes used to designate Tuesdays. Use 1 for "YES".

(3.1) Tue Start Time: Type a number from 0 to 2359, 0 Decimal Digits.

(3.2) Tue End Time: Type a number from 0 to 2359, 0 Decimal Digits (and greater than the start time).

(4) Wednesday: This field is a set of codes used to designate Wednesdays. Use 1 for "YES".

(4.1) Wed Start Time: Type a number from 0 to 2359, 0 Decimal Digits.

(4.2) Wed End Time: Type a number from 0 to 2359, 0 Decimal Digits (and greater than the start time).

(5) Thursday: This field is a set of codes used to designate Thursdays. Use 1 for "YES".

(5.1) Thu Start Time: Type a number from 0 to 2359, 0 Decimal Digits.

(5.2) Thu End Time: Type a number from 0 to 2359, 0 Decimal Digits (and greater than start time).

(6) Friday: This field is a set of codes used to designate Fridays. Use 1 for "YES".

(6.1) Fri Start Time: Type a number from 0 to 2359, 0 Decimal Digits.

(6.2) Fri End Time: Type a number from 0 to 2359, 0 Decimal Digits (and greater than start time).

(7) Saturday: This field is a set of codes used to designate Saturdays. Use 1 for "YES".

(7.1) Sat Start Time: Type a number from 0 to 2359, 0 Decimal Digits.

(7.2) Sat End Time: Type a number from 0 to 2359, 0 Decimal Digits (and greater than the start time).

(8) Immed Collect On: This field is a set of codes. Use 1 for "YES".

(8) BLOOD BANK DEFAULTS (Subfile): Defaults for Donor, Inventory, and the patient portions of the blood bank.

(.001) Number: Type a whole number from 1 to 8.

(.01) Blood Bank Option: This is a free text field. Answer must be 2 to 30 characters in length.

(.02) First Default: This field is a set of codes. Use 1 for "YES" and 0 for "NO".
DONOR: Move ABO/Rh test results to INVENTORY file.
PATIENT: Direct Combs testing default.
DONOR PAT INV:

(.03) Second Default: This field is a set of codes. Use 1 for "YES" and 0 for "NO". DONOR: Ask Military Rank.

(.04) Third Default: This field is a set of codes. Use 1 for "YES" and 0 for "NO". DONOR: Ask Bag Lot Number.

(.05) Fourth Default: This field is a set of codes. Use 1 for "YES" and 0 for "NO". DONOR: Ask Social Security Number.

(.06) Fifth Default: This field is a set of codes. Use 1 for "YES" and 0 for "NO".

(.07) Sixth Default: This field is a set of codes. Use 1 for "YES" and 0 for "NO".

(.08) Seventh Default: This field is a set of codes. Use 1 for "YES" and 0 for "NO".

(.1) Major Section: This field is a pointer to the ACCESSION file (#68).

(.11) Subsection: This field is a pointer to the ACCESSION file (#68).

(8.1) BLOOD BANK INSTITUTION (Subfile): Indicate here which institution will be considered primary for this site.

(.01) Blood Bank Institution: Indicate here which institution will be considered primary for this site. This field cannot be altered except by a programmer. You must fill in this field for the workload to be accumulated properly.

(.02) Inventory Major Section: This field is a pointer to the ACCESSION file (#68).

(.03) Inventory Subsection: This field is a pointer to the ACCESSION file (#68).

(.04) Donor Major Section: This field is a pointer to the ACCESSION file (#68).

(.05) Donor Subsection: This field is a pointer to the ACCESSION file (#68).

(9) HOSPITAL SITE (Subfile): This is where parameters are selected for sites throughout the hospital to control various aspects of lab order entry through OE/RR.

(.01) Hospital Site: This is the hospital site where parameters may apply.

(1) Max Days For Continuous Orders: This is the maximum number of days that multiple-continuous orders can be placed for this location. Type a number between 0 and 30, 0 decimal digits.

(2) Cancel On Ward Transfer: The functionality that this parameter was designed for has been put on hold until further notice. It is not used at this time. This parameter allows orders to be automatically canceled when a patient is transferred from this location.

(3) Cancel On Service Transfer: The functionality that this parameter was designed for has been put on hold until further notice. It is not used at this time. This parameter allows orders to be automatically canceled when a patient is transferred to a new service within this location.

(4) Ask Urgency: Answer "YES" to this field to prompt with urgency for every test when ordering through OE/RR. Test with a forced urgency as defined in the LABORATORY TEST file overrides this parameter.

(5) Default Type For Quick Orders: The entry in this field will determine the type of collection that Quick Orders will have assigned to them.

> **Example:** Ward Collect, Send Patient or Lab Collect. Enter the type of collection (Ward collect, Send patient or Lab collect) that Quick Orders should use. This field is a set of codes, WC for Ward Collect; SP for Send Patient; and LC for Lab Collect.

(10) ASK PRACTITIONER: Allows you to choose whether or not system users will be required to enter the physician's (practitioner's) name during ordering and accessioning of tests. If you answer "NO" here, the practitioner prompt will not appear on the screen at all when the test is ordered/accessioned. If you answer "YES", the prompt will appear to users on the ward (or other locations outside of the lab), and must be answered before an order can be placed. It also will appear to lab users; LRLAB security key holders may bypass the question. Entries in this field points to valid entries in the NEW PERSON file (#200).

(11) QUEUE CH, HL, etc., VERIFIED TEST(S): This field must be set to "YES" to allow automatic generation of interim reports at any location at your site, even if only one location will get the reports.

(11.1) ASK FROZEN SECTION: If frozen sections are to be put in a separate field "YES" should be entered.

(11.5) QUE MICRO VERIFIED TEST(S): This field must be set to "YES" if technologist approved microbiology results are to be automatically queued to any location at your site.

(12) PRINT LABELS: Answer "YES" if you want your accession labels to print automatically whenever tests are accessioned into the lab. If you choose "NO" here, the labels will not print unless you use the Reprint Accession Labels option for each label you wish to print. The device on which the labels will print is determined by answering the "PRINT LABELS ON:" prompt (seen when using the options Multipurpose Accessioning or Accessioning Tests Ordered by Ward Order Entry) with the number of the printer you wish to use.

(13) ALLOW LAB TO ADD PATIENTS: If set to "YES" this field allows lab users (holding LRLAB security key) to add new patients into the system.

(14) CHOICE OF ACCESSION NUMBERS: Set this field to "YES" if you need to be able to specify what accession number gets assigned to a given specimen. For each test accessioned, the system will prompt you with the next available accession number in sequence. You may accept the default prompt or choose another number if you wish.

(15) GRACE PERIOD FOR ORDERS: This field designates the time period in which old (inactive or uncollected) orders will be kept in the system. Minimum length of time is seven days; maximum is 999 days. Using the option Purge Old Orders and Accessions will purge (remove) any of these old orders and daily accessions which have been verified up to the grace period. For example, if you set the grace period equal to 30 days, and today's date is May 15th, purging old orders will remove only orders up to April 15th. The 30 days worth of orders through the current date will remain untouched. We suggest setting the grace period equal to at least 30 days, and possibly longer. This decision is based in part on how much disk space you have available for storage of the information.

NOTE: The period that tests can be ordered in the future is hard coded in LRORD (line 65+1). Version 5.2 sets this period to 1 year (370 days). If the site wants to change this, the coding in the routine MUST be changed.

(16) GRACE PERIOD FOR CUMULATIVE: All Outpatient data older than the number of days specified in this field will be purged. No data will be purged if the field is left blank, or null. (Consult the "Reports" chapter for specific implications of this field entry.) The cumulative report (^LAC global) will be purged automatically when the cumulative report is run. Inpatient data is not purged. Patients currently enrolled in clinics are not purged. All other data (inactive for the number of days specified by this field) is purged. No entry means that no data will be purged.

(17) WKLD STATS ON: To have WKLD statistics collected at the time of accessioning and verification, set this field to "YES". This is the primary switch to turn on workload collection. This entry turns off the entire function. There is also a secondary switch (field) which allow each accession area to be turned on independently. It MUST also be answered "YES" to allow workload data collection in that specific accession area. It is located in the ACCESSION AREA file (#68), Workload On field (#10).

NOTE: Both fields must be answered "YES" to allow workload data to be accumulated.

(17.1) *AMIS/CAP DEFAULTS: This field will be deleted in later version.

(18) *GRACE PERIOD FOR STATISTICS: This field will be deleted in later version.

(19) GRACE PERIOD FOR INACTIVITY: The number entered in this field indicates the number of days that a patient has to be inactive (no lab orders) for the Force Cumulative Data to Permanent Page option to identify the patient data as qualified to be forced to permanent.

(20) DAYS BACK FOR DELTA CHECKS: This field specifies how far back (in number of days) the system will look for previous patient data to be compared with current data for any delta checks. (Delta checks are defined in the DELTA CHECK file (#62.1) and entered in the LABORATORY TEST file (#60) under the site /specimen field; refer to those files for specific information.) This time period holds for all delta checks on all tests in all accession areas; i.e., hospital wide. However, it is more system intensive to have a greater time period specified for a small number of tests rather than a short period of time defined for a large number of tests.

(100) DEFAULT BLOOD SPECIMEN: This single entry is presupplied, and should NOT be changed or edited. It provides the system with a default answer for specimen type if none is specified.

(101) DEFAULT URINE SPECIMEN: This entry is presupplied; DO NOT EDIT.

(102) DEFAULT SERUM SPECIMEN: This entry is presupplied; DO NOT EDIT.

(103) DEFAULT PLASMA SPECIMEN: This entry is presupplied; DO NOT EDIT.

(104) DEFAULT UNKNOWN SPECIMEN: This entry is presupplied; DO NOT EDIT.

(200) MICRO SURVEY REPORTS DEFAULTS (Subfile): Entries in this field are used as the default of "(A)LL" for the questions asked on the Infection Control Survey report. If collection sample is present, all surveys will display the sample; if not, site/specimen is displayed.

> **(.01) Micro Survey Reports Defaults:** Entries in this field are used as the default of "(A)LL" for the questions asked on the Infection Control Survey report. If collection sample is present, all surveys will display the sample; if not, site/specimen is displayed.

(201) MICRO TREND REPORT DEFAULTS (Subfile): Entries in this field are used as the default of "(A)LL" for the prompts in the Antibiotic Trends Report. P = patient, D = physician, L = location, S = site/specimen, C = collection sample, and O = organism. Please consult the "Micro" chapter of this manual for more specifics on this field.

> **(.01) Micro Trend Report Defaults:** This field contains the default parameters for the Micro Trend Report.

(202) MICRO REPORT FORMAT: The entry in this field determines how antibiotic susceptibilities will be displayed on patient reports. I = interpretation only, R = results only, and B = both interpretation and results. A null entry will display interpretations only.

(203) MICRO DEFAULT TEMPLATE: Enter the edit template name used for entering antimicrobial results for organisms without a susceptibility edit template defined in the ETIOLOGY FIELD file (#61.2). The supplied template is LR Default. DO NOT EDIT THIS TEMPLATE.

(204) MICRO OTHER TEMPLATE: Enter the edit template used for entering antimicrobial results that are not on the template specific for the organism. The supplied template is LR Other. DO NOT EDIT THIS TEMPLATE.

(210) DOWNLOAD FULL DATA: This field is used to determine how much data is to be downloaded to an instrument. If this field is set to download full data, it will send data for all those instrument fields it have data for. A caution when setting this field is that the more data sent to the instrument the larger the records get and the longer it takes to complete a download. Also if there is limited disk space on the instrument you may over run the space available causing the download to abort before you have all the data downloaded. This may cause the instrument to stop its processing until you correct the problem. Answer "YES" to pass all available data to the instrument. Answer "NO" to pass only required data.

(300) HOLD-OVER SORT URGENCY: Enter a number in this field that corresponds to the urgency status number of the specimens which needs to show up at the beginning of any load and/or worklist. The urgency status types and numbers can be found in the URGENCY file (#62.05). Refer to that file for a more detailed explanation. For this field, the lower the number, the more urgent the specimens are and need to be listed first on a loadlist and/or worklist. This is the urgency of hold-overs in building a loadlist. A 0 is before STAT and 10 is after routine. Choose from the numbers listed in the URGENCY file (#62.05).

Example 1: If you set this field to 1.5 (which is the default answer in the exported version), the 1 will put any highest priority or stat specimens first on the list. The .5 will designate that any specimens left over from a previous date will come next on the list, regardless of their original urgency. The rest of the list would be built according to the urgencies assigned to the specimens from high to low.

Example 2: If this field is set to 2, the first specimens to appear on the list would be the 1 priority, then the 2 priority, then the rest of the specimens, including hold overs from a previous date. The most workable answer for the field would be 1.5, which would ensure that whenever a stat specimen was accessioned, it would show up at the beginning of the next list that was built, and would also allow the tech to catch any leftover specimens from the day before.

(301) DEFAULT URGENCY: This provides the system with a default urgency status for any tests ordered without an urgency being specified. This entry will most probably be **routine** for your lab.

(302) LABEL TYPE: The entry in this field specifies which of the presupplied label formats you will be using to print your accession labels on. Currently, there are six formats available (see the section in this manual on Lab Labels). The best way to decide which label type to use is by testing them out, and determining where and/or how the labels will be used. Another consideration is the size of the

print in order to fit the information on the smaller divisions of the label strip. It is necessary to use a compressed mode of print (16 pitch) and a 132 column width on the label printer. In addition to the even split through the middle or MEDLAB label type, there is a site developed type (to allow for site specific customized labels), as well as a label format designed specifically for use with the three part standard VA Form 10-1392 label stock.

(303) LOG PRINTER FOR LC: By entering a device number in this field, you can specify a printer on which your order slips will print. These are the hard copy individual order slips generated by the system when the Lab Test Order (lab collect) [LROW] option and Fast Lab Test Order (ROUTINE) [LROW ROUTINE] options are used to enter orders to be placed on the collection list or drawn by the lab's phlebotomists. This may be useful as a fail-safe document for Phlebotomy rounds.
(304) RESERVED FIELD #1: This field is reserved for future development.

(400) PHLEBOTOMY ORDER CUT-OFF TIME (Subfile): Order cut-off time for associated collection time - time is in 24 hour format. Orders placed after the cut off time will be defaulted to the next routine lab collection. When users order tests with the Lab Test Order (lab collect) [LROW] option or Fast Lab Test (ROUTINE) [LROW ROUTINE] option, the system will prompt with the next available scheduled routine phlebotomy collection and order cut off time, based on the entries in this field.

(.01) Phlebotomy Order Cut-Off Time: Order cut off time for associated collection time - time is in 24-hour format. Orders placed after the cut off time will be defaulted to the next routine lab collection.

(1) Phlebotomy Collection Time(s): Enter the time (based on 24 hour military time) that a collection list will be generated and/or routine phlebotomy is performed. The default time of 0500 (5:00 AM) can be deleted and entered again as a different time, and additional times can be added (only one per order cut off time).

(2) $H Format For Collection Time: This field is computed from what is entered in the Phlebotomy Collection field.

(3) Division: Allows a multidivision site to define which collection times are applicable to which division. OE/RR-LAB interface uses this to screen out times for Lab Collection. Enter the Division this collection time applies to.

(500) COLLECT THURSDAYS ORDERS IN: Enter the number of days until the next routine phlebotomy, or the day that orders placed and entered into the system on a Thursday will actually be collected. If they will be collected on Friday's draw list, enter a 1 for one day. If there is no scheduled phlebotomy or collection list generated at your lab until Monday, enter a “4” for four days. Remember to include weekends in your counting.

(501) COLLECT FRIDAYS ORDERS IN: Enter the number of days until orders placed on a Friday will be collected.

(502) COLLECT SATURDAYS ORDERS IN: Enter the number of days until orders placed on a Saturday will be collected.

(503) COLLECT SUNDAYS ORDERS IN: Enter the number of days until orders placed on a Sunday will be collected.

(504) COLLECT MONDAYS ORDERS IN: Enter the number of days until orders placed on a Monday will be collected.

(505) COLLECT TUESDAYS ORDERS IN: Enter the number of days until orders placed on a Tuesday will be collected.

(506) COLLECT WEDNESDAYS ORDERS IN: Enter the number of days until orders placed on a Wednesday will be collected.

(507) IGNORE HOLIDAYS: Enter a "YES" in this field if the lab will perform routine phlebotomy collections on holidays; leave blank (null) otherwise.

(509) EXCEPTED LOCATIONS (Subfile): This field contains those locations which have special printing or specimen collection status apart from other hospital locations. Only allow locations with abbreviations.

> **(.01) Excepted Locations:** Collections for Saturdays, Sundays, Holidays, etc., are never skipped for locations in this field. Cannot be altered except by programmer.

(510) BUILDING COLLECTION LIST: This field should always be set to "NO" unless the collection list is in the process of being built. Do not edit this field; it is filled in by the system automatically.

NOTE: If for some reason the system goes down or hangs DURING the building /creation of or adding to a collection list, the field can be manually reset back to "NO" to allow the list to be built once the system is back up.

(511) COLLECTION LIST BUILD $H: DO NOT EDIT these fields. They are filled in by the system automatically, and should be used for troubleshooting purposes only.

(512) COLLECTION LIST BUILDER (DUZ): This field is used and filled in by the collection list when it is built. It contains the DUZ of the user that built the list. For troubleshooting purposes only.

(513) COLLECTION LIST TIME: This field is used and filled in by the collection list when it is built. It contains the time that the list is built. This is for troubleshooting purposes only.

(514) COLLECTION LIST PRINT COUNT: This field is used and filled in by the collection list when it is built and printed. It contains a count of the number of times a collection list is printed. This is for troubleshooting purposes only.

(520) DATE ROLLOVER LAST RUN: This field contains the date that Rollover last ran.

(521) ROLLOVER RUNNING: This field will be automatically set to "YES" when rollover is running.

NOTE: If for some reason the system goes down this field can be manually reset back to "NO" to allow rollover to run.

(530) STANDARD LOCATIONS ONLY: Enter a "YES" in this field if accessioning is to be restricted to standard locations (valid locations as defined in HOSPITAL LOCATION file (#44)). If you want to restrict accessioning to only allow the entry of standard locations (locations defined in the HOSPITAL LOCATION file (#44)), set this field to "YES".

(600) ARCHIVE DATA (Subfile): New entries are added to this field without being prompted for. This field contains a history of archive activity done in the past. It also may contain information concerning archive process in progress.

(.01) Logical Name: Enter the logical name for the archive media (can t be altered except by a programmer).

(1) Physical Name: Enter the physical name for the archive media.

(2) Run Date: Enter the date on which the particular archive run is made.

(3) Status: This field indicates the current status of the archive process.

(601) DEFAULT PRACTITIONER: Enter name as "1" if you want to be defaulted with a provider when the patient is an outpatient.

(602) COMBINE TEST DURING ORDER: This field allows a site, during the ordering process, to turn on or off the feature of combining tests within a panel that have the same sample and urgency. The software will check here first before attempting to combine single tests with profiles. If there are tests which should not be combined, edit ^LAB(60, field #602 and Combine Test During Order field #503.

(603) LAST LRDFN ARCHIVE SEARCH: This field contains the last LRDFN that was found that required archiving during the search process of lab archive.

(604) LAST PURGED LRDFN FROM ARCHIVE: This is the last LRDFN that the archive process purged from the LAR global.

(605) TAPE NUMBER: This field contains the tape number that the archive process is using during the output of archive data to a tape media.

(606) # OF DAYS FOR ERRORS: This field is used by the ^LABERR routine to determine how many days before autoinstrument errors will be purged out of ^LA("ERR"). If this entry is blank, a default value of three days will be used. Type a number between 3 and 30, 0 decimal digits.

(607) DEFAULT OPT TREATING SP.: This field will be used as the default treating specialty for all outpatient workload data collection for WKLD. It is recommended that an entry in the FACILITY TREATING SPECIALTY file (#45.7) be made for Ambulatory Care. Then use that entry in this field. If this field is blank, then there will be no treating specialty for outpatient workload. Select the treating specialty for ALL out patient care.

(608) LRNIGHT: This node is used for preventing two copies of the Workload data collection routine from being executed at the same time. This node contains the date/time that the Workload collection routine began processing the data. The node is set to null when the process completes. This node should not be set through FileMan. To recover after a system failure, delete this entry to allow the workload collection routine to proceed.

(609) PHLEB/STOP CODE RUNNING: Do not enter a date in this field. Doing so may stop the data collection process. The routines will fill in the field during the data collection process and delete the date when the process has gone to a normal completion.

(611) CLINIC STOP CODE: Enter the clinic stop code used by the Laboratory for the MAS package stop code credit. Generally the code number is 108.

(612) COUNTING BB WORKLOAD: This field is filled in by the routine while it processes the Blood Bank workload.

(613) URGENCY ALERT: This field is used as a cutoff level (urgency) to control the flashing of the urgency alert display during verification. Any urgency equal or less than this urgency will cause the display to flash.

Example: If you enter the urgency of OUTPATIENT, it has a value of 3. Then the urgencies of STAT, ASAP, and OUTPATIENT for any accession will be flashed on the screen when data is entered.

NOTE: If your terminal type file is setup incorrectly or the terminal you are using does not support reverse video, the urgency will not flash, it will merely be displayed.

(614) TRANSMIT CLINIC STOP CODES: This field should be answered “YES” if you wish the Laboratory package to automatically stuff clinic stop codes for you. The data is automatically collected but will not be transmitted unless this field is answered “YES”.

(615) VSIT ON: This field will be used with the VISIT file when it becomes available. This field is not presently used, however, this field is reserved.

(616) COLLECT WKLD LOG FILE DATA: This field controls if data should be accumulated in the WKLD LOG file (#64.03). This file can be used for special on site local interest in laboratory workload. This file contains information about what tests are performed by the laboratory. Any special cost analysis study can make use of this file without having to actually navigate through various Globals to obtain data. DSS/DMSS project will find the file very useful. Also there is an option provided to allow printing of this file with suitable cell separators for downloading to spread sheets operating on PC based systems.

LR ROUTINE INTEGRITY CHECKER file (#69.91)

This file contains routine size (^%ZOSF(“SIZE”)) and routine bit size (^LRINTEG) for the exported lab package by version number. The data stored in this file can be used to verify that patches are applied correctly. This file is not required for the laboratory package to function properly. Its primary function is to assist the software support staff in maintaining the integrity of the LR* and LA* routines. Since the option Lab Routine Integrity [LR INTEGRITY MENU] Menu is not assigned to any Lab liaison menu, you need to have IRM add it or have them run the option.

The file is exported with options which will either be deleted or repointed during the post INIT routine. A listing of affected options is provided in the Release Notes. Features of this file include:

Allows checking of LA* and LR* routine size and ASCII value
Provides a method of easily listing locally edited routines
Provides a routine patch application check
Provides a listing of all LA* and LR* routines which are not INITs
Provides a tracking mechanism for applied patches

This file is VA FileMan compatible and uses the routine ^LRINTEG in the input transform. There are three options associated with the primary menu [LR INTEGRITY MENU], which use the routines LRINTEG and LRINTEGL:

1. Load integrity file [LR INTEGRITY LOAD]
   After the LRINITs have run to completion, this option should be invoked to populate the file with LR* and LA* routine data. This option can be used while users are signed on. It should be done before any local enhancements to any LR* and LA* routines are made.

2. Loop thru LR INTEGRITY [LR INTEGRITY LOOP]
   This option will search the file for any routines which have been edited. This feature can be used to list any locally edited routines for possible editing in a new release.

3. Check a single routine size [LR INTEGRITY SINGLE]
   This option will check a single routine to determine the routine size ($L) and ASCII ($A) value of the characters. This option should be used after a patch has been applied to the routine. Compares the $L and $A values to the numbers released with the patch.

NOTE: This is not a foolproof method of verification. When entering a patch, if the correct characters are entered but transposed, the values will match and the error will not be detected.

Field List

```
(.01) VERSION #
(1) ROUTINE (SUBFILE 69.911)
(.01) ROUTINE
(1) ROUTINE SIZE ($L)
(2) ROUTINE BIT SIZE ($A)
(2.5) CHECK SUM
(3) PATCH # (SUBFILE)
(.01) PATCH #
(2) DISTRIBUTION DATE
(3) DELETED OPTIONS (Subfile 69.913)
(.01) DELETED OPTIONS
(1) OPTION NAME
(2) REPOINT
(3) REPOINT TO OPTION
(4) DELETE PRINT TEMPLATE (Subfile 69.914)
(.01) DELETE PRINT TEMPLATE
(5) DELETE SORT TEMPLATE (Subfile 69.915)
(.01) DELETE SORT TEMPLATE
(6) DELETE EDIT TEMPLATE (Subfile 69.916)
(.01) DELETE EDIT TEMPLATE
```

Fields Description

(.01) Version #: The version number for this set of exported routines.

(1) Routine (Subfile): Enter name of a Laboratory routine.

(.01) Routine: Enter name of a Laboratory routine. The Laboratory routine must begin with a "L" or enter a patch number.

(1) Routine Size ($L): This is the size ($L) of the routine determined by LRINTEG. This does not include the first line of the routine, and is not allowed to be edited.

(2) Routine Bit Size ($A): Enter the routine bit size as derived by LRINTEG This value does not include the first line or the routine. It is the sum of all the ASCII characters in the routines.

(2.5) Check Sum: This is the check sum provided by the ^%ZOSF(RSUM) node and the checksum value shown on the Forum patch module. This is a true checksum value. It does not include the second line of the routine in the calculation, therefore it does not ensure that the patch number has been placed in that line (e.g., **45**). This line is checked however by the $L and the $A nodes.

(3) Patch # (Subfile): Enter a patch number if appropriate.

(.01) Patch #: Enter a patch number if appropriate.

(2) Distribution Date: This field contains the distribution date of this version.

(3) DELETED OPTIONS (Subfile): This field contains a list of options which are being moved from one menu to another during version installation.

(.01) Deleted Options: Enter the menu text of the option being deleted.

(1) Option Name: Answer must be 3-60 characters in length.

(2) Repoint: This field is a set of codes, 1 For "YES" and 0 For "NO".

(3) Repoint To Option: Enter the name of the option to which is repointing.

(4) DELETE PRINT TEMPLATE (Subfile): This field contains a list of print templates which are obsolete or being replaced by another template using new file structure. The post INIT routine LROPUD uses this field during the clean up /deletion process.

(.01) Delete Print Template: This is a free text field, answer must be 1-50 characters in length.

(5) DELETE SORT TEMPLATE (Subfile): This field contains a list of obsolete or replaced sort template using new file structure. The post INIT routine LROPUD uses this field to delete sort templates.

(.01) Delete Sort Template: This is a free text field, answer must be 1-50 characters in length.

(6) DELETE EDIT TEMPLATE (Subfile): This field contains a list of edit/input templates which are obsolete or being replaced by another template using new file structure. The post INIT routine LROPUD uses this field to delete edit templates which are obsolete or being replaced by new templates based on the new file structure.

(.01) Delete Edit Template: This is a free text field, answer must be 1 to 50 characters in length.

LAB JOURNAL file (#95)

This file contains medical journals that provide references of various Bacteriology articles. These articles offer the user of the Laboratory package additional information concerning possible issues relating to patient care treatment plans or departmental procedure guidelines.

Field List

```
(.01) JOURNAL ABBREVIATION
(.02) FULL NAME
(.03) CITY OF PUBLICATION
(.04) NLM CALL NUMBER
(.05) NLM TITLE CONTROL NUMBER
(1) COMMENT (Subfile 95.01)
(.01) COMMENT
```

Fields Description

(.01) JOURNAL ABBREVIATION: This is a free text field, answer must be 2 to 50 characters in length.

(.02) FULL NAME: Enter the full name of the Lab Journal entry. This is a free text field, answer must be 2 to 80 characters in length.

(.03) CITY OF PUBLICATION: Enter the city where the journal was published. This is a free text field, answer must be 2 to 30 characters in length.

(.04) NLM CALL NUMBER: This field contains the National Library of Medicine call number. This is a free text field, answer must be 2 to 30 characters in length.

(.05) NLM TITLE CONTROL NUMBER: This field contains the National Library of Medicine title control number. This is a free text field, answer must be 2 to 30 characters in length.

(1) COMMENT (Subfile): Enter any comment referencing this journal entry. This is a word processing field.

(.01) Comment: Enter any comment referencing this journal entry.

General Laboratory

Menu Description

Familiarize the Laboratory personnel with as many of the options available as possible in the exported Laboratory package. The more the Lab personnel review and practice, the more benefits will be gain from all the time spent modifying the Laboratory files. Even the most carefully defined database will not be much help if the Lab personnel do not know how to use the system.

The Laboratory options are exported as menus that group the options with similar functions together into general categories, as follows:

Menu	Function
Laboratory DHCP Menu	This is the primary menu options
Phlebotomy Menu [LR GET]	Options the lab uses to get (collect) the test orders and specimens
Accessioning Menu [LR IN]	Options the lab uses to put the orders in (enter into) the system
Process Data In Lab Menu	Option the lab uses to do (process) the work [LR DO!] on the specimens
Quality Control Menu	Options for maintaining quality assurance
Results Menu [LR OUT]	Options the lab uses to report or send out patient test results
Information-Help Menu [LR HELP]	Options the lab uses to obtain additional "help" or information about tests, orders, make inquiries, etc.
Anatomic Pathology [LRAP]	Options used by the Anatomic Pathology module
Blood Bank [LRBL]	Options used by the Blood Bank module
Microbiology Menu {LRMI]	Options related to the microbiology section
Supervisor Menu [LRSUPERVISOR]	Options used by supervisors to perform specialized functions in the lab
Ward Lab Menu [LRWARDM]	Options used by the ward personnel to place orders, make inquiries, etc.

Menu Management

For a complete list of all the exported menus and the options they contain, see the exported menu section of this manual. These options may be rearranged into different groups or menus to suit your site needs. Be sure to follow suggested Entry and Exit action when setting up your own ZMENU.

It is not necessary to place all the possible menu options for work processing on everyone's menu. The more options available, the more difficult it is to train new employees. It is also much more difficult to troubleshoot problems when users have multiple options for data entry and processing.

One approach is to design custom menus for different sections of the laboratory and for different levels of authority. One word of caution about this approach, KEEP good records of who has what keys and which menus belong to which person. Try to keep the number of menus limited for simplicity and for ease of problem solving. The custom menus LRZ NAMESPACE can be created using the menu management options available to IRM staff or you can use the exported menu and limit access by limiting who has which security keys.

Another approach to menus is to design one or two master menus with all the options needed for everyone in the lab. Then create local keys to lock various sections of this menu. You can then give everyone the exact same primary menu and customize them by giving the various keys. The advantage of this approach is that as people move around in the lab taking on different duties or covering in certain areas unexpectedly, it is easy to adjust the menus by just adding keys. If new versions or options need to be added to the menus, you only have one or two menus to change, not dozens. It is also easier to troubleshoot problems since only one or two versions of the menu will be in use.

Laboratory Options List

```
OPTION LIST                                        AUG 21,1994  14:48    PAGE 1 MENU
TEXT                                          NAME
-------------------------------------------------------------------------------
Check the lab interface                       LA 1103
AP Microfiche Archive                         LA AP FICHE
Set instrument to run by Accession            LA AUTO ACC
Set instrument to run by load list            LA AUTO LLIST
Direct Connect Auto-Instrument  Start         LA DIR JOB
Download a load list to an Instrument.        LA DOWN
Lab Error Trap Listing                        LA ERR PRINT
Lab interface menu                            LA INTERFACE
Restart processing of instrument data         LA JOB
Keypad differential for CRT's                 LA KB DIFF
Test the interface                            LA LAB TEST
Change instrument run mode.                   LA LRLL/AC SWITCH
Automated Microbiology Menu                   LA MI MENU
MicroScan Load Worklist (Build)               LA MI MICROSCAN L/W BUILD
Load Vitek Special Characters                 LA MI SPECIAL CHARACTER LOAD
Verify Micro Auto Data                        LA MI VERIFY AUTO
Vitek Load Worklist (Build)                   LA MI VITEK L/W BUILD
Watch the data in the LA global.              LA WATCH LAB
Edit controls added to the accessions each day LR ACC CONTROLS
Accession order then immediately enter data   LR ACC THEN DATA
Clear data from the LAR global                LR ARCHIVE CLEAR
Find patient's archived data                  LR ARCHIVE DATA
Archive lab data                              LR ARCHIVE MENU
Convert archived data to use New Person file  LR ARCHIVE NP CONVERSION
Purge data found in the Search option         LR ARCHIVE PURGE
Read data from off-line media                 LR ARCHIVE READ MEDIA
Restore archived data to LR global            LR ARCHIVE RESTORE
Search for lab data to archive                LR ARCHIVE SEARCH
Write data to off-line media                  LR ARCHIVE WRITE MEDIA
Download Format for Intermec Printer          LR BARCODE FORMAT LOAD
Lab test turnaround time                      LR CAPTT
Count accessioned tests                       LR COUNT ACC TESTS
Process data in lab menu                      LR DO!
Phlebotomy menu                               LR GET
Health Department report                      LR HEALTH DEPT
Accessioning menu                             LR IN
Infection warning edit                        LR INF WARN
LAB ROUTINE INTEGRITY MENU                    LR INTEGRITY
Load Integrity File                           LR INTEGRITY LOAD
Loop thru LR INTEGRITY                        LR INTEGRITY LOOP
Check a single routine size                   LR INTEGRITY SINGLE
LIM workload menu                             LR LIM/WKLD MENU
Lookup accession                              LR LOOKUP ACCESSION
Results menu                                  LR OUT
Misc. Processing Menu                         LR PROCESS, MISC
Rollover Accession (Manual)                   LR ROLLOVER
Summary list (supervisors')                   LR SUP SUMMARY
Supervisor workload menu                      LR SUPER/WKLD MENU
Lab statistics menu                           LR WKLD
Review accession workload                     LR WKLD AUDIT
WKLD code list by code                        LR WKLD CODE BY CODE
WKLD code list by name                        LR WKLD CODE BY NAME
Edit workload comments                        LR WKLD COMMENTS
```

PHASE 1: Move data from 64.1 to 67.9.	LR WKLD LMIP 1
Recompile Phase 1 LMIP Data.	LR WKLD LMIP 1 REPEAT
PHASE 2: Collect data for transmit to NDB.	LR WKLD LMIP 2
PHASE 3: Print of data to be sent to NDB.	LR WKLD LMIP 3
PHASE 4: Create E-mail message for NDB.	LR WKLD LMIP 4
PHASE 5: Purge monthly WKLD data from 67.9.	LR WKLD LMIP 5
Manually compile WKLD and workload counts	LR WKLD MANUAL
Workload manual input	LR WKLD MANUAL INPUT
Requesting center dictionary	LR WKLD REQUEST
Lab section list by code	LR WKLD SECTION BY CODE
Lab section list by name	LR WKLD SECTION BY NAME
Service dictionary	LR WKLD SERVICE
Turn on site workload statistics	LR WKLD STATS ON
Turn on workload stats for accession area	LR WKLD STATS ON ACC AREA
Std/QC/Reps Manual Workload count	LR WKLD STD/QC/REPS
Lab subsection by Lab section	LR WKLD SUB BY SECTION
Lab subsection list	LR WKLD SUBSECTION
Test dictionary	LR WKLD TEST DICT
WKLD statistics reports	LR WKLD2
File listings	LR WKLD3
LMIP Reports/Data Collection	LR WKLD4
Cumulative menu	LRAC
Reprint a permanent page from cumulative	LRAC 1 PAGE
Mumps A index of the LAB REPORTS file	LRAC A
Mumps A, AC, & AR indexes of the LAB REPORTS	LRAC A AC AR
Mumps AC index of the LAB REPORTS file	LRAC AC
Mumps AR index of the LAB REPORTS file	LRAC AR
Diagnostic routine for Lab Reports file (64.5)	LRAC DIAG
Patient Lab Discharge Summary (Manual)	LRAC DISCHARGE
Force cumulative data to Permanent Page	LRAC FORCE
Print a full patient summary	LRAC FULL PATIENT SUMMARY
Initialize LAC global & X references	LRAC INITIALIZE
List of patients by location for cumulative report	LRAC LIST
Reprint cumulative on a given location	LRAC LOC
Reprint cumulative from location to location	LRAC LOC-LOC
Manual queuing of cumulative	LRAC MANUAL
Manual Queuing of Fileroom Cum	LRAC MANUAL FILEROOM CUM Reprint cumulative on a given patient LRAC PT
Purge the Cumulative file	LRAC PURGE
Cumulative device status	LRAC STATUS
Re-cross-reference indexes in LAB REPORTS file	LRAC XREF
Long form accession list	LRACC1
Short accession list	LRACC2
Work sheet Accession list	LRACC3
Work sheet of all unverified accessions for a date	LRACC4
Supervisor's report	LRACS MANUAL
Add tests to a given accession.	LRADD TO ACC
Add tests to an already existing order number	LRADD TO ORDER
Lab add test(s) to an existing order	LRADDTST
Anatomic pathology	LRAP
Add patient(s) to report print queue	LRAP ADD
Delete report print queue	LRAP DELETE
Print all reports on queue	LRAP PRINT ALL ON QUEUE
Print single report only	LRAP PRINT SINGLE
Sum of accessions by date, anat path	LRAPA
AFIP registries	LRAPAFIP
Alphabetical autopsy list	LRAPAUA
Data entry for autopsies	LRAPAUDA

Autopsy protocol & ICD9CM coding	LRAPAUDAA
Autopsy protocol & SNOMED coding	LRAPAUDAB
Autopsy protocol	LRAPAUDAP
Special studies, autopsy	LRAPAUDAS
Final autopsy diagnoses date	LRAPAUFAD
Path cases by resident, tech, senior or clinician	LRAPAUL
Accession counts by senior pathologist	LRAPAULC
Autopsy administrative reports	LRAPAUP
Provisional anatomic diagnoses	LRAPAUPAD
Autopsy protocol/supplementary report	LRAPAUPT
Autopsy data review	LRAPAURV
Autopsy supplementary report	LRAPAUSR
Autopsy status list	LRAPAUSTATUS
Print log book	LRAPBK
Anatomic pathology topography counts	LRAPC
Coding, anat path	LRAPCODE
Display cytopath reports for a patient	LRAPCYCUM
% Pos, Atyp, Dysp, Neg, Susp, Unsat cytopath	LRAPCYPCT
Print cytopathology report for a patient	LRAPCYSGL
Data entry, anat path	LRAPD
Delete anat path descriptions by date	LRAPDAR
Enter/edit lab description file	LRAPDES
Delete free text specimen entries	LRAPDFS
Clinical Hx/Gross Description/FS	LRAPDGD
FS/Gross/Micro/Dx/ICD9CM Coding	LRAPDGI
FS/Gross/Micro/Dx	LRAPDGM
FS/Gross/Micro/Dx/SNOMED Coding	LRAPDGS
Disease (SNOMED) enter/edit	LRAPDIS
Disease (SNOMED) reference print	LRAPDP
Prisoner of war veterans	LRAPDPT
Disease (SNOMED) reference	LRAPDR
Supplementary Report, Anat Path	LRAPDSR
Spec Studies-EM;Immuno;Consult;Pic, Anat Path	LRAPDSS
Edit/modify data, anat path	LRAPE
Edit log-in & clinical hx, anat path	LRAPED
Edit anat path comments	LRAPEDC
Display EM reports for a patient	LRAPEMCUM
Print electron microscopy report for a patient	LRAPEMSGL
Etiology (SNOMED) reference print	LRAPEP
Etiology (SNOMED) reference	LRAPER
Etiology (SNOMED) enter/edit	LRAPETI
Print final path reports by accession #	LRAPFICH
Function (SNOMED) reference print	LRAPFP
Function (SNOMED) reference	LRAPFR
Function (SNOMED) enter/edit	LRAPFUN
Histopathology Worksheet	LRAPH
Edit pathology parameters	LRAPHDR
Inquiries, anat path	LRAPI
ICD9CM coding, anat path	LRAPICD
Incomplete reports, anat path	LRAPINC
Delete accession #, anat path	LRAPKILL
Log-in menu, anat path	LRAPL
Anatomic pathology labels	LRAPLBL
Log-in, anat path	LRAPLG
Medical journal file edit	LRAPLIB
Anat path slide labels	LRAPLM
Anat path specimen labels	LRAPLS
Modify anat path gross/micro/dx/frozen section	LRAPM
Clinician options, anat path	LRAPMD

Print path modifications	LRAPMOD
Morphology (SNOMED) enter/edit	LRAPMOR
Morphology (SNOMED) reference print	LRAPMP
Morphology (SNOMED) reference	LRAPMR
Move anatomic path accession	LRAPMV
Occupation (SNOMED) enter/edit	LRAPOCC
Enter old anat path records	LRAPOLD
Occupation (SNOMED) reference print	LRAPOP
Occupation (SNOMED) reference	LRAPOR
Print, anat path	LRAPP
Display final path reports by accession #	LRAPPA
Anat path accession list by date	LRAPPAD
Anat path accession list by number	LRAPPAN
Anat path accession reports	LRAPPAR
Entries by dates,patient & accession #	LRAPPF
Persian gulf veterans	LRAPPG
Procedure (SNOMED) reference print	LRAPPP
Procedure (SNOMED) reference	LRAPPR
Procedure (SNOMED) enter/edit	LRAPPRO
List pathology reports in print queue	LRAPQ
AP quality assurance	LRAPQA
Cum path summaries for quality assurance	LRAPQAC
QA codes entry/edit	LRAPQACD
AP consultation searches and reports	LRAPQACN
Delete TC and QA codes	LRAPQADEL
Frozen section, surgical path correlation	LRAPQAFS
Print path micro modifications	LRAPQAM
Malignancy review	LRAPQAMR
10% random case review, surg path	LRAPQAR
Edit QA site parameters	LRAPQASP
Tissue committee review cases	LRAPQAT
QA outcome review cases	LRAPQOR
Verify/release reports, anat path	LRAPR
SNOMED field references	LRAPREF
Pathology reports for a patient	LRAPRPT
Supplementary report release, anat path	LRAPRS
Accession list with stains	LRAPSA
DISEASE code search, SNOMED	LRAPSD
ETIOLOGY code search, SNOMED	LRAPSE
Search options, anat path	LRAPSEARCH
MULTIAXIAL code search, SNOMED	LRAPSEM
FUNCTION code search, SNOMED	LRAPSF
Print a pathology report for a patient	LRAPSGL
ICD9CM code search	LRAPSI
MORPHOLOGY code search, SNOMED	LRAPSM
Enter/edit items in a SNOMED field	LRAPSNOMEDIT
PROCEDURE code search, SNOMED	LRAPSP
Display surg path reports for a patient	LRAPSPCUM
Blocks, Stains, Procedures, anat path	LRAPSPDAT
Print surgical pathology report for a patient	LRAPSPSGL
Enter/edit SNOMED file references	LRAPSRE
Print references for a SNOMED entry	LRAPSRP
Display stains/blocks for a patient	LRAPST
Supervisor, anat path	LRAPSUPER
Cum path data summaries	LRAPT
Topography (SNOMED) enter/edit	LRAPTOP
Topography (SNOMED) reference print	LRAPTP
Topography (SNOMED) reference	LRAPTR
Anatomic pathology turnaround time	LRAPTT
List of unverified pathology reports	LRAPV

Verify/release menu, anat path	LRAPVR
Workload, anat path	LRAPW
EM scanning and photo workload	LRAPWE
Cytopathology screening workload	LRAPWR
Surg path gross assistance workload	LRAPWRSP
SNOMED coding, anat path	LRAPX
Autopsy pathology	LRAU
Data entry, Autopsy Path	LRAUDA
Autopsy protocol & ICD9CM coding	LRAUDAA
Autopsy protocol & SNOMED coding	LRAUDAB
SNOMED coding, Autopsy Path	LRAUDAC
ICD9CM coding, Autopsy Path	LRAUDAI
Autopsy protocol	LRAUDAP
Delete autopsy protocols by date	LRAUDAR
Special studies, Autopsy	LRAUDAS
Final Autopsy Diagnoses Date	LRAUFAD
Log-in, Autopsy path	LRAULG
Autopsy Slide Labels (generic)	LRAUMLK
Print option, Autopsy path	LRAUP
Blood bank	LRBL
Blood Bank Administrative Data	LRBLA
Crossmatch/Transfusions by Specialty/Physician	LRBLAA
Print data change audits	LRBLAD
Remove data change audits	LRBLAR
Inventory ABO/Rh re-check counts	LRBLC
Blood bank consultation reports	LRBLCN
Donor	LRBLD
Donor collection/deferral edit	LRBLDA
Apheresis donor list	LRBLDAP
Acknowledge donor award by deletion	LRBLDAWARD
Donor collection/processing	LRBLDC
Collection disposition report	LRBLDCD
Collection disposition/component preparation	LRBLDCP
Component preparation report	LRBLDCR
Cumulative donations and awards	LRBLDCU
Edit donor consent	LRBLDCX
Donor demographics	LRBLDD
Gallon donor report	LRBLDDA
ABO/Rh testing of donor units	LRBLDDAT
Donor unit testing worklist	LRBLDDAW
Donor deferral report	LRBLDDR
Blood donor group/type edit	LRBLDEDIT
Emergency donor report	LRBLDEDR
Permanent deferral/special comments	LRBLDEF
Print ex-donors	LRBLDEX
First time blood donors	LRBLDFD
Group affiliation report	LRBLDGA
Group donation report	LRBLDGDR
Remove ex-donors	LRBLDK
Donor lists/labels/letters	LRBLDL
Donor registration	LRBLDLG
Enter/edit donor letters	LRBLDLT
Mobile (Collection Site) report	LRBLDMC
Donor month/holiday recall list	LRBLDMR
Old blood donor records	LRBLDO
Patient credits from blood donations	LRBLDPCR
Permanent donor deferral report	LRBLDPD
Donor phenotyping	LRBLDPH
List of donors by last attempt date	LRBLDPL
Blood product rejection report	LRBLDPRR

Donor history, physical and consent form	LRBLDR
Blood donor recruitment reports	LRBLDRPTS
Test review/Component labeling/release	LRBLDRR
Donor scheduling report	LRBLDSC
Donor short draw report	LRBLDSD
Donor summary reports	LRBLDSR
Lab tests(not ABO/Rh) on donor units	LRBLDT
Abnormal donor tests	LRBLDTA
Donor unit testing prooflist	LRBLDTR
Donor unit supplemental testing prooflist	LRBLDTRS
Donor blood testing/review/release	LRBLDU
Donor unit ABO/Rh recheck	LRBLDUC
Edit blood bank files	LRBLEF
Inventory	LRBLI
CMV Antibody Status Report	LRBLICV
Disposition -not transfused	LRBLIDN
Disposition -relocation	LRBLIDR
Disposition-not transfused	LRBLIDU
Blood bank inventory integrity report	LRBLII
Unit CAUTION tag labels	LRBLILA
Log-in regular (invoices)	LRBLILR
Enter blood inventory typing charges	LRBLILS
Phenotyped units available	LRBLIPH
Single unit information- display	LRBLIPSD
Single unit information- print	LRBLIPSP
Transfusion reactions report	LRBLIPTR
Unit issue book entries	LRBLIRB
Blood inventory status reports	LRBLIS
Shipping invoices for blood components	LRBLISH
Transfusion data report	LRBLITR
Transfusions by treating specialty/physician	LRBLITS
Blood inventory transaction reports	LRBLITX
Unit ABO/Rh confirmation	LRBLIUC
Unit phenotyping	LRBLIUP
Units release to stock (cancel) by patient	LRBLIUR
Blood utilization & summary reports	LRBLIUS
Inventory ABO/Rh testing worksheet	LRBLIW
Units on Xmatch by date/time xmatched	LRBLIX
Autologous disposition report	LRBLJB
Edit pooled blood product	LRBLJM
Transfused RBC for treating specialty	LRBLJUT
Blood bank patient	LRBLP
Add BB patient(s) to report queue	LRBLP ADD
Delete BB report print queue	LRBLP DELETE
Print all BB patient reports on print queue	LRBLP PRINT ALL ON QUEUE
Print single BB patient report	LRBLP PRINT SINGLE
Antibodies by patient	LRBLPAB
Patient accession list	LRBLPAL
Blood bank tests report	LRBLPBR
Request/select/xmatch blood components	LRBLPC
Patient transfusions & hematology results	LRBLPCH
Blood component requests	LRBLPCS
Pediatric unit preparation	LRBLPED
Patient ABO/Rh edit	LRBLPEDIT
Previous records	LRBLPER
Enter test data	LRBLPET
Patient Medication List	LRBLPH
Select units for patients	LRBLPIC
Prolonged transfusion times	LRBLPIT
Specimen log-in	LRBLPLOGIN

File 81 conversion	LRBLPOST
Patient antibody report (short list)	LRBLPR
Patient antibody report (long-list)	LRBLPRA
Inappropriate transfusion requests report	LRBLPRIT
Special instructions	LRBLPSI
Blood transfusion results	LRBLPT
Unknown unit transfusion reaction	LRBLPTXR
Enter crossmatch results	LRBLPX
Inquiries	LRBLQ
Patient blood bank record	LRBLQDR
Units assigned/components requested	LRBLQPR
Single donor information	LRBLQSD
Single donor demographic information	LRBLQSDD
Single unit status	LRBLQST
Single unit (display/print) information	LRBLQSU
Reports	LRBLR
Crossmatch:Transfusion report	LRBLRCT
Supplier invoices (inventory)	LRBLRIN
Special typing charges (inventory)	LRBLRIS
Supplier transactions (inventory)	LRBLRIT
Test counts by location	LRBLRTC
Units available (indate/no disposition)	LRBLRUA
Print units with final disposition	LRBLRUF
Units with no disposition	LRBLRUN
Blood bank workload reports	LRBLRWK
Supervisor	LRBLS
Blood donor edit options	LRBLSD
Delete a user's patient list	LRBLSDPL
Edit blood product file	LRBLSEB
Edit unit - patient fields	LRBLSEC
Edit unit disposition fields	LRBLSED
Free autologous/directed donor units	LRBLSEE
Edit blood bank descriptions file	LRBLSEF
Edit donor history questions	LRBLSEH
Edit unit log-in	LRBLSEL
Remove units with final disposition	LRBLSER
Tests for inclusion in transfusion report	LRBLSET
Edit blood bank utility file	LRBLSEU
Edit number of lines in a label	LRBLSF
Blood bank inventory edit options	LRBLSI
Edit lab letter file	LRBLSLL
Maximum surgical blood order edit	LRBLSMS
Edit Corresponding Antigen/Antibody	LRBLSNO
Blood bank patient edit options	LRBLSP
Edit previous transfusion record	LRBLSPP
Remove inappropriate transfusion requests	LRBLSRI
Blood component request edit	LRBLSRQ
Edit blood bank site parameters	LRBLSSP
Summary and deletion reports	LRBLSSR
Tests for display on patient look-up	LRBLST
Blood bank workload	LRBLSW
Transfusion reaction count	LRBLTA
Test worklist	LRBLTTW
Tests for transfusion follow-up	LRBLTX
Transfusion follow-up tests	LRBLTXA
Blood bank validation documentation	LRBLVAL
Validation documentation	LRBLVALI
Print blood bank validation	LRBLVALP
Ward	LRBLW
Add a new WKLD code to file	LRCAP CODE ADD

RCS-CDR/LMIP REPORT	LRCAPAM5
Workload code list	LRCAPD
WKLD log file download	LRCAPDL
Etiology WKLD Codes (Force)	LRCAPF
Workload Statistics by Major Section	LRCAPMA
Workload cost report by major section	LRCAPML
Workload Report	LRCAPR1
Treating Specialty Workload Report	LRCAPTS
Delete entire order or individual tests	LRCENDEL
Review by order number	LRCENLKUP
Check files for inconsistencies	LRCHKFILES
Check patient and lab data cross pointers	LRCKPTR
Audit of deleted/edited comments	LRDCOM
Remove an accession	LRDELOG
Edit atomic tests	LRDIEATOMIC
Edit cosmic tests	LRDIECOSMIC
Graph results	LRDIST
Ward collection summary for lab orders	LRDRAW
Enter/verify/modify data (manual)	LRENTER
Test description information	LREV
Bypass normal data entry	LRFAST
Fast Bypass Data Entry/Verify	LRFASTS
General report for selected tests	LRGEN
Group unverified review (EA, EL, EW)	LRGP
Group verify (EA, EL, EW)	LRGV
Group data review (verified & EM)	LRGVP
Information-help menu	LRHELP
Clear instrument/worklist data	LRINSTCLR
Reprint order accession label(s)	LRLABXOL
Reprint accession label(s)	LRLABXT
Lab liaison menu	LRLIAISON
Lab liaison menu	LRLIASON
Summary list (extended supervisors')	LRLISTE
Build a load/work list	LRLL
Edit control placement on load/work list	LRLL CONTROLS
Set new "starting sequence number"	LRLL NEW 1ST SEQUENCE #
Change Load/Work list type.	LRLL TYPE
Unload Load/Work List	LRLLCT
Edit the default parameters Load/Work list.	LRLLE DFT
Edit the Load/Work list profile	LRLLE PRO
Insert a Sample on a Load/Work list	LRLLINST
Move a Load/Work list entry	LRLLMOVE
Print a load/work list	LRLLP
Active Load Work Listing	LRLLPA
Remove a Load/Work list entry	LRLLREMV
Laboratory DHCP Menu	LRMENU
Microbiology menu	LRMI
Long form accession list for microbiology	LRMIACC1
Batch accessioning	LRMIBL
Accessioning, standard (Microbiology)	LRMICROLOGIN
Results entry	LRMIEDZ
Verification of data by tech	LRMINEWD
Microbiology print menu	LRMIP
Cumulative patient report	LRMIPC
All results for selected accessions	LRMIPLOG
Patient report	LRMIPSZ
References	LRMIREF
Enter/Edit medical journal references	LRMIREF JOURNAL
Enter/Edit micro journal references	LRMIREF MICRO
Inquire to micro journal references	LRMIREF MICRO I

Infection control survey report	LRMISEZ
Results entry (batch)	LRMISTUF
Microbiology Trend Report	LRMITS
Verification of data by supervisor	LRMIVER
Re-index Antimicrobial Suscept File (62.06)	LRMIXALL
List of orders not collected (Long form)	LRNDLST
Set a new starting accession number	LRNEWSTART
List of lab orders not collected	LRNODRAW
Special test accessioning	LRNONCOM
Purge old orders & accessions	LROC
Accessioning tests ordered by ward order entry	LROE
Documentation for lab options	LROPT
Listing of Laboratory Menus/Options	LROPTLST
Order/test status	LROS
Lab test order	LROW
Fast lab test order (IMMEDIATE COLLECT)	LROW IMMED COLLECT
Fast lab test order (ROUTINE)	LROW ROUTINE
Fast lab test order (SEND PATIENT)	LROW SEND PAT
Fast lab test order (WARD COLLECT)	LROW WARD COL
Reprint a Ward Collect Order	LROWRP
Receipt of routine lab collection from wards	LRPHEXCPT
Itemized routine lab collection	LRPHITEM
Print collection list/labels	LRPHLIST
Add to collection list	LRPHMAN
Quality control display (Levey-Jennings)	LRQC
Add/edit QC name &/or edit test means	LRQCADDNAME
Bull algorithm quality control	LRQCC
Manually accession QC, Environmental, etc.	LRQCLOG
Quality control menu	LRQCM
Multipurpose accessioning	LRQUICK
Interim report by provider	LRRD
Interim reports for 1 provider (manual queue)	LRRD BY MD
Interim report	LRRP2
Interim report for selected tests	LRRP3
Lab orders by collection type	LRRP5
Detail workload report	LRRP6
Workload statistics by accession area and shift	LRRP8
Interim reports by location (manual queue)	LRRS
Interim reports for 1 location (manual queue)	LRRS BY LOC
Interim report for selected tests as ordered	LRRSP
Flagged Specimens	LRSMAC3
Run Smac	LRSMAC5
Halt Smac Run	LRSMAC6
Smac Support menu	LRSMACMENU
Search for high/low values of a test	LRSORA
Search for critical value flagged tests	LRSORC
Search for abnormal and critical flagged tests	LRSORD
Manual Enter Clinic Stop Codes	LRSTOPC
Batch data entry (chem, hem, tox, etc.)	LRSTUF
Supervisor reports	LRSUPER REPORTS
Supervisor menu	LRSUPERVISOR
SUPERVISOR'S SUMMARY REPORT FOR TASKMAN	LRTASK ACS
LOAD CONTROLS ON THE ACCESSION LISTS.	LRTASK CONJAM
TASK THE CUMULATIVE TO RUN EACH NITE	LRTASK CUM
TASK CUMULATIVE FILEROOM REPORT	LRTASK CUM FILEROOM
QUEUED INTERIM DAILY REPORT (FIRST)	LRTASK DAILY INTERIM 1
QUEUED INTERIM DAILY REPORT (SECOND)	LRTASK DAILY INTERIM 2
Patient Lab Discharge Summary	LRTASK DISCHARGE
START-UP THE BACK GROUND 'LAB' ROUTINE	LRTASK LAB

NIGHTLY CLEANUP	LRTASK NIGHTY
CREATE NEW COLLECTION LIST	LRTASK PHSET
CREATE NEW COLLECTION LIST	LRTASK PHSET1
CREATE A COLLECTION LIST	LRTASK PHSET2
ROLLOVER ACCESSION	LRTASK ROLLOVER
Inquiry to LAB TEST file	LRTESTDIQ
Delete test from an accession	LRTSTOUT
Print accession list(s)	LRUAC
File list for lab	LRUCONTENTS
Changes in verified lab data	LRUER
Print future collection labels	LRUFCL
Print single future collection label	LRUFCLS
Outline for one or more files	LRUFILE
Print/display preselected lab tests	LRUMD
Edit/print/display preselected lab tests	LRUMDA
Delete user selected lab test/patient lists	LRUMDD
Enter/edit user defined lab test lists	LRUMDE
Enter/edit predefined lab test lists	LRUMDL
User selected lab test/patient list edits	LRUMDLM
Accession list by number	LRUPA
Lab accession and test counts	LRUPAC
Accession and test counts by shift	LRUPACS
Test counts by treating specialty	LRUPACT
Accession list by date	LRUPAD
Show list of accessions for a patient	LRUPT
Print group user manual	LRUPUM
Edit group user manual	LRUPUME
Edit referral patient file	LRUV
Accession area worklist	LRUW
Display workload for an accession	LRUWL
Enter/verify data (auto instrument)	LRVR
Enter/verify data (Work list)	LRVRW
Enter/verify data (Load list)	LRVRW2
Ward lab menu	LRWARDM
Incomplete test status report	LRWRKINC
Add a new data name	LRWU5
Modify an existing data name	LRWU6
Add a new internal name for an antibiotic	LRWU7
Update Lab protocols for OE/RR	LRX0
Update ALL lab protocols	LRX1
Fast Lab orders	LRX1000
Update protocol for a single lab test	LRX2
Update protocols for all lab tests	LRX3
Update protocols for all accession groups	LRX4
Update protocols for single accession group	LRX5
Initial Creation of Lab Protocols	LRX6
Lab	LRX999
OE/RR interface parameters	LRXOSX
Inquire to a Lab administration schedule	LRXOSX0
Edit a lab administration schedule	LRXOSX1
Edit HOSPITAL SITE parameters	LRXOSX2
LABORATORY TEST MENU	LRXQ1

Distribution Of Menus

The Laboratory package menu consists of 11 main areas. Each Laboratory may reorganize the order and grouping of menus according to its specific needs and work flow.

Laboratory Options [LRMENU]

1. Phlebotomy menu [LR GET]

2. Accessioning menu [LR IN]

3. Process data in lab menu [LR DO!]

4. Quality control menu [LRQCM]

5. Results menu [LR OUT]

6. Information-help menu [LRHELP]

7. Ward lab menu [LRWARDM]

8. Anatomic pathology [LRAP]

9. Blood bank [LRBL]

10. Microbiology menu [LRMI]

11. Supervisor menu [LRSUPERVISOR]

List of Menus with Entry or Exit Action

```
 NAME: LR IN                              MENU TEXT: Accessioning menu
  ENTRY ACTION: D ^LRPARAM

NAME: LRWARDM                        MENU TEXT: Ward lab menu
  ENTRY ACTION: D ^LRWD,^LRPARAM

NAME: LRAP                               MENU TEXT: Anatomic pathology
  ENTRY ACTION: S IOP="HOME" D ^%ZIS W @IOF,?28,"ANATOMIC
PATHOLOGY MENU"

NAME: LRBL                               MENU TEXT: Blood bank
  ENTRY ACTION: S IOP="HOME" D ^%ZIS W @IOF,?35,"BLOOD BANK"

NAME: LRMI                               MENU TEXT: Microbiology menu
  EXIT ACTION: K A,Z

NAME: LRMENU                         MENU TEXT: Laboratory DHCP Menu
 ENTRY ACTION: D ^LRPARAM        EXIT ACTION: D ^LRKILL
```

Laboratory Security Keys

The Laboratory package supplies various security keys that act as follows:

• Some routines check for user security keys. If you do not have the appropriate security key assigned to you, the routine will not work for you.

• Certain options and menus are LOCKED with security keys. These keys are used as locks for particular options, and are also checked elsewhere during the execution of the option. In some cases, the lack of the appropriate security key will prevent you from seeing an option even though you have been assigned a menu that normally contains that option.

Each user of the Laboratory package must have the appropriate keys assigned for access to the appropriate menus and options. SECURITY KEY file (#19.1) contains the key names, a short description, and a list of the holders. The following is a list of the Lab keys:

The ** indicates the highest security level of all keys. These key should be reserved for the LIM and IRM support staff.

KEY	USERS
LRANAT	Anatomic Pathology users
LRAPSUPER	Anyone allowed to use the Anatomic Pathology Supervisor Menu and edit SNOMED codes
LRAU	Autopsy Module users
LRBLOODBANK	Blood Bank users
LRBLSUPER	For Blood Bank supervisory level decisions
LRCY	Cytology Module users
LREM	Electron Microscopy Module users
LRLAB	Laboratory Personnel only
LRLIASON	Laboratory Application Coordinator**
LRMICRO	Microbiology users
LRMIVERIFY	Microbiology personnel
LRSP	Surgical Pathology Module users
LRSUPER	Laboratory Supervisors
LRVERIFY	Anyone who is authorized to verify lab results
LRPHMAN	Phlebotomists
LRPHSUPER	Supervisor of the phlebotomy collection team

Any combination of the above security levels can be used as deemed appropriate by the Laboratory personnel. These keys can be used to lock menu options as the site deems appropriate.

Individual Module Requirements/Concerns

Anatomic Pathology

In addition to the LRLAB and LRVERIFY security keys, the Anatomic Pathology Module requires several specific keys to access the appropriate Accession Area.

LRANAT	Anatomic Pathology users
LRAU	Autopsy Module users
LRCY	Cytology Module users
LREM	Electron Microscopy Module users
LRSP	Surgical Pathology Module users

These options should be limited to the LIM or Supervisory personnel.

LRAPSUPER	Allows anyone to use the Anatomic Pathology Supervisor Menu and edit SNOMED codes
LRSUPER	Laboratory Supervisors

Since various options (excluding those in the Supervisor menu) do not require specific security keys once you have the appropriate accession area keys regulating access to the options must be accomplished via strict menu management.

Blood Bank

In addition to the LRLAB and LRVERIFY security keys, the Blood Bank Module requires only the LRBLOODBANK key to access the majority of the options. The LRBLSUPER key is, however, necessary to access all of the options in the Supervisor's Menu, as well as to release incompatible blood using the Disposition-relocation [LRBLIDR], option in the Inventory Menu.

Since the various options, excluding those in the Supervisor's menu, do not require specific security keys, regulating access to the options must be accomplished via strict menu management. Menus must be constructed at each site, tailored to the actual needs of the individuals using the module.

Chemistry/Immunology

The Chemistry subscript Module requires the LRLAB and LRVERIFY security keys to access the majority of the options. The LRSUPER key is necessary to access the options in the Supervisor's Menu.

Microbiology

In addition to the LRLAB and LRVERIFY security keys, the Microbiology Module requires only the LRMICRO key to access the majority of the options and to release results. The LRSUPER key is necessary to access the options in the Microbiology Supervisor's Menu,

Phlebotomy

The phlebotomy section requires the LRLAB key to access the necessary options. The LRPHSUPER key is, however, necessary to access the options needed by the Phlebotomy supervisor.

Menu assessment

- Once you have determined which lab system options your lab will be using, you should seriously consider enhancing the user friendliness of the system by rearranging existing groups or menus of the options to fit the individual needs of each user or group of users. Access to Menu Manager options is a site specific security issue, but regardless of whether you will be allowed to add users and create menus or whether it will be done by your site manager, you will need to compile the information. Some basic steps to be taken when you are customizing menus include:

  a) Identify the user or group of users for which the menu is being created (i.e., phlebotomy supervisor, chemistry tech, clinical pathologist, ward or clinic clerk, etc.).

  b) Determine what lab functions that particular user or group of users will be performing on a daily basis (i.e., printing collection lists/labels, accessioning specimens, entering and reviewing results, looking up patient results, etc.).

  c) Identify the specific lab options from the exported package that the user(s) will need in order to perform the functions (i.e., Print Collection List/Labels [LRPHLIST], Multipurpose Accessioning [LRQUICK], Enter/Verify/Modify data (manual) (EM) [LRENTER], Order/Test Status [LROS], etc.). Be sure to list the internal or bracket name of each option, as well.

  d) Identify any of the lab security keys listed in SECURITY KEY file (#19.1). The user(s) will need security keys assigned before being able to use his/her specific options. Each option may be locked and subsequently unlocked if a user holds a particular security key. Any existing locks are listed with each option name. (Examples: Option [LRENTER] is locked with the LRVERIFY security key, so only users holding that key will be able to verify data using that option; option [LRPHMAN] is locked with the LRPHSUPER security key, so only users who hold or have that key will be able to add orders to a collection list with that option.)

  e) Create a new menu for the user or group of users, specific to their needs. Use the convention of LRZMENU NAME to denote that it is a site or station specific menu, and give the menu a name.

     Example: LRZWARD CLERK for the ward clerk menu; LRZCHEM TECH for a chemistry tech menu. Add the user specific options as identified above in paragraph "c" to this new menu name.

  f) Assign the new menu you have created to the user as the primary menu option, using option Edit an existing user, or if the user is not yet entered into the system, Add a new user. The same primary menu option may be assigned to more than one user, in order to accommodate

a group of users who will be performing the same functions (for example, ward clerks, phlebotomists, etc.).

g) Assign each user or group the necessary security keys, using option Key allocation of the Menu Manager options.

h) Have the user sign on to the system and try out his/her new menu.

It is much less work to assign menus to groups of users than to create a new menu for each user. It has been reported that having the options listed each time a user signs on (or "auto menus") can cause a significant slowdown in system response time, especially during peak usage periods. A solution may be to have "auto menus" generated only during training or only the first week or so after going live. Once users are familiar with their option choices, the auto menu generation can be turned off. The users will then see a list of their options only by entering a "?" at the "Select menu option:" prompts. It is also suggested that you avoid allowing users the ability to "type ahead," which can be especially troublesome if you have a number of tests with default answers defined in, LABORATORY TEST file (#60). Again, consult your Site Manager as to who will be responsible for entering users, assigning access codes, assigning menus, and creating new primary menus.

Example of a Laboratory (Short) menu

By Ed Bader, San Francisco, CA ISC

```
LABoratory (Short)

Select Laboratory (Short) Option: ?? <RET>

2  ACCESSIONING [LRZ IN]
3  PROCESS [LRZ DO!]
5  RESULTS [LRZ OUT]
6  INFORMATION-HELP [LRZHELP]
11 SUPERVISOR [LRZSUPERVISOR]  Locked: LRSUPER

Select Laboratory (Short) Option: ACCESSIONING <RET>

Select ACCESSIONING Option: ?? <RET>

   Accessioning tests ordered by ward order entry [LROE]
   Bypass normal data entry [LRFAST]
   Delete entire order or individual tests [LRCENDEL]
   Fast lab test order (ROUTINE) [LROW ROUTINE]
   Fast lab test order (SEND PATIENT) [LROW SEND PAT]
   Lookup accession [LR LOOKUP ACCESSION]
   Multipurpose accessioning [LRQUICK]
   Order/test status [LROS]
   Print accession list(s) [LRUAC]
   Reprint accession label(s) [LRLABXT]
   Show list of accessions for a patient [LRUPT]
   Test description information [LREV]

Select Laboratory (Short) Option: 3  PROCESS

Select PROCESS Option: ?? <RET>

1  Clear instrument/worklist data [LRINSTCLR]
2  Unload Load/Work List [LRLLCT]
3  Build a load/work list [LRLL]
```

```
EA Enter/verify data (auto instrument) [LRVR]
EL Enter/verify data (Load list) [LRVRW2]
EM Enter/verify/modify data (manual) [LRENTER]
   Bypass normal data entry [LRFAST]
   Incomplete test status report [LRWRKINC]
   Long form accession list [LRACC1]
   Order/test status [LROS]
   Print a load/work list [LRLLP]
   Short accession list [LRACC2]

Select Laboratory (Short) Option: 5  RESULTS <RET>

Select RESULTS Option: ?? <RET>

   General report for selected tests [LRGEN]
   Interim report for selected tests as ordered [LRRSP]
   Interim reports by location (manual queue) [LRRS]
   Interim reports for 1 physician (manual queue) [LRRD BY MD]
   Order/test status [LROS]
   Print a full patient summary [LRAC FULL PATIENT SUMMARY]
Select Laboratory (Short) Option: 6  INFORMATION-HELP <RET>

Select INFORMATION-HELP Option: ?? <RET>

   General report for selected tests [LRGEN]
   Inquiry to LAB TEST file [LRTESTDIQ]  Locked: LRSUPER
   Interim report for selected tests as ordered [LRRSP]
   Order/test status [LROS]
   Review by order number [LRCENLKUP]
   Test description information [LREV]

Select Laboratory (Short) Option: 11  SUPERVISOR

Select SUPERVISOR Option: ?? <RET>

   Add/edit QC name &/or edit test means [LRQCADDNAME]   Locked: LRSUPER
   Cumulative menu [LRAC]  Locked: LRSUPER
   Edit atomic tests [LRDIEATOMIC]  Locked: LRSUPER
   Edit cosmic tests [LRDIECOSMIC]
   Infection warning edit [LR INF WARN]  Locked: LRSUPER
   Lab interface menu [LA INTERFACE]
   Lab liaison menu [LRLIAISON]  Locked: LRLIASON
   Purge old orders & accessions [LROC]  Locked: LRSUPER
   Supervisor reports [LRSUPER REPORTS]

>D P^DI <RET>

VA FileMan 18

Select OPTION: ENTER OR EDIT FILE ENTRIES
INPUT TO WHAT FILE: OPTION// <RET>
EDIT WHICH FIELD: ALL// NAME
THEN EDIT FIELD: DESCRIPTION      ( word processing)
THEN EDIT FIELD: LOCK
THEN EDIT FIELD: ENTERING THIS OPTION  ENTRY ACTION
THEN EDIT FIELD: EXIT ACTION
THEN EDIT FIELD:
STORE THESE FIELDS IN TEMPLATE:
Select OPTION NAME: LRZMENU          Laboratory (Short)
```

```
NAME: LRZMENU// <RET>

DESCRIPTION:

1>This is a demonstration of the minimum options needed to get a
2>small laboratory started with the DHCP laboratory software.
EDIT Option:
LOCK: LRLAB//
ENTRY ACTION: D ^LRPARAM//
EXIT ACTION: D ^LRKILL//
```

Workflow/Procedures

This section describes how to evaluate the specific options and procedures for efficient functioning and select the options and procedures to implement.

Once the lab package software has been installed into a test (or non production) account or UCI by the site manager, start defining and setting up your lab files. After the file "site configuration" has been completed, you will be ready to examine the options and functions available in the lab package. In order to determine which options or combination of options will be used to replace existing manual procedures in your lab, you will need to figure out the ways in which your lab **currently** operates.

One of the best methods to use in determining how the flow of work into and out of your lab will be handled after implementation of the system is to map out the pathway of specimens through the lab. Include all of the functions with which your lab handles and/or processes specimens for testing. To get an idea of where to start, try to answer the following series of questions:

- How do test requests get to the lab?
- What type of order slips or request forms are used?
- Does your lab have a scheduled or routine collection of specimens from the wards?
- If so, how often?
  Once a day Monday through Friday, twice daily including weekends, etc.?
- At what time(s) during the day is the collection performed?
  7:00 a.m. only or 7:00 a.m. and 4:00 p.m., etc.?
- How are the test requests for collection by the lab sorted and tallied? Who sorts the requests, and when? When do the requests need to arrive in the lab to be included as part of the draw? Can test requests be left on the wards to be drawn as part of the scheduled collection?
- What work documents (if any) do the phlebotomists take with them to know which specimens to collect?
- After specimens are collected and brought back to the lab, how are they logged in?
- Who is responsible for logging them in?

- Is the receipt of the specimens into the “lab performed” in a centralized area or within each department?
- After logging the specimens into the “Lab is completed” does the lab notify the wards of the samples which were not collected?
- If so, how is this accomplished, and who notifies them?
- How are test requests canceled which were not collected?
- After all specimens have been collected and received in the lab, how is the work distributed to each department or workbench?
- What types of work documents or lists (if any) do the techs use to organize their specimens?
- Do they use copies of the original order slips, log books, worksheets, data forms, or other methods?
- How do the techs check to see if any work has been left over (that is, still pending) from a previous date?
- How do the techs determine which specimens need to be assigned to each instrument and/or workbench?
- What steps are taken to “track down” misplaced specimens?
- Are the tests performed by manual methods or run on an instrument?
- If run on an instrument, is the instrument's test volume (number of tests run per day and/or number of individual test parameters per each test) high enough that interfacing it with the instrument would save time?
- Are test results reviewed before being release from the lab and by whom?
  Each tech reviews his/her own work and the chief tech or supervisor reviews the staff work.
- How are the test results reviewed, and how are they recorded?
- On the order slips, in a logbook, on worksheets, etc.?
- How do the results get reported back to the requesting ward (by phone, etc.?)
- What copies of test results and work documents are retained in the lab for reference, and to meet accreditation guidelines?

- How are the wards notified if an improper type of specimen was submitted, or if the test must be canceled for any reason? (spilled in transit, clotted specimen, broken in centrifuge, etc.)

Consult with your lab personnel to get additional information as to how the workload is currently processed, from a first hand perspective. At the same time, ask them for areas that could be improved or weak spots, in the process of getting work in and out of the lab. Ask for any ideas or suggestion about how the workload might be handled once the computer is installed. Remember, letting the techs and other lab personnel actively participate in the implementation process sparks their interest and encourages their cooperation.

After you have identified the existing "major steps" in the lab work procedures, write them down in either an outline or flow chart diagram form. Compare this list with the lab options. You should then match each step with a lab option which will provide the same function or replace the procedure. You may find that some existing steps may be combined or eliminated altogether, **or** that you will need to add a step in order to use an option to perform a necessary function in the lab.

The following sections attempt to explain how different combinations of the lab options may be used to:

- Collect and receive specimens into the lab
- Organize the workload onto various types of lists or work documents
- Enter, review, verify, and modify test results

Each topic lists the procedure(s), some general comments (if applicable), and the specific options used.

Implementation/User Hints

- Keep in mind that the computer system will not magically organize a disorganized laboratory! Implementation provides the lab a perfect opportunity to identify and correct any weak spots that exist in current work flow patterns and procedures and cam help streamline the workload.

- It can be very helpful to print your collection lists (if you are using them) on multiple part computer paper. Using three part paper, for example, would allow you to keep one copy in the lab and give two copies to the phlebotomists to take with them to the wards. The phlebotomists could then leave one copy on the wards and bring the remaining copy back to the lab with the specimens. Another possibility might be to print one copy of the list on single part paper to send with the phlebotomists and reprint it after they return, or even later in the day, for record keeping purposes.

- Receipt of specimens into the lab after a scheduled lab collection can be performed in one of two ways:

  by using the option Receipt of Routine Lab Collection From Wards [LRPHEXCPT], in which all specimens are assumed collected unless they are entered as canceled (by order number), or

  by using the option Itemized Routine Lab Collection [LRPHITEM], in which all specimens must be entered as drawn or canceled, again by order number. If no collection status is entered for a specimen, that order is automatically canceled by the system.

  Since using the option [LRPHITEM] obviously requires more work and time, it would probably be most useful at a smaller hospital with a lighter lab draw volume or load. Both options receive specimens and subsequently release the accessions for processing by ward location, to decrease the amount of time between the arrival of the specimens in the lab and the beginning of the testing on those specimens.

  When using the option Receipt of Routine Lab Collection From Wards [LRPHEXCPT], it is possible to double check that all ward locations have been received and accounted for, by generating a List of Orders Not Collected [LRNODRAW]. If an order has been canceled, it will print on the list with a reason for the cancellation or with a comment. If an order has been overlooked, it will also print on the list, but the reason for cancellation will be blank.

Example: Ward 3 West has been overlooked during the receipt process. By calling up the [LRNODRAW] list, the phlebotomy supervisor sees a lot of orders for the location "3 West" printout, with no reason for cancellation listed. He/she realizes the error, finds the copy of the collection list from "3 West," and receives the specimens accordingly.

- The option, Accessioning Tests Ordered by Ward Order Entry [LROE], may also be used when an order number has not been assigned to a specimen, or when an order number has been assigned, but the ward has neglected to write it on either the specimen or order slip which arrives in the lab. The first prompt of "Enter order number:" can be skipped, and the system will then prompt with "Select patient name:," and will proceed in a similar fashion to the option, Multipurpose accessioning [LRQUICK].

- Order numbers should **not** be deleted **after** an accession number has been assigned, nor should users outside the lab have access to any options which will add to, delete from, or remove and **accession.**

- Currently, it is possible to have order slips printed each time an order is placed, using either the Lab Test Order [LROW] or Fast Lab Test Order (ROUTINE) [LROW ROUTINE] options, on a specified device in the lab. This device is defined in the Log device for LC field of the LABORATORY SITE file (#69.9). These slips can be used as a backup in case of system failure before or during the creation and/or printing of the collection list. The slips could be sorted and taken with the phlebotomists as they go to collect the specimens from the wards.

- The phlebotomy collection time(s) for scheduled lab collects, as defined in LABORATORY SITE file (#69.9), should be considered as the cutoff time for accepting orders to be placed on a collection list, and should be fairly close to the actual time of collection. **Any orders placed by the wards through the ward order entry options between the time defined in File #69.9 and the time the collection list is built will be put on the next collection list.**

  Therefore, if there is a relatively long time lag between the time the collection list is created and the actual collection begins, you may need to use the option Add to Collection List [LRPHMAN] to include last minute orders, before printing the list or labels.

- The options, Bypass Normal Data Entry [LRFAST] and Accession Order Then Immediately Enter Data [LR ACC THEN DATA], do **not** allow for the results to be entered via an instrument interface - they must be entered manually.

- The option Special Test Accessioning [LRNONCOM] is generally **not** used except in special situations. The option allows a specimen to be forced to any accession area or any accession number. It would be possible, then, to obtain an accession number on a CBC from the RIA accession area. It is a powerful option, so try to limit access to it accordingly!

- The hospital computer goes down for an indefinite period of time. The lab goes into a contingency or backup manual operation where the work is logged onto worklists. The lab can continue to assign sequential numbers (accession numbers) to the specimens and run them on automated instruments using these numbers. (Having the instrument set up to be cross linked by accession number comes in handy in this situation - see the Instrumentation/Interfacing section for more details.)

- The data is collected in the LSI but is not being processed by the computer. The system finally comes back up and all the data needs to be entered. The LAB program restarts (automatically) and processes the data from the LSI to the computer. The specimens can now be logged in, using Special Test Accessioning option [LRNONCOM], and forced to the accession numbers they have

been run on the instrument with. The data will be available using the automated entry options (i.e., Enter/Verify Data (Auto Instrument) [LRVR]), without having to enter it manual.

- Since the data was processed by the instrument before the test was accessioned, a prompt of "Are you sure this data is correct?" will be displayed before verification). Also, while the computer is down, if the power on the LSI itself is turned off and then on, the unverified data is cleared, and if your automated instruments can not retransmit the data, you will be forced to enter everything you have run by hand.

Collection of Specimens

Without Collection List/Labels

Manual slips only

Blood collection can be performed in the same manner as before the implementation of the computer system. Manual slips are used to request tests and are brought back to the lab with the manually labeled specimens obtained by the phlebotomist. When the work arrives in the lab, the test requests are entered into the computer using the Multipurpose Accessioning [LRQUICK] option that assign an order number and an accession number which should be written on the lab request slips . A label will be generated and placed on the corresponding tubes of blood. The accessioning process can be performed by a phlebotomist, lab clerk, aide, or technologist (in their respective departments or areas). The slips are used to keep a tally of the work to be done as the specimens are processed prior to testing.

Comments: This system of collection very closely mirrors most the previous manual system, and will not require any major adjustments to existing procedures. It will also greatly decrease the amount of initial computer training the lab personnel will need. Bottlenecks in the flow of work into the lab may be created if all of the specimens are arriving to be accessioned into the system at the same time. This system does not allow the use of computer generated labels for the blood draw, nor does it provide information to the wards regarding the collection status of the specimens.

This option is only recommended for ow volume samples drawn by ward or clinic staff or other special remote collection sites.

With Collection List/Labels

Manual slips, Order numbers

Manual slips with test requests to be drawn during the routine lab collection can be sent to the lab either the night before or early the morning of the scheduled collection. The test requests are entered into the system and given order numbers using the Fast Lab Test Order (ROUTINE) [LROW ROUTINE] option. After all requests have been entered, the software will combine all of the orders and generate a collection list (that is to be given to the phlebotomist to use on the wards) assigning all of the orders an accession number using the Create New Collection List [LRTASK PHSET] or Print Collection/List/Labels [LRPHLIST] options. The labels are placed on the specimen as it is collected. The labeled specimens and collection lists are brought back to the Laboratory by the phlebotomist after the collections are done. The specimens received are entered into the computer as "collected" or "not collected" (or canceled) using the Itemized Routine Lab Collection [LRPHITEM] option or Receipt of Routine Lab Collection from Wards [LRPHEXCPT] option.

The reason(s) for any cancellations are also entered at the same time. After the confirmation of the receipt of collected specimens into the computer has been completed, the labeled specimens are distributed to each location. The accessions are now available for inclusion on any Laboratory work/load lists . Also a list of specimens which were not collected, as well as the reasons for cancellation can be printed and kept in the Lab for reference using the List of Orders not Collected [LRNODRAW] option. This list is also available to the wards using the Ward Collection Summary [LRDRAW] option.

Options To Use: Fast Lab Test Order (ROUTINE) [LROW ROUTINE]

Create New Collection List [LRTASK PHSET] or
Add to Collection List [LRPHMAN]

Print Collection List/Labels [LRPHLIST]

Itemized Routine Lab Collection [LRPHITEM] or
Receipt of Routine Lab Collection from Wards [LRPHEXCPT]

List of Orders not Collected [LRNODRAW]

Ward Collection Summary [LRDRAW]

Ward order entry, Lab collect

Test requests for blood orders to be drawn as part of a scheduled lab collection may also be entered directly from the wards or other remote location through the use of ward order entry. The test orders are entered into the computer by the ward clerk or physician using the Lab Test Order [LROW] or Fast Lab Test Order (ROUTINE)[LROW ROUTINE] options. Those orders are retained by the Laboratory software and combined when the collection list is created using the Create New Collection List [LRTASK PHSET] or Add to Collection List [LRPHMAN] options. The lab can then print the collection list and labels by using the Print Collection List/Labels [LRPHLIST] option for use during the draw. Receipt of the specimens collected and cancellation of those not collected (with the appropriate comments) is acknowledged using the Itemized Routine Lab Collection [LRPHITEM] or Receipt of Routine Lab Collection from Wards [LRPHEXCPT] options to release the accessions for generation of work documents in the lab. The labeled specimens are then distributed to each lab area for processing. Also, a list of specimens which were not collected, as well as the reasons for cancellation, may be printed and kept in the lab for reference by using the List of Orders not Collected [LRNODRAW] option. This list is also available to the wards by using the Ward Collection Summary [LRDRAW] option.

This method is just like the previous one except the ward personnel directly enter the test and manual slips do not have to be generated.

Options To Use: Lab test order [LROW] or Fast Lab Test Order (ROUTINE)[LROW ROUTINE]

Create New Collection List [LRTASK PHSET] or
Add to Collection List [LRPHMAN]

Print Collection List/Labels [LRPHLIST]

Itemized Routine Lab Collection [LRPHITEM] or

Receipt of Routine Lab Collection from Wards [LRPHEXCPT]

List of Orders not Collected [LRNODRAW]

Ward Collection Summary [LRDRAW]

Ward order entry, Immediate collect

Test requests for blood orders to be drawn as part of an immediate collection may also be entered directly from the wards or other remote location through the use of ward order entry. The test orders are entered into the computer by the ward clerk or physician using the Lab Test Order [LROW] or Fast Lab Test Order (IMMEDIATE)[LROW IMMED COLLECT] options. Those orders are printed at the designated printer. The lab can then print the collection labels by using the Print Single Future Collection Label [LRUFCLS] option for use during the draw or the phlebotomist can use the printed copy of the order as a guide. Receipt of the specimens collected and cancellation of those not collected (with the appropriate comments) is done by use of the Accessioning Tests Ordered by Ward Order Entry [LROE] option. The labeled specimens are then distributed to each lab area for processing.

Options To Use: Lab test order [LROW] or Fast lab test order (IMMEDIATE COLLECT) [LROW IMMED COLLECT]

Print Single Future Collection Label [LRUFCLS]

Accessioning Tests Ordered by Ward Order Entry [LROE]

Organizing Your Workload

After the specimens have been collected, received or logged in, and been assigned accession numbers, the following types of lists or work documents may be generated for the purposes of organizing the work to be done in each lab department and for tracking down problems:

1. **Load/work lists** - In many larger labs, it may be less cumbersome to use load or work lists as lists of pending accessions or to indicate what work needs to be done in a certain area. The format of these lists is determined by the field entries for each load/work list name in the LOAD/WORK LIST file (#68.2).

   When using load or work lists, it is generally a good idea to start fresh at the beginning of each shift, by clearing any unverified data using the Clear Instrument/Worklist Data [LRINSTCLR] option and unloading the list sequence using the Unload Load/Work List [LRLLCT] option before you attempt to create or build using the Build a Load/Work List [LRLL] and Print a Load/Work List [LRLLP] options, the first load/work list of the day. You can limit or specify which accessions appear on the list by requesting the list to build a specified range of accession numbers or specified profile onto the list. Profiles and the tests they contain are defined in the LOAD/WORK LIST file (#68.2). Remember, if you are running an interfaced auto instrument on line, you must have a load/work list defined for it and associated with that instrument in the AUTO INSTRUMENT file (#62.4). Load or work lists can be built by a specified urgency or range of urgencies and accessions can be entered on a list only when the tests ordered exactly match the tests defined in the list profile.

Example: If a load list profile consists of two tests T3 and T4, the list can be specified to build only the accessions which have both T3 and T4 ordered on the list. Accessions having only a T3 ordered would NOT be built onto that list. The load or work list that has been created can now be used to find the appropriate specimens, aliquot samples, label sample cups, etc.

The lists can also be manipulated in order to allow you to insert using the Insert a Sample on a Load/Work List [LRLLINST] option, move using the Move a Load/Work List Entry [LRLLMOVE] option, and remove using the Remove a Load/Work List Entry [LRLLREMV] option samples onto and off the lists as originally built, if desired.

Options To Use: Clear Instrument/Worklist Data [LRINSTCLR]
Unload Load/Work List [LRLLCT]

Build a Load/Work List [LRLL] and
Print a Load/Work List [LRLLP]

Insert a Sample on a Load/Work List [LRLLINST]
Move a Load/Work List Entry [LRLLMOVE]
Remove a Load/Work List Entry [LRLLREMV]

2. **Incomplete test report** - This list or report will display patient name, social security number, location, test name, order urgency, and accession number, as well a status of the incomplete test(s). The report may be requested for a given accession area or for a selected group of tests within an accession area.

   Option To Use: Incomplete Test Status Report [LRWRKINC]

3. **Long form accession list** - This list gives a detailed printout of all the pending accessions for a given accession area. It may be requested by specific date or range of dates, specific tests, and/or by incomplete tests only. This list may also be used as a worklist or as a replacement for manual logbooks or worksheets. It can also be useful to use as a checklist at the end of each shift for finding any specimens that have not been run, or determining the work which is leftover and will be run during the next shift.

   Option To Use: Long Form Accession List [LRACC1]

4. **Short accession list** - This option produces an abbreviated form of the above “long form” list. It displays the accession number, patient name, test name, and status of any incomplete tests. The list may also be generated after test results have been entered, as it will display the verified test results for single tests, and then can be used for a hard copy of the results to be left in the lab for reference.

   Option To Use: Short Accession List [LRACC2]

NOTE: The following types of lists or work documents may be generated for the purposes of tracking down problems.

5. **Show list of accessions for a patient** - This option lists all accessions which have been received in the lab for a given patient, and can be used to help locate a missing specimen if only the patient name is known. (Display only, you cannot print this report.)

   Option To Use: Show list of Accession for a Patient [LRUPT]

6. **Review by order number** - This option can be of help when trying to find a specimen when all the information that is available is the order number.

   Option To Use: Review by Order number [LRCENLKUP] option (display only, you cannot print this report).

7. **Lookup accession** - This option lists all the information available in the system about a single accession, by accession number, and can be used to track down a misplaced specimen.

   Option To Use: Look Up Accession [LR LOOKUP ACCESSION] option (Display only, you cannot print this report.)

8. **List of orders not collected** - This list, which is generated after receipt of specimens from a routine scheduled collection, can also be consulted when trying to find a missing specimen. If, during the receiving process, a specimen or group of specimens from a single ward location is overlooked, the system will not release those accessions, but leave them with a status of on collection list (when using the Receipt of Routines Lab Collections from Wards [LRPHEXCPT] option, or with a status of canceled when using the Itemized Routines Lab Collection [LRPHITEM] option.

   Option To Use: List of Orders not Collected [LRNODRAW]

9. **Alternate types of lists** - You may also choose to gather specimens and perform the requested analyses based on the information printed on the accession labels which are placed on the specimens themselves (and not create a list of any kind), OR, to use extra labels printed at the time of specimen collection or accessioning to manually build a work list, by placing the labels onto an appropriately titled page of a log book or worksheet as the specimens arrive in the particular area of the lab. Additional labels can also be printed using the Reprint labels option to attach to log books or worksheets.

Data Entry, Review, and Verification

Manual Tests Not On A Load Or Work List

If you are using a long form or short accession list, manual list created from labels, log entries, or the information on the accession label placed on each specimen as your method of workload organization, and the tests are performed manually (in other words, NOT on an interfaced instrument), you may:

FUNCTION	OPTION
a) Enter, review, and verify the test results individually, prompted by accession number in numerical sequence	Enter/Verify/Modify Data (manual) [LRENTER]
b) Enter and verify a test result for a range or batch of accessions, in which you can specify whether or not to automatically "stuff" a result or specify the result for each accession within the group	Batch Data Entry (chem, hem, tox, etc.) [LRSTUF]
c) Enter the results individually and review those results as a group, with the option of obtaining a hard copy of the review	Enter/Verify/Modify Data (manual) [LRENTER] or Group Data Review (verified & EM) [LRGVP]
d) Enter and review the results individually or in groups and verify those results for a specified range of accessions.	Enter/Verify/Modify Data (manual) [LRENTER] or Group Data Review (verified & EM) [LRGVP]
e) Order, accession, enter results, review results, and verify the results of a test after performing the test.	Bypass Normal Data Entry [LRFAST]
f) Accession, enter results, review results, and verify the results of a test after performing the test. This would be used for specimens brought to the lab with an order number already assigned through ward order entry.	Accession Order Then Immediately Enter Data [LR ACC THEN DATA]

Manual Tests On A Load Or Work List

If you are performing the tests by manual methods or running them on an instrument that is not interfaced, and you have created load or work lists to better organize these accessions, you may:

Function	Option
a) enter, review, and verify each result or set of results individually, prompted by either load list tray/cup number or	Enter/Verify Data (load list) [LRVRW2]
by worklist sequence number	Enter/Verify Data (worklist) [LRVRW]
b) enter the results individually,	Enter/Verify Data (load list)[LRVRW2] or Enter/Verify Data (worklist) [LRVRW] or Enter/Verify/Modify Data (manual) [LRENTER]
review them as a group, with the option of obtaining a hard copy of the review	Group Unverified Review (EA,EL,EW) [LRGP]
c) enter and review the results individually	Enter/Verify Data (load list)[LRVRW2] or Enter/Verify Data (worklist) [LRVRW]
or in groups and	Group Unverified Review (EA,EL,EW) [LRGP]
verify those results in a “batch” or group.	Group Verify (EA,EL,EW) [LRVRW2]

Tests Run On line With An Interfaced Instrument

1. If you are running the tests on the instrument by load list, you may:

Function	Option
a) review data transmitted from the instrument through the LSI to the computer individually prompted by load list tray/cup number	Enter/Verify Data (load list) [LRVRW2]
b) review data transmitted from the instrument through the LSI to the computer individually (auto instrument) prompted by accession number order	Enter/Verify Data (auto instrument) [LRVR]
c) review data transmitted from the instrument through the LSI to the computer in a group	Group Unverified Review `(EA,EL,EW) [LRGP]
d) verify data reviewed by any method individually prompted by load list tray/cup number	Enter/Verify Data (load list) [LRVRW2]
e) verify data reviewed by any method individually prompted by accession number order	Enter/Verify Data (auto instrument) [LRVR]
f) verify data reviewed by any method in a group	Group Verify (EA,EL,EW) [LRVRW2] or Enter/Verify Data (auto instrument) [LRVR]

2. If you are running the tests on the instrument by accession, you may:

Function	Option
a) review data transmitted from the instrument through the LSI to the computer individually prompted by accession number order	Enter/Verify Data (auto instrument) [LRVR]
b) review data transmitted from the instrument through the LSI to the computer in a group	Group Unverified Review (EA,EL,EW) [LRGP]
c) verify data reviewed by any method individually, prompted by accession number order	Enter/Verify Data (auto instrument) (EA) [LRVR]
e) verify data reviewed by any method in a group	Group Verify (EA,EL,EW) (GA) [LRGV]

Data Modification (General Laboratory)

Before Verifying The Data

Changing or modifying entered data before it is verified is accomplished by using the same methods as were used to enter the data originally. Any of the following options may be used:

- Enter/Verify/Modify Data (manual) [LRENTER]
- Enter/verify data (load list) [LRVRW2]
- Enter/verify data (worklist) [LRVRW]
- Enter/verify data (auto instrument) [LRVR]

After Verifying The Data

Changing or modifying data after it is verified may be accomplished by using the Enter/verify/modify data (manual) [LRENTER] option. This is the ONLY option that can be used to modify previously verified data!

NOTE: If you are using the Bypass normal data entry [LRFAST] option or the Accession order option you will need to immediately enter the data, even if you do not verify the data as it is entered. If the data is not entered you will have to use the Enter/verify/modify data [LRENTER] option to manually change the results because the starting point of each of these two options references the patient name or the order number, respectively.

Record-Keeping

Routine Records

In order to meet accreditation, agency guidelines, and standards for general record keeping purposes in the lab copies of the following documents may be reprinted, collected, or generated:

1. **Long form accession list** - printed by accession area, specific test, date(s), or by incomplete tests only.

2. **Short accession list** - printed by accession area, test, or specified date(s).

3. **Instrument print-outs** - may be saved along with other work documents.

4. **Load or work lists** - copies may be saved (with or without results).

5. **Group review/verify lists** - copies may be saved of the following:

   a) Group data review [LRGVP] - for manually entered results.

   b) Group unverified review [LRGD] - for results entered by load or work list or transmitted from an instrument.

   c) Group verify (EM entered) [LRGV] - for manually entered results.

   d) Group verify (EA,EL,EW) [LRVRW2] - for results entered by load or work list or transmitted from an instrument.

6. **Collection lists** - collection lists may be printed or reprinted by ward location on multiple part paper and saved.

7. **List of orders not collected** - list may be printed or reprinted by ward location on multiple part paper and saved.

Special Reports

Various specialized reports exist that can be used by Lab for quality control, quality assurance, daily review, and summary purposes. They include:

1. **Search for abnormal/critical flagged results** - finds any test results which are outside of the established or defined critical (panic) value ranges, or are otherwise abnormal (i.e., have failed a delta check, etc.,) within a specified time span.

   Search for abnormal and critical flagged tests [LRSURD]

2. **Search for critical value flagged tests** - finds any test results which have exceeded the critical value limits defined in the LABORATORY TEST file (#60), within a specified time span.

   Search for critical flagged tests [LRSORD]

3. **Search for high/low values of a test** - finds any results equal to, less than, or greater than the value you specify for a given test or group of tests, within a specified time span.

   Search for high/low values of a test [LRSORD]

4. **Quality control display (Levey-Jennings)** - will display the quality control data for a test or group of tests by a given lab control name (as defined in the LAB CONTROL NAME file (#62.3)), for a set number of time points. This is a highly specialized format which indicates the actual value of the control sample, and plots it against the established mean and +/- 1, 2, and 3 standard deviations on the display.

   Quality control display (Levy-Jennings) [LRQC]

5. **Summary lists** - various reports which summarize large groups of data include:

   a) **Supervisor report** - generated with a format similar to the daily cumulative reports; by date.

   Supervisor's report [LRACS MANUAL]

   b) **Summary list (Supervisor's)** - generated with a format similar to the long form accession list, with or without verified test results; by date.

   Summary list (Supervisor's) [LR SUP SUMMARY]

   c) **Print a full patient summary** - lists all data in the computer for a given patient inverse or forward chronological order. Working copy of the cumulative.

   Print a full patient summary [LRAC FULL PATIENT SUMMARY]

Lab Labels

There are six lab label types available for use in the Laboratory package. Only one of these label types can be used at any given time. The label type is defined in the LABORATORY SITE file (#69.9). The following list the six label types:

1. **3.5 X 15/16 Accession # 1st (LRLABEL):** This is the default label if no label type is entered in the LABORATORY SITE file (#69.9).

Example:

```
HE 0904 ET
AAA,A                    09/04/88
000-11-1222  W:OLD B:4401-C
LAVENDER                 Order: 1101
CBC
```

2. **2 X 5 UNEVEN (LRLABEL1)**: This is the 10 part SLC label at 16.5 CPI, with 1 label printed for every four tests on the accession.

Example:

```
AAA,A                        CH 0910 2   CH 0910 2   CH 0910 2   CH 0910 2   CH 0910 2
000-11-1222 W:1B             09/10/88    09/10/88    09/10/88    09/10/88    09/10/88
SMALL RED TOP Order: 1118                AAA,A       AAA,A       AAA,A       AAA,A
CHEM 7                                   RED TOP     RED TOP     RED TOP     RED TOP

AAA,A                        CH 0910 2   CH 0910 2   CH 0910 2   CH 0910 2   CH 0910 2
000-11-1222 W:1B             09/10/88    09/10/88    09/10/88    09/10/88    09/10/88
```

3. **ORDER # FIRST (LRLABEL2):** The order number appears on the top line.

Example:

```
Order: 1101
AAA,A
000-11-1222 W:OLD
HE 0904 35                   LAVENDER
CBC
```

4. **MEDLAB (LRLABEL3):** 7 part MEDLAB type label.

Example:

AAA,A	AAA,A	AAA,A			
HE 0904 35	W:OLD	HE 0904 ET	W:OLD	HE 0904 35	W:OLD
000-11-1222	09/04/88	000-11-1222	09/04/88	000-11-1222	09/04/88
LAVENDER Order:1101		LAVENDER Order:1101		LAVENDER Order:1101	
CBC					
HE 0904 35	HE 0904 35	HE 0904 35	HE 0904 35		
09/04/88	09/04/88	09/04/88	09/04/88		

5. **SITE File (LRLABEL4):** This is a label type that can be used for the label program developed at the local site. The name of the site developed routine must be LRLABEL4. This might be used when a modification is made to one of the previous four label routines to meet site specific requirements.

6. **SITE DEVELOPED (LRLABEL5):** This label type is used for VA Form 10-1392.

Example:

URINE 0714 4	URINE 0714 4	URINE

7. **INTERMEC LABEL (LRLABEL6):** Requires Intermec Printers.

Example:

```
ADAMS,HOUSTON   3333

CREAT,CL,ALBUMIN,TRIGLY,
<H 0530 62  <ROUTINE>  1B
```

CH

Implementation/User Hints

- Keep in mind that the computer system will not magically organize a disorganized laboratory! Implementation provides the lab a perfect opportunity to identify and correct any weak spots that exist in current work flow patterns and procedures and cam help streamline the workload.

- It can be very helpful to print your collection lists (if you are using them) on multiple part computer paper. Using three part paper, for example, would allow you to keep one copy in the lab and give two copies to the phlebotomists to take with them to the wards. The phlebotomists could then leave one copy on the wards and bring the remaining copy back to the lab with the specimens. Another possibility might be to print one copy of the list on single part paper to send with the phlebotomists and reprint it after they return, or even later in the day, for record-keeping purposes.

- Receipt of specimens into the lab after a scheduled lab collection can be performed in one of two ways:

  by using the option Receipt of Routine Lab Collection From Wards [LRPHEXCPT], in which all specimens are assumed collected unless they are entered as canceled (by order number), or

  by using the option Itemized Routine Lab Collection [LRPHITEM], in which all specimens must be entered as drawn or canceled, again by order number. If no collection status is entered for a specimen, that order is automatically canceled by the system.

  Since using the option [LRPHITEM] obviously requires more work and time, it would probably be most useful at a smaller hospital with a lighter lab draw volume or load. Both options receive specimens and subsequently release the accessions for processing by ward location, to decrease the amount of time between the arrival of the specimens in the lab and the beginning of the testing on those specimens.

  When using the option Receipt of Routine Lab Collection From Wards [LRPHEXCPT], it is possible to double check that all ward locations have been received and accounted for, by generating a List of Orders Not Collected [LRNODRAW]. If an order has been canceled, it will print on the list with a reason for the cancellation or with a comment. If an order has been overlooked, it will also print on the list, but the reason for cancellation will be blank.

Example: Ward 3 West has been overlooked during the receipt process. By calling up the [LRNODRAW] list, the phlebotomy supervisor sees a lot of orders for the location “3 West” printout, with no reason for cancellation listed. He/she realizes the error, finds the copy of the collection list from “3 West,” and receives the specimens accordingly.

Workload Implementation (General Laboratory)

The DHCP Laboratory Workload recording and reporting system is a flexible and comprehensive technique for capturing work performed. The system covers all areas of the laboratory, both clinical and anatomical. Although differing methods for capturing the workload data are used, all data is uniform in structure and content. The level of reporting may be general or specific depending on how the files are setup. The data is designed to allow either gross bottom line figures or highly detailed line item reports.

There are four levels of data concentration or reporting levels.

1. National level
2. Administrative level (Site specific)
3. Lab section level
4. Accession level (data for each patient sample)

The highest report would be the national level and it is similar to the AMIS report. This report supplies total work load for the reporting institutions. Various miscellaneous reports could be obtained from the national rollup data base as needs are identified. The report would be used by offices dealing with national and regional issues (i.e., Regional Director, Central Office).

The next lower reporting level contains site specific data in more detail. Administrative reports contain data dealing with ordering location, or time of day work was completed. This type of report can be used by the hospital director, chief of staff or laboratory service.

The next reporting level is of the most benefit (internally) to the laboratory service. The site can then control the level of granularity they wish the data to be collected. This level contains all information known about the work performed except the patient identity and accession number. There could be several reports dealing with specific areas or sections of the laboratory. Reports may be generated for a particular bench or workstation.

The lowest reporting level is of the most benefit to lab supervisors. This data level is the most detailed, and includes more than 30 data elements at this level. There are a wide variety of potential views of the data collected, and unique displays can be devised by the user. Since this level includes the patient identity and the accession number you can get quite specific.

All levels of reporting below the national level (the highest collecting point) can be manipulated via VA FileMan sorts and prints, thus allowing ad hoc reports to be designed by the reporting sites. The data structure is flexible and standard, providing data that is standardized at the national level yet customized at the site levels. The degree of granularity at the site level will not affect the data at the national level. The data collected at the national level will be consistent and standardized.

To achieve standardized and consistent data content at all levels, the scheme outlined in the "Manual For Laboratory Workload Reporting" published by the College of American Pathologists was used. This manual outlines methods for identifying and collecting workloads. The terminology, categories, methods, etc., were adopted into the DHCP reporting methods. The elements of the most current CAP manual were loaded into DHCP files. The CAP manual represents the national dictionary and reference source for data collection and techniques used for data collecting. It is recommended that the LAC get a copy of the manual and review it before implementation. Using a functional specific outline by the Laboratory program office, a system of data collection and tabulation was devised.

The actual process of data collection is designed to relieve the verifying technologist of as much of the burden of additional work tasks or key strokes as possible. The technologist need only answer one or two additional questions while in the course of normal activity to trigger data collection. Additional keystrokes will be necessary to capture many non routine procedures. Although some may complain that this had added to their workload, the data entry is necessary to ensure accurate reports. The collecting process is virtually transparent to the technologist. The collecting system has a great deal of flexibility inherently designed into it, thus allowing each site the ability to tailor their system to their particular work flow.

Although methods of collecting may vary from site to site, the data is comparable to any other site data at any level. This supports management and functional needs without regard to data source. If a particular procedure and method is performed at one site, it will be identified the same way at any other site.

Approximately 70-85% of workload data is collected automatically by the system. The remaining 15-30% can be entered into the system manually. This feature allows for input during periods when the system was unavailable to capture the data automatically.

As new instruments, techniques, and procedures become available this new information will be distributed via a national release. This ensures that data remains standardized and consistent for site to site. A procedure for coordinating DHCP activity and the College of American Pathologist will be worked out to remove any conflicts of methods and terms.

New Field Descriptions For Files

Entries should be made in these fields to allow the sites to capture workload data. Please, use a test account to verify your field entries before implementing these changes. Workload data will only be captured for an accession if the Workload On field is set to “YES” in both the LABORATORY SITE file (#69.9) and the ACCESSION file (#68).

<u>LABORATORY TEST file (#60)</u>

Subscript (4): This field indicates the way the system will store the data, (CH is most common subscript). The code WK was added to the set of codes for this field. If a test is setup specifically for workload, enter WK as the subscript.

Lab Test Included in the Panel (200): New AP Multiply Factor added subfield (#.02).

AP Multiply Factor (.02): If procedure is counted more than once, the number of times counted is entered here. Used only for cytology workload and labels.

```
200  LAB TEST INCLUDED IN PANEL (Subfile 60.02)
   .001 NUMBER
   .01  LAB TEST
   .02  AP MULTIPLY FACTOR
```

Collection Sample (300): Has a new multiple field called Sample WKLD Code (#500).

Sample WKLD Code (500): Points to WKLD CODE file. Allows specimen specific WKLD codes to be setup. If there is a WKLD procedure which is always done for a particular specimen, it may be entered in this field. This code is captured when the test is accessioned.

```
500  SAMPLE WKLD CODE (Subfile 60.14)
  .01  SAMPLE WKLD CODE
  1    SAMPLE WKLD CODE #
  2    TEST MULTIPLY FACTOR
```

Example: Urine electrophoresis always has a urine protein performed, so you would enter the WKLD code for that procedure here. It will only be counted for the collection sample of urine.

Verify WKLD Code (500): Enter the basic manual WKLD code procedure which should be captured when the test is verified. Enter the five digit code, or WKLD CODE procedure. The four digit suffix will be appended when the test is verified. The suffix is setup in the load/worklist file.

```
500  VERIFY WKLD CODE (Subfile 60.12)
  .01  VERIFY WKLD CODE
  1    VERIFY WKLD CODE #
  2    TEST MULTIPLY FACTOR
  3    PROTECT SUFFIX
```

Example: Glucose should have a VERIFY WKLD Code = 84330 Glucose quant in File #60. If your lab performs glucoses on more than one instrument, you can tally them separately by placing the suffix .3120, in the load/worklist file for the CX3 worklist; suffix .3103 for the Kodak Ectachem 700 worklist. The appropriate suffix will be appended when the accession is verified.

Test Multiply Factor: If the WKLD code should be credited more than once, enter a factor in this field. A null entry is equivalent to entering a one.

Protect Suffix: If the VERIFY WKLD Code should not be altered, enter "YES" (that is no suffix should be added). If there is only one VERIFY WKLD Code for a test then it should never be changed, the nine digit WKLD code can be entered. Codes that contain all nine digits (with the suffix other than .0000) are automatically protected.

Accession WKLD Code (500.1): Enter a WKLD code which should be credited each time this test is accessioned. It will be captured automatically for all accessions. The suffix numbers are not changed or altered. This workload is credited to the postmaster rather than to a specific technologist.

```
500.1 ACCESSION WKLD CODE (Subfile 60.13)
  .01  ACCESSION WKLD CODE
  1    ACCESSION WKLD CODE #
  2    TEST MULTIPLY FACTOR
```

NOTE: The fields AMIS/CAP code test, AMIS/CAP code and Default, found under the AMIS/CAP code multiple field, has been deleted. Codes that were contained in these fields may be re-entered into one of the new WKLD code fields of File #60.

ETIOLOGY FIELD file (#61.2)

Etiology WKLD Code 11 (Subfile 61.211): Enter a WKLD code which can be associated with the isolation and identification of this particular organism. The verifier will be able to select from these entries for additional workload.

COLLECTION SAMPLE file (#62)

Collection WKLD Code (500): This field is used for those unique situations when an accession WKLD code can not be used.

Example: A parasite exam on a stool sample will always have a concentration performed. A WKLD Code for Concentration of Specimen Parasite can be counted every time a sample is accessioned for a Parasite exam on a stool sample if the COLLECTION SAMPLE file has the correct entries.

```
NAME: STOOL                              DEFAULT SPECIMEN: FECES
  LAB SECTION: MICROBIOLOGY
SYNONYM: FECES
ACCESSION AREA: MICROBIOLOGY
LAB TEST: PARASITE EXAM
WKLD CODE: Concentration of Specimen Parasite

Select Microbiology menu Option: Accessioning, standard (Microbiology)

WANT TO ENTER COLLECTION TIMES? Y//N

Select Patient Name: STALL,FRANK       11-11-11     741852369     NSC VETERAN

     Select one of the following:

          LC        LAB COLLECT(INPATIENTS-MORN. DRAW)
          SP        SEND PATIENT
          WC        WARD COLLECT
          I         Immed COLLECT

Specimen collected how ? : SP// WC  WARD COLLECT
PATIENT LOCATION: MICU// <RET>
PROVIDER: WELBY,HARRY// <RET>
LAB Order number: 3110
Is there one sample for this patient's order? YES// <RET>  (YES)
Select COLLECTION SAMPLE NAME: STOOL          FECES
Enter Order Comment: <RET>
Choose one (or more, separated by commas)  ('*' AFTER NUMBER TO CHANGE
URGENCY)
1   CULTURE & SENSITIVITY                6   AFB SMEAR
2   ANAEROBIC CULTURE                    7   MYCOLOGY CULTURE
3   GRAM STAIN                           8   PARASITE EXAM
4   BLOOD CULTURE                        9   FECAL LEUKOCYTES
5   AFB CULTURE & SMEAR
TEST number(s): 8
For PARASITE EXAM
Other tests? N// <RET>
```

```
You have just selected the following tests for SNALLING,FRANK  741-85-2369
     entry no. Test                          Sample
     1         PARASITE EXAM                 STOOL  FECES

All satisfactory? YES// <RET>  (YES)

LAB Order number: 3110


PRINT LABELS ON: LABLABEL// <RET>  R7 GP

DO YOU WISH TO TEST THE LABEL PRINTER? NO// <RET>  (NO)
force to: 13// <RET>
Are you sure? NO// Y  (YES)

ACCESSION:  MICRO 94 13
PARASITE EXAM                 STOOL  FECES
COMMENT ON SPECIMEN:
```

If you then go into the File 68 to look at that accession you see that a concentration has been counted for this specimen.

```
 Review Accession Workload

               Which File (68 or 64.1 ) 68
     Would like to view verified data from ^LR( also ? NO// <RET>  (NO)


Select ACCESSION AREA: MICRO  MICROBIOLOGY

Select MICROBIOLOGY Date: 1994// <RET>  1994
Enter Accession #(s) :13
Enter Accession #(s) : <RET>
DEVICE: HOME// (Enter Your Printer's name) <RET>


LOG: 13                                  LRDFN: 13
  FILE #: PATIENT                        ORIGINAL ACCN DATE: 1994
  DATE ORDERED: MAY  2, 1994             SPECIMEN NUMBER: 5
  REPORT ROUTING LOCATION: SICK          PRACTITIONER: WELBY,HARRY
  TREATING SPECIALITY: MEDICINE          LOG IN PERSON: HEMBREE,SUSAN
  LOCATION TYPE: WARD                    ORDERING LOCATION: MICU

 TEST: PARASITE EXAM                     URGENCY OF TEST: ROUTINE
WKLD CODE: +Concentration of Specimen Parasite
  TEST MULTIPLY FACTOR: 1                COMPLETION TIME: MAY  2, 1994@11:22:01
  USER: POSTMASTER                       INSTITUTION: REGION 7
  MAJOR SECTION: MICROBIOLOGY            LAB SUBSECTION: MICROBIOLOGY
```

EXECUTE CODE file (#62.07)

Execute WKLD Code (500) WKLD codes associated with the execute codes are entered here.

LAB DATA file (#63)

The LAB DATA file (#63) has added several new fields, since the new fields work with Blood Bank and Anatomic Path these new fields will be discussed in that section .

BLOOD INVENTORY file (#65)

This file transacts with Blood Bank and will be discussed in that area's Workload section.

BLOOD BANK UTILITY file (#65.4)

This file transacts with Blood Bank and will be discussed in that area's Workload section.

BLOOD DONOR file (#65.5)

This file transacts with Blood Bank and will be discussed in that area's Workload section.

LAB LETTER file (#65.9)

This file transacts with Blood Bank and will be discussed in that area's Workload section.

BLOOD PRODUCT file (#66)

This file transacts with Blood Bank and will be discussed in that area's Workload section.

BLOOD BANK VALIDATION file (#66.2) - (NEW)

This file transacts with Blood Bank and will be discussed in that area's Workload section.

OPERATIONS (MSBOS) file (#66.5) - (NEW)

This file transacts with Blood Bank and will be discussed in that area's Workload section.

BLOOD COMPONENT REQUEST file (#66.9)

This file transacts with Blood Bank and will be discussed in that area's workload section.

ACCESSION file (#68)

This file contains entries that represent the functional Laboratory subdivisions or departments, referred to by the Laboratory package as Accession Areas. The file is used to define the site specific information needed for each Laboratory Accession Area.

Lab Division (.19): Enter AP (standing for Anatomic Pathology) or CP (standing for Clinical Pathology). If no entry is made, the program assumes Clinical pathology for the lab division. This field does not refer to a "multidivision" laboratory arrangement. It is used as a primary sort for workload assessment and other management information. Be sure this field is filled in for previously existing Accession areas.

Technologist (68.04,3): This field contains the DUZ of the person verifying the test. In previous versions, this field was named Tech Initials that contained the technologists initial.

WKLD Code (68.04,6): The data is stuffed automatically by routines at the time of verification of the test.

WKLD Suffix (68.04, 8): This field is automatically stuffed with WKLD code suffix.

Bar code print (5): This field is used by label print utilities to determine if bar code labels should be printed for the accession area. Bar code labels will print with the lab labels that are defined in the LABORATORY SITE file (#69.9).

Identity (68.04, 7): Field name changed from "Test Reason" to "Identity". This field will be deleted after this version.

Work area (9): Enter workarea, if the accession area defines a workarea for one of the LOAD/WORK LIST file (#68.2) entries. This field works like an On/Off flag, On is for "Workarea" and Off is for "Null". This field should only be used when a workarea is entered. Leave the current accession areas (that is Hematology, Chemistry, etc.,) null for this field.

When you create workareas (e.g. Hitachi 737, Astra, etc.,) that is used for a load/work list, you must have a corresponding entry in the ACCESSION file (#68). You must fill in this field with the workareas name. Accession areas that have an entry in this field can only be used as a workarea for a load/work list, not as a major Accession Area in the load/work list. You cannot accession tests to such an area or use it as the accession area entry in File #60.

Workload On (10): In order to capture workload recording, enter "YES" in this field. A null entry means that no workload data will be tallied. This can also be done using the Turn On Site Workload Stats for Accession Area [LRWKLD STATS ON ACC AREA] option.

Collect QC/STD/Rpts: This field must be turned on if you want to enter QC/STD/Rpts as you verify a test.

LOAD/WORK LIST file (#68.2)

Before a tech may verify an accession, the tech is prompted for WORKLOAD AREA. This allows the program to know which suffix to append to the verify cap code (stored in File #60). Workareas should be named for the auto instruments or benches in a lab. This will make the names easy to remember. You must have a WKLD method code filled in every worklist if you plan to use the worklist for verification. If the worklist is for manual tests, use the manual WKLD SUFFIX (.3000).

In order to setup a WORKAREA, only the WKLD method field has be completed for the LMIP to work. The tests that will be verified do not have to be entered under the test subfield of Profile field (#50). For further granularity other fields must be filled in. Please see examples at end of section.

WKLD Method(.14): Enter the appropriate WKLD Suffix Code which should be appended to the Verify WKLD Code defined in File #60. A Suffix code is defined for each method that may be used for an analysis. Suffix codes may be entered by entering the instrument name, manufacturer, or suffix code (without the decimal point). (Points to WKLD Suffix Codes). The field will be used as default response when setting up WKLD codes during verification. This field is required if this load/work list is to be used as a workload area.

WKLD Code Method Name (.15): This field should contain the name of the procedure that should receive credit for workload any time a user selects this worklist.

NOTE: The WKLD Code Method Name and the WKLD Code Suffix fields are triggered when the WKLD Method field is filled in. You do not fill them in.

WKLD Code Suffix (.16): This field indicates what is the standard default method used by this particular load/work list.

Major Accession Area (1): Enter the Lab section in which the test is performed (points to ACCESSION file (#68)).

Lab Subsection (1.5): Allows for further breakdown of workload. The Major Section Workload report will print all WKLD codes for a particular subsection, with subtotal for unit count, and weighted count. The workload report will list all workload grouped by lab subsection.

Workarea (1.7): Lowest level of work distribution. Generally this would indicate the work bench where the work is to be done.

Example: Major Accession area - CHEMISTRY
Lab subsection - TOXICOLOGY
Work area - DRUG SCREEN

NOTES:

1. The default for Major Accession area, Lab subsection, and work area is the entry above it. (No Major Accession area, then the Lab section associated with the WKLD code for the test performed will be used.)

2. The order is as follows, Major Accession Area, Lab subsection, and Workarea.

3. Default is the Accession Area of the WKLD Method, Major Accession Area, and Lab subsection.

4. The last three fields (Major Accession area, Lab Subsection, and Workarea) are categories to help sort workload data as each site desires for workload purposes. The Lab Subsection and Workarea fields are arbitrary, you can leave these fields blank if you do not wish to further subdivide your data.

5. The Workarea field must first be defined in the ACCESSION file (#68).

Additional Lab Test (52): If the worklist should have additional WKLD counts, enter a test (dummy test) in the LAB TEST file (#60) which contains the needed Verify WKLD Codes field (#500). These WKLD codes will be included with each verified test.

> **NOTE:** When verifying a test, the technologist must be very careful when selecting a workload area. If you select Coulter STKS and then verify a different type test, the program does not check if the workload area selected matches the test. It just tallies up any additional tests using the dummy entries in File #60, whether your accession has that test or not.

Example: Load/work list used.

```
NAME: CX3                                LOAD TRANSFORM: UNIVERSAL
  TYPE: SEQUENCE/BATCH                   CUPS PER TRAY: 0
  FULL TRAY'S ONLY: NO                   VERIFY BY: ACCESSION
  INCLUDE UNCOLLECTED ACCESSIONS: NO
ADDITIONAL LAB TESTS: INSTRUMENT SETUP
PROFILE: CHEM 7                          ACCESSION AREA: CHEMISTRY
TEST: SODIUM                             BUILD NAME ONLY: NO
TEST: POTASSIUM, STAT                    BUILD NAME ONLY: NO
TEST: CHLORIDE                           BUILD NAME ONLY: NO
TEST: CO2                                BUILD NAME ONLY: NO
TEST: GLUCOSE                            BUILD NAME ONLY: NO
TEST: UREA NITROGEN                      BUILD NAME ONLY: NO
TEST: CREATININE                         BUILD NAME ONLY: NO
TEST: CHEM 7                             BUILD NAME ONLY: YES
  WKLD METHOD: SYNCHRON CX3              WKLD CODE METHOD NAME: SYNCHRON CX3
  WKLD CODE SUFFIX: .3120                MAJOR ACCESSION AREA: CHEMISTRY1
  LAB SUBSECTION: DAY CHEM               WORK AREA: CX3-WORKAREA
```

Example: Accession areas used.

```
AREA: CHEMISTRY1
  LR SUBSCRIPT: CHEM, HEM, TOX, RIA, SER, etc.
  CLEAN UP: DAILY                        ACCESSION TRANSFORM: DAILY
  VERIFICATION CODE: VA CONTROL RULES    PRINT ORDER: 24
  ABBREVIATION: CH1                      *LAB SECTION: CHEMISTRY
  BAR CODE PRINT: YES                    WORKLOAD ON: YES
  LAB DIVISION: CLINICAL PATHOLOGY       COLLECT QC/STD/REPS: YES
  ACC CODE: S LRAD=DT
  VER CODE: I $P(^LRO(68,LRAA,1,LRAD,1,LRAN,0),U,2)=62.3 S LRTEST="" D
^LRMRSHRT


AREA: DAY CHEM
  LR SUBSCRIPT: CHEM, HEM, TOX, RIA, SER, etc.
  CLEAN UP: DAILY                        ACCESSION TRANSFORM: DAILY
  PRINT ORDER: 12                        ABBREVIATION: DCH
  *LAB SECTION: CHEMISTRY                WORKLOAD ON: YES
  WORK AREA: WORK AREA                   LAB DIVISION: CLINICAL PATHOLOGY
  COLLECT QC/STD/REPS: YES               ACC CODE: S LRAD=DT


AREA: CX3-WORKAREA
  LR SUBSCRIPT: CHEM, HEM, TOX, RIA, SER, etc.
```

```
  CLEAN UP: DAILY                        ACCESSION TRANSFORM: DAILY
  PRINT ORDER: 23                        ABBREVIATION: CXW
  *LAB SECTION: CHEMISTRY                BAR CODE PRINT: YES
  WORKLOAD ON: YES                       WORK AREA: WORK AREA
  LAB DIVISION: CLINICAL PATHOLOGY       COLLECT QC/STD/REPS: YES
  ACC CODE: S LRAD=DT
```

Now when this test is counted, the count can be tracked down to being done on the CX3 in Chemistry, subsection Day Chem and workarea CX3.

```
LOG: 2                                   LRDFN: 319
  FILE #: PATIENT                        ORIGINAL ACCN DATE: MAY  3, 1994
  DATE ORDERED: MAY  3, 1994             SPECIMEN NUMBER: 11
  REPORT ROUTING LOCATION: UPTOWN        PRACTITIONER: WELBY,HARRY
  TREATING SPECIALITY: ALLERGY           LOG IN PERSON: EMBRY,SUSAN
  LOCATION TYPE: WARD                    ORDERING LOCATION: 1D

 TEST: POTASSIUM,STAT                    URGENCY OF TEST: ROUTINE
  TECHNOLOGIST: EMBRY,SUSAN              COMPLETE DATE: MAY  3, 1994@09:56:40
  TALLY TO AMIS: YES                     WKLD SUFFIX: 3120
 TEST: INSTRUMENT SETUP                  URGENCY OF TEST: WKL - ROUTINE
  TECHNOLOGIST: EMBRY,SUSAN              COMPLETE DATE: MAY  3, 1994@09:56:40
  TALLY TO AMIS: YES                     WKLD SUFFIX: 3120
WKLD CODE: Instrument Set Up~SYNCHRON CX3
  TEST MULTIPLY FACTOR: 1                COMPLETION TIME: MAY  3, 1994@09:56:40
  USER: EMBRY,SUSAN                      INSTITUTION: REGION 7
  MAJOR SECTION: CHEMISTRY1              LAB SUBSECTION: DAY CHEM
  WORK AREA: CX3-WORKAREA
```

LAB SECTION PRINT file (#69.2)

This file has new fields for Anatomic Pathology use. The changes will be discussed in the Anatomic Pathology section.

LABORATORY SITE file (#69.9)

This file holds specific information which defines certain site parameters relating to the actual functioning of the Laboratory.

Default Institution (3): The background workload routines require the institution that the workload should be credited to. Enter the primary reporting institution or parent institution if it is a multidivisional site. If this field is NOT filled in, the MailMan domain value will be used.

Blood Bank Institution (8.1): Indicate here which institution will be considered primary for this site. This field MUST be filled in for the Blood Bank workload to be collected properly.

Workload On (17): Answer “YES” or “NO” for this field. Be sure to also set the Workload On field in the ACCESSION file (#68). Workload may be tallied for all or selected Accession Areas (as decided by the ACCESSION file (#68) Workload On field (#17)). This field can be switched on by using the Turn On Site Workload Statistics [LR WKLD STATS ON] option.

Default OPT Treating Speciality (607): This field should not be used. Removed from documentation

LRNIGHT (608): Do not edit this field. It is used to record the date/time began processing workload data. THIS ENTRY MAY NEED TO BE DELETED AFTER SYSTEM FAILURE (in order to start the routine running).

Last Date Phlebotomy WKLD Collected (609): Do NOT edit this field. It is filled in by the routine after completion of date.

Clinic Stop Code (611): Enter Laboratory clinic stop code 108.

Counting BB Workload (612): Do NOT edit this field. It is filled in when processing Blood Bank data.

Urgency Alert (613): This field is used as a cutoff level (urgency) to control the flashing urgency alert display during verification. Any urgency less (lower number) than this urgency will cause the display to flash. If you enter the urgency of Outpatient, (it has value of 3), then the urgencies of Stat (value of 1) and ASAP (value of 2) for any accession will be flashed on the screen when data is verified.

Transmit Clinic Stop Codes (614): This field should be answered "YES" if you wish the Laboratory package to automatically stuff clinic stop codes for you. The data is automatically collected, but will not be transmitted unless this field is answered "YES".

Collect WKLD Log File Data (616): This field controls whether data should be accumulated in the WKLD LOG file (#64.03). This file can be used for special on site local interest in Laboratory workload.

Creating a New WKLD Code

As mentioned in the introduction to this section, the WKLD codes are from a nationally distributed file. The file will be updated periodically. Sometimes the sites will need to create a new WKLD code for special needs. For instance, the site has a Beckman Astra 8 instrument (suffix code of .3096) and all glucoses are done on that instrument, the Add a New WKLD Code to File option allowed them to create a new WKLD code of (84330.3096) that is equivalent to a glucose done on a Beckman Astra 8 instrument.

You may not need to use the Add a New WKLD Code to File option. The program takes care of adding the suffix to the prefix during verification. The work/load list carries the suffix for the instrument, but to cover those site specific situations this option is available.

The Add a New WKLD Code to File option asks for the procedure name and then the suffix code. If the WKLD code already exist, the information will be displayed.

Example 1: Trying to add a WKLD code that already exist (Glucose done on a ASTRA 8).

```
Select Supervisor menu Option: lab liaison menu

Select Lab liaison menu Option: add
    1    Add a new data name
    2    Add a new internal name for an antibiotic
    3    Add a new WKLD code to file
CHOOSE 1-3: 3  Add a new WKLD code to file

                    ADDING A NEW WKLD CODE TO FILE


Select WKLD CODE PROCEDURE: glucose

          Now enter your Suffix


Select WKLD SUFFIX CODES NAME: ASTRA 8          .3096      BECKMAN

           This code (84330.3096) Already exist
PROCEDURE: +Glucose ASTRA 8             WKLD CODE: 84330.3096
  BILLABLE PROCEDURE: YES               UNIT FOR COUNT: TEST
  SORTING GROUP: 80                     WKLD CODE LAB SECTION: Chemistry
```

Example 2: Add a new one (Urea Nitrogen on a SMAC)

```
Select WKLD CODE PROCEDURE: Urea Nitrogen


          Now enter your Suffix


Select WKLD SUFFIX CODES NAME: SMAC
     1   SMAC          .3065      TECHNICON
     2   SMAC II          .3066      TECHNICON
CHOOSE 1-2: 1
BILLABLE PROCEDURE: YES// <RET>

# 100045
PROCEDURE: +Urea Nitrogen~SMAC          WKLD CODE: 84520.3065
  BILLABLE PROCEDURE: YES               UNIT FOR COUNT: TEST
WKLD CODE LAB SECTION: Chemistry


                                NOW IN FILE
```

Relationship of LMIP to Laboratory Workload

The very top level of the Laboratory Workload program (Lab WKLD) is created to provide the information for the Laboratory Management Index Program (LMIP). The RCS-CDR/LMIP report and the options to transmit the Lab WKLD data to Austin are part of the LMIP. To have LMIP work, you must do the following steps:

1. READ your LMIP instructions. LMIP is concerned with how many specimens are run. Identify an action that uniquely identifies a specimen. For instance, a CBC with differential is ordered. According to the LMIP, they are not interested how manual differentials you have to perform to check the instrument generated differential, just how many specimens are tested. Every CBC is run on an automated Hematology instrument so if you can count how many samples go through, you have a count of the specimens ran.

2. Setup a new lab test in LABORATORY TEST file (#60). The test can be called Instrument Setup.

```
NAME: INSTRUMENT HE SETUP                TYPE: NEITHER
  SUBSCRIPT: WORKLOAD
  HIGHEST URGENCY ALLOWED: ROUTINE       PRINT NAME: SETUP
VERIFY WKLD CODE: Instrument Set Up      VERIFY WKLD CODE #: 85036.0000
```

3. Check the WKLD CODE file (#64) to be sure the WKLD code is marked billable.

```
PROCEDURE: +Instrument Set Up - Hematology
  WKLD CODE: 85036.0000                  BILLABLE PROCEDURE: YES
  UNIT FOR COUNT: SPEC                   WKLD CODE LAB SECTION: Hematology
  ACTIVATE WKLD CODE: YES
```

The WKLD Code Lab section is Hematology. When setting up the files, be sure to use the right Instrument setup code.

4. Go to the LABORATORY SITE file (#69.9) and fill in two fields. The Workload On field (#17) must be set to "YES" for workload to be collected. The Default Institution field (#3) must have the correct institution name so that the workload can be credited correctly at multidivsional sites.

5. Go to the LOAD/WORK LIST file (#68.2) and enter the test, Instrument Setup, into the Additional Lab Test field (#52) on the correct Load/Work List. You must also fill in the WKLD Method field (#.14). For instance, you are working on setting up a CBC with differential that is to be performed on a Coulter JT. You would have a Load/Work list for the Coulter JT instrument and you will enter the suffix .4183 which is the identifying suffix number from the WKLD SUFFIX CODE file (#64.2) into the WKLD Method field (#.14).

6. Go to the ACCESSION file (#68) for the appropriate accession area and fill in the needed fields. Specifically, the Collect QC/STD/REPS, Lab Division, and the Workload On fields. The Lab Division field will be Clinical Pathology since this is not an Anatomic Pathology type test. Workload On field must be set to On for the workload to be collected for the accession area.

Example:

```
AREA: HEMATOLOGY                        WORKLOAD ON: YES
LAB DIVISION: CLINICAL PATHOLOGY        COLLECT QC/STD/REPS: YES
```

Now, when you verify a CBC with differential on the Coulter JT load/work list, you will get one count of Instrument Setup on a Coulter JT counted under Hematology.

NOTES:

- Only the test, Instrument Setup, Hematology has a WKLD code marked billable. LMIP only counts billable tests.

- The prefix controls the WKLD code LAB Section. If by accident you should link the Instrument HE Set Up code to a instrument with a Chemistry WKLD code Lab section (Hitachi 737), the tests would appear on the LMIP reports as being done in Hematology not Chemistry.

New Functionality

1. Counting Clinic Stop Codes

a) The Clinic stop codes will be counted automatically as long as the accessioner finishes the task. If for some reason the code is not captured immediately, the codes will be caught when the LRTASK NIGHTY is ran. The Clinic stop code routine looks at all accessions performed since the last time the routine was run. This information is saved automatically in an A cross reference until the next time that the Clinic stop codes routine is run. The routine then looks at the patient location and if that location is a clinic module or a non ward, the routine automatically counts a Clinic Stop code.

   It is recommended that the Laboratory coordinates the activation of the functionality with MAS. This codes will appear on the computer generated code list that MAS runs (Stop Code Listing (Computer Generated) [SDACS CGSCLIST]).

NOTE: If the Purge Old Orders And Accessions option has been used and the order/accession falls beyond the grace period specified in File #69.9, the data used to count the Clinic stop codes will be lost.

b) The Clinic Stop codes can also be counted manually and entered into the computer after a downtime by using the Manual Enter Clinic Stop Codes option (locked by LRLAB key) and selecting the appropriate patient name and the Clinic Stop date.

NOTE: This option should only be used after a computer downtime for which no backlogging of tests will be done.

2. Capturing Venipuncture Workload

Venipuncture workload is captured when the user answers the prompt regarding how the sample will be drawn (Ward Collect, Lab Collect, Immediate Collect, or Send Patient). The venipuncture workload routine runs whenever the LRTASK NIGHTY runs.

The venipuncture workload routine performs the following functions:

a) Looks at the orders accessioned since the last time the routine was run (the information is saved automatically)
b) Looks at the order type (e.g., how the specimen was collected)
c) Assigns the proper venipuncture WKLD code. The WKLD codes are hard coded into the routine.

1. WKLD code 89341 (named travel time) is counted for Lab Collect and Immediate Collect

2. WKLD code 89343 (named outpatient collection) is counted for Send Patient

3. No WKLD code is counted for Ward Collect

3. Counting Accession WKLD Codes

Accession WKLD codes (multiple field) defined in the LABORATORY TEST file (#60) are captured automatically.

Codes for any special processing may be captured during accessioning. The codes may also be captured during verification by the proper use of the verify WKLD field.

Example: When an HDL is accessioned, the code for an Extraction w/Organic Solvent could be automatically counted if in the LABORATORY TEST file (#60), the field Accession WKLD Code (#500.1) has a code entered. (This example assumes that the HDL procedure used involves an extraction process.)

After a test has been accessioned and verified, the tech can review what WKLD codes have been recorded by using the Review Accession Workload option. This option allow the review of ACCESSION file (#68) and WKLD DATA file (#64.1).

Example: File #68 asks for Accession area, Date, and Accession #.

The ACCESSION file (#68) has fields for the Lab division (default of Clinical Pathology) and for the Lab section (that points to both major and minor sections). The "Review Accession Workload option" displays data collected from the accessioned test and workload data.

```
Select Process data in lab menu Option: REVIEW ACCESSION WORKLOAD
               Which File (68 or 64.1 ) 68

Select ACCESSION AREA: CHEMISTRY

Select CHEMISTRY Date: 8-26-1992//   8-26-1992
Enter Accession #(s) :7
```

```
Enter Accession #(s) :<RET>
DEVICE: HOME// (Enter Your Printer's Name) <RET>

LOG: 7                                  LRDFN: 12
  FILE #: PATIENT                       ORIGINAL ACCN DATE: AUG 26, 1992
  DATE ORDERED: AUG 26, 1992            SPECIMEN NUMBER: 7
  REPORT ROUTING LOCATION: NO ABRV      PRACTITIONER: VANILLA,A
  TREATING SPECIALITY: MEDICINE         LOG IN PERSON: BREE,SUSAN
  LOCATION TYPE: WARD                   ORDERING LOCATION: 111A
 TEST: SODIUM                           URGENCY OF TEST: ROUTINE
  LOAD LIST ENTRY: 48;1;9               TECHNOLOGIST: BREE,SUSAN
  COMPLETE DATE: AUG 26, 1992@13:31:50  TALLY TO AMIS: YES
  CAP SUFFIX: 000
```

Example: File #64.1 asks for WKLD Workload Institution, Date, and WKLD code.

The option lists the data containing patient name, constituent wt., standards, QC, repeats, and associated workload data.

```
Select Process data in lab menu Option: REVIEW ACCESSION WORKLOAD

               Which File (68 or 64.1 ) 64.1


Select WKLD WORKLOAD INSTITUTION: REGION 7
Select DATE: 8/24   AUG 24, 1992......
     You may select individual codes separated by  ,
          or enter  ALL  for complete list
          ENTER CODE ALL

DEVICE: HOME// (Enter Your Printer's Name) <RET>

WKLD CODE: Venipuncture: Travel Time     UNIT WEIGHT: 10
  MANUAL INPUT WORKLOAD : 1

WKLD CODE: Automated Chemistry Specimen~SMAC II
  UNIT WEIGHT: 2.6

ACCESSION WKLD CODE TIME: 1448.01        LAB TEST: GLUCOSE1
  LAB DIVISION: CLINICAL PATHOLOGY
  MAJ. SECT.: CHEMISTRY                 SUBSECTION: CHEMISTRY
  ACC NO.: CH 0824 2                    PATIENT: ANDRUS,DWIGHT
  ORIGINAL ACC DATE: AUG 24, 1992       DATE ORDERED: AUG 24, 1992
  SPECIMEN NO.: 1                       REPORT ROUTING LOCATION: 1B
  PRACTITIONER: FREE,USER               TREATING SPECIALTY: PULMONARY
  LOG IN PERSON: CASS,PAT             LOCATION TYPE: WARD
  ORDERING LOCATION: 1B                 INVERSE DATE COMPLETED: 7079174.858343
  URGENCY: WKL                          VERIFY TECH.: CASS,PAT

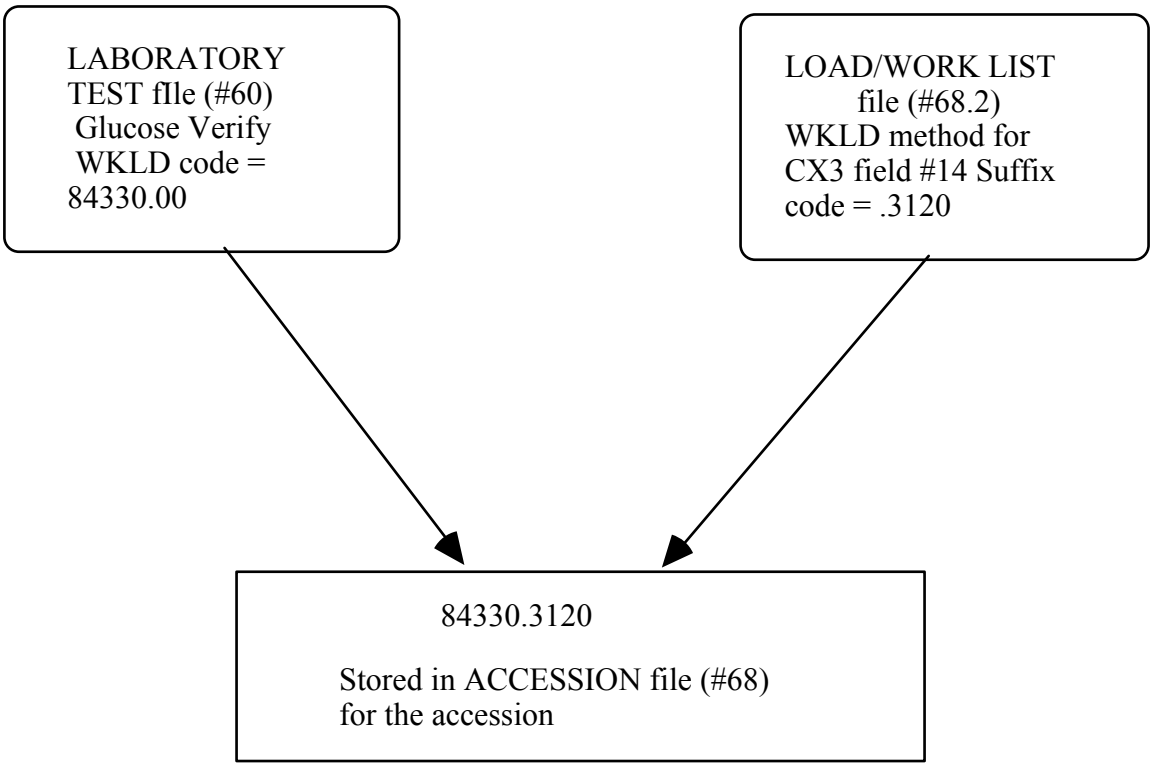
     WORK AREA: CHEMISTRY
```

4. Workload Recorded When Results Are Entered

User selects a workarea LOAD/WORKLIST file (#68.2) entry. After the results are verified for each test, the five digit WKLD code which is defined in File #60 is captured. The suffix which is defined in the load/list file is appended to the five digit CAP code. This eight digit WKLD code is stored in the ACCESSION file (#68) for that accession.

NOTE: If you plan to use a load/work list for verification, the WKLD Method field (#.14) in the LOAD/WORK LIST file (#68.2) must have an entry. You do not need to build the list or verify by the

list, but you do need to specify a list in order to trigger the verify codes. This field is a pointer to the WKLD SUFFIX CODE file (#64.2). If the test is manual, enter .3000 (which is the suffix for a manual test) in this field.



This technique is only needed if there is more than one technique in your lab to perform a given test. Otherwise, the alternative method is simpler and eliminates tech error.

The alternative method is to create a nine digit WKLD code using the option, Add a New WKLD Code. Enter that code in LABORATORY TEST file (#60). Then if verifier selects the incorrect workload area, the correct code will be recorded during verification.

Example: How the process works

```
Select Process data in lab menu Option: EW  Enter/verify data (Work list)
Select LOAD/WORK LIST NAME: CHEM 7

Work Load Area: CHEM WORKLOAD

Do you wish to modify the test list? NO// <RET>  (NO)
You have selected 11 tests to work with.
Do you want to review the data before and after you edit? YES// <RET>  (YES)

TRAY: 1//2  CUP: 1//2
No data for that tray & cup
CRANE,NOVA                              381-92-1340

Sample: BLOOD
Specimen: SERUM
```

```
CRANE,NOVA   SSN: 381-92-1340      LOC: 1 NORTH
Practitioner: QUACK,IMA

ACCESSION:                    CH 0831 22     CH 0904 11
STANDARD                      08/31 1314d   09/04 1458d
GLUCOSE //123

Select COMMENT: <RET>

CRANE,NOVA   SSN: 381-92-1340      LOC: 1 NORTH
Practitioner: QUACK,IMA

ACCESSION:                    CH 0831 22     CH 0904 11
STANDARD                      08/31 1314d   09/04 1458d
GLUCOSE                            123       123    mg/dL

SELECT ('E' to Edit , 'C' for Comments, 'W' Workload ) W

       Currently you are using ( CX3 )  Suffix [.3120]

Work Load Area: CHEM 7// <RET>  This is where you could change the work area.

CRANE,NOVA   SSN: 381-92-1340      LOC: 1 NORTH
Practitioner: QUACK,IMA

ACCESSION:                    CH 0831 22     CH 0904 11
STANDARD                      08/31 1314d   09/04 1458d
GLUCOSE                            123       123    mg/dL


SELECT ('E' to Edit , 'C' for Comments, 'W' Workload ) <RET>
Approve for release by entering your initials:
LAST IN LIST


^WKLD Review accession workload

               Which File (68 or 64.1 ) 68
     Would like to view verified data from ^LR( also ? NO// <RET>  (NO)
Select ACCESSION AREA: CHEMISTRY

Select CHEMISTRY Date: 8-29-1994// <RET>  8-29-1994
Enter Accession #(s) :11
Enter Accession #(s) : <RET>
DEVICE: HOME// PRINTER


LOG: 11                                LRDFN: 57
  FILE #: PATIENT                      ORIGINAL ACCN DATE: AUG 29, 1994
  DATE ORDERED: AUG 29, 1994           SPECIMEN NUMBER: 11
  REPORT ROUTING LOCATION: AMBSURG     PROVIDER: COUGAR,BIG HARRY
  LOG-IN PERSON: EMBREE,SHARON         LOCATION TYPE: CLINIC
  ORDERING LOCATION: AMBULATORY SURGERY

 TEST: CHEM 7                          URGENCY OF TEST: ROUTINE
  TECHNOLOGIST: EMBREE,SHARON          COMPLETE DATE: AUG 31, 1994@14:30:46

 Which File (68 or 64.1 ) 64.1
```

```
Select WKLD DATA INSTITUTION:    LOCAL VA
Select DATE: t   SEP  4, 1994
     You may select individual codes
          or enter 'ALL' for complete list

          ENTER CODE ALL

DEVICE: HOME// PRINTER

WKLD CODE: Glucose Quant~CX3
ACCESSION WKLD CODE TIME: 1506.45       LAB TEST: GLUCOSE
  WEIGHT MULTIPLIER: 1                  LAB DIVISION: CLINICAL PATHOLOGY
  MAJ. SECT.: CHEMISTRY                 SUBSECTION: CHEMISTRY
  ACC NO.: CH 0904 11                   PATIENT: CRANE,NOVA
  ORIGINAL ACC DATE: SEP  4, 1994       DATE ORDERED: SEP  4, 1994
  SPECIMEN NO.: 2                       SPECIMEN: SERUM
  REPORT ROUTING LOCATION: 1N           PROVIDER: QUACK,IMA
  TREATING SPECIALITY: GENERAL MEDICINE LOG IN PERSON: EMBREE,SHARON
  LOCATION TYPE: WARD                   ORDERING LOCATION: 1 NORTH
  INVERSE DATE COMPLETED: 7059094.854161
  URGENCY: ROUTINE                      VERIFY TECH.: EMBREE,SHARON

WKLD CODE: +Instrument Set Up~CX3
ACCESSION WKLD CODE TIME: 1506.44       LAB TEST: INSTRUMENT SETUP
  WEIGHT MULTIPLIER: 1                  LAB DIVISION: CLINICAL PATHOLOGY
  MAJ. SECT.: CHEMISTRY                 SUBSECTION: CHEMISTRY
  ACC NO.: CH 0904 11                   PATIENT: CRANE,NOVA
  ORIGINAL ACC DATE: SEP  4, 1994       DATE ORDERED: SEP  4, 1994
  SPECIMEN NO.: 2                       SPECIMEN: SERUM
  REPORT ROUTING LOCATION: 1N           PROVIDER: QUACK,IMA
  TREATING SPECIALITY: GENERAL MEDICINE LOG IN PERSON: EMBREE,SHARON
  LOCATION TYPE: WARD                   ORDERING LOCATION: 1 NORTH
  INVERSE DATE COMPLETED: 7059094.854161
  URGENCY: WKL - ROUTINE                VERIFY TECH.: EMBREE,SHARON
```

5. Lab Recording Repetition/Stds/QC

Additional WKLD procedures may be captured if the user enters data after the prompt "Controls/Standards/Repeats" is displayed. The program stores the last set of WKLD procedures which were captured for an accession, and those cap codes are tallied for each control, std, or repeat which is entered.

☛**WARNING:** Do not add workload at the "Wish to enter STD/QC/REPS ? NO//" prompt if you are using a worklist which contains more than one type of procedure and that you have used to verify more than one type of test. Any Std., QC, or repeat that you add at this prompt will automatically be added to all procedures on that worklist. For example, a worklist called Heme Misc. has the tests Sickle cell, Plasma Hgb., and LAP on it. You verify an accession that has all three tests on it. If you answer "YES" to the "STD/QC/REPS" prompt, there is no way to indicate that there was one repeat on the LAP, two stds. on Plasma Hgb., and 2 controls on the Sickle cell test. If you enter one repeat, two stds and two controls, all three of the tests will have that workload added to their counts.

A. **Repetition:** The user can modify/add to what has been automatically counted by asking for Workload at the verification prompt.

1. For a Chemistry type test, a user can modify/add to what has been automatically be counted by asking for Workload at the editing/approval prompt, as data is ready for verification.

```
Select Process data in lab menu Option: EM Enter/verify/modify data
(manual)
Do you want to review the data before and after you edit?? YES// <RET>
(YES)
Select Accession: CH 0826 7 <RET>
CH  CHEMISTRY
CHEMISTRY  (AUG 26, 1992)  7

Work Load Area MANUAL BENCH
DUCK,DAFFY                    454-54-5444   LOC:NO ABRV

Sample: BLOOD
Specimen: SERUM

DUCK,DAFFY  SSN: 454-54-5444      LOC: NO ABRV
ACCESSION:                    CH 0826 1      CH 0826 7
                              08/26 0920d   08/26 1329d
SODIUM //125  L
Select COMMENT: <RET>


DUCK,DAFFY  SSN: 454-54-5444      LOC: NO ABRV

ACCESSION:                    CH 0826 1      CH 0826 7
                              08/26 0920d   08/26 1329d
SODIUM                                       125 L meq/L
TESTS DONE BY ( E  to Edit,  C  for Comments,  W  Workload ) //W
          Wish to enter STD/QC/REPS ? NO// Y  (YES)

          Number of standards this run <RET>

          Number of QC this Run <RET>
```

```
            Number of Repeats 2

        Currently you are using ( MANUAL )  Suffix [.000]

Work Load Area MANUAL BENCH <RET>

DUCK,DAFFY  SSN: 454-54-5444      LOC: NO ABRV

ACCESSION:                     CH 0826 1      CH 0826 7
                               08/26 0920d   08/26 1329d
SODIUM                                        125 L meq/L
TESTS DONE BY ( E  to Edit,  C  for Comments,  W  Workload ) // <RET>
Approve for release by entering your initials: SH <RET>
LAST IN WORK LIST
```

2. Microbiology type tests ask automatically if the Tech wants to add to what has automatically been counted.

B. **STDS/QC:** The Std/QC/Reps/Manual Workload option can be used to:

1) Manually enter Stds, QC, Repetitions, and Workload after a downtime.

2) Used at the end of the shift to add any extra Stds, QC, or repetitions done during the shift.

6. Other Data Capture Information

A. Data Storage

1) The routine LRNIGHT copies data from ACCESSION file (#68) and stores it in WKLD DATA file (#64.1).

2) From the WKLD DATA file (#64.1) totals are stored and data is sent to the national workload database in Austin. This is a stand alone file which may be archived.

B. File Entries For Panel Tests

The setup WKLD code should go under panel test. The WKLD code will only be counted once, automatically. If more WKLD codes are required, it can be entered manually using the Manual Input Workload option.

The Single test of the panel should also have Verify WKLD codes defined. The setup WKLD code should be entered under Single test to ensure that an individual test has been ordered and the WKLD code is tallied.

LMIP Reports

Your site will need to send reports to the National Database (NDB) for comparisons with other VA Medical Centers. The LMIP Reports/Data Collection menu allows you to perform this task.

Examples:

```
Select Supervisor menu Option: LAB Statistics menu

          Edit Workload Comments
          File listings ...
          Lab test turnaround time
          LMIP Reports/Data Collection ...
          Review Accession Workload
          STD/QC/REPS/MANUAL WKLD COUNT
          Turn on site workload statistics
          Turn on workload stats for accession area
          WKLD statistics reports ...
          Workload Manual Input

Select Lab statistics menu Option: LMIP Reports/Data Collection

   1      PHASE 1: Move data from 64.1 to 67.9.
   2      PHASE 2: Collect data for transmit to NDB.
   3      PHASE 3: Print of data to be sent to NDB.
   4      PHASE 4: Create E-mail message for NDB.
   5      PHASE 5: Purge monthly WKLD data from 67.9.
          RECOMPILE PHASE 1 LMIP DATA

Select LMIP Reports/Data Collection Option:
```

The first option, PHASE 1: Move Data from 64.1 to 67.9 performs the first phase for producing monthly reports for LMIP. This option will extract workload data from the WKLD DATA file (#64.1) ^LRO(64.1, which contains the daily workload and compiled into a condensed form. The condensed workload data is stored in the LAB MONTHLY WORKLOADS file (#67.9) ^LRO(67.9. Approximately two days after the last day of the month, the workload data can be extracted for the previous month. The two days is just a recommendation so that the site can be sure that the Nightly Cleanup [LRTASK NIGHTY] option has been run and the workload data is stored.

The second option, PHASE 2: Collect Data for Transmit to NDB performs the second phase of LMIP data reporting for transmission. In this step the LMIP data is further condensed and formatted for transmission to the National Database. This formatted message is stored in a temporary global from which a review of the report will be created for your certification. Care should be taken as to who has access to this menu. The Laboratory Information Manager or the Chief Technologist should control this option.

The third option, PHASE 3: Print of Data to be sent to NDB performs the third phase which produces a printable report of LMIP data that the system has collected for the requested reporting period. In order to review the LMIP data, it must be converted to into a readable format. This report allows you to have a printout of the LMIP data. The LMIP data can not be edited. Only the files that stores the LMIP data can be edited to a limited degree. If this report does not conform to your manual workload tally procedures, a review of the Laboratory software package implementation may be required.

The fourth option, PHASE 4: Create E-mail Message for NDB performs the last phase of data collection leading to the creation of a mail message containing the LMIP data. This option will take the formatted LMIP data from a temporary file and place the data into an appropriately formatted mail message. The mail message will be sent only to the user creating the message. The user must forward the message via MailMan options to the National Database location. Consult the LMIP directive for the proper forwarding procedures. If for some reason the message created fails, this option can be repeated multiple times. The National Database will only accept one data message for a single month. Submit only one message to the National Database. The second one sent for any month will not be processed.

NOTE: The mail domain for the National Database will be available from the Data base Administrator. Do not try to create your own version of the mail domain.

The fifth option, PHASE 5: Purge Monthly WKLD Data from #67.9 is used to purge LMIP data from the LAB MONTHLY WORKLOADS file (#67.9) after the LMIP data has been sent to the National Database. Care should be taken that data is not deleted prematurely. If the site elects to archive File #67.9, this should be done before this option is used to delete data.

The sixth option, Recompile Phase 1 LMIP Data allows the user to rerun Phase 1 of LMIP data collection. If for some reason it becomes necessary to recompile the LMIP report, this option will delete the LMIP data stored in ^LRO(67.9 and the temporary global for the selected reporting period (month) and then reset the pointers in ^LRO(64.1 to allow the date to be recompiled again. If the Recompile Phase 1 LMIP Data option is used, Phase 1 must be redone.

NOTES:

1. The Recompile Phase 1 LMIP Data option should not be used after LMIP data has been submitted to the National Database. This option should only be used after LMIP data has been reviewed and errors or discrepancies are noted.

2. This option may use large amounts of journal space so coordinate its use with your IRM department.

Laboratory Reports For Workload

Treating Specialty Workload Reports [LRCAPTS]

The Treating Specialty Workload Report [LRCAPTS] option creates a Laboratory report of workload by a date range broken down by treating specialty. You may choose to sort by Facility Treating Specialty or by Patient Treating Specialty (PTF). You may select a single institution or all institutions, a date range, and one or more Accession areas either by detailed or summary format (the detailed format includes the summary format).

This option will also print a detailed and summary report for each institution. For each treating specialty the detail section will list the WKLD codes, the count, unit cost, and total cost for each WKLD code. The summary section will list the treating specialty counts, a percent of the total count and cost, and the percent of the grand total cost.

Detail workload report [LRRP6]

This Detail workload report [LRRP6] option can be run two ways. It can be run by test or by WKLD code. You may select one or more divisions, a date range, the sort/select method (by test or by WKLD code), detailed, or condensed format. If you choose the by test method you will also need to select a single Accession area. If you choose the select by test, the data is gathered from the ACCESSION file (#68). If you select by WKLD code the data is pulled from the WKLD DATA file (#64.1).

The detailed section for by test will show each accession for the selected area, the tests for that accession and any associated WKLD codes and a count for each WKLD code.

The detailed section for by WKLD code will show each WKLD code and list what tests it was associated with and a count of how many times this occurred.

The condensed section for by test gives a list similar to the detailed section, but summed for all accessions and then a alphabetical list of WKLD codes and the count of occurrences.

The condensed section for by WKLD code gives a list of tests and the count of each for all WKLD codes. It then prints a summary count of venipuncture WKLD code counts.

Workload Code List [LRCAPD]

The only selection to make is the device to display/print on.

This report prints in two parts. The first part is alphabetical by test name. It will list any verify, accession, or sample workload codes that have been assigned to this test along with the multiply factor for each code. The second part is a alphabetical list of WKLD codes and detailed information for that code. It will list all tests in the LABORATORY TEST file (#60).

Workload Report [LRCAPR1]

Select:

Division	1or more
Accession area	1
Date Range	
Specimen	1 or more
Collection Sample	1 or more
Tests/WKLD Codes	
Urgencies	considered STAT
Location	1 or more
Patient Types	In/out
Type Workload	All, LMIP, non LMIP

Format:

Detailed - This form shows a list of lab tests the instrument or method used to perform the test, location, accession #, date verified, and the WKLD code.

Condensed - This form includes several areas of Tests by Methodology by Day, Tests by Location, Tests by Instruments, Workload by Tests, Tests by STAT urgency, and a grand total count of the tests done.

WKLD Statistics by Accession area and shift [LRRP8]

Select:

Comment pages	"YES" or "NO"
Institution	1 only
Accession areas	1 or more
Date Range	
Workload Codes	1 or more
Time Range	1 or to define shifts

Format:

Detailed - This section will list by accession area/shift, WKLD codes, counts, and the percent of the shift subtotal. The detailed section will also show a similar list for the entire accession area combining the shift subtotals (if only one shift is defined this section will be redundant).

Summary - This section will list the accession areas, the count for each, and the percentage of grand total this count represents.

The summary is followed by the SQRM report (Standards, QCs, Repeats, and Manuals). This shows all workload for the date range selected which falls in one of these for categories.

If you requested the comment pages, they will appear next. They will be presented in three parts; General Comments, Workload Code Comments, and Date Comments. If there are no comments of a particular category then that part will not print.

Workload cost report by major section [LRCAPML] and
Workload Statistics by major section [LRCAPMA]

These two reports have the same selection criteria and print in very similar formats, the difference between the two is what columns/counts appear on the report. LRCAPML shows the columns UNIT COST, UNIT COUNT, TOTAL COST, and % (of sub total). LRCAPMA shows the columns CNTRL, INPAT, OUTPAT, NONPAT, and TOTAL.

Select:

Comment pages “YES” or “NO”

Institutions 1 or more

Date Range

Accession areas one or more

Format:

Detailed

Condensed

The report will print all Anatomic Pathology (AP) data, then all Clinical Pathology (CP) data and finally a combined summary. Within each of these two divisions the data will be broken out for each institution and within each institution it will be further divided into major/subsections. The detailed section lists each WKLD code and the columns mentioned above for whichever report you are running (LRCAPML/LRCAPMA). There is a summary at the end of each institution which shows the subtotals for each major/subsection.

The combined summary section shows the counts for each major/subsection which includes both AP and CP data for all institutions selected.

The summary is followed by the SQRM report (Standards, QCs, Repeats, and Manuals). This shows all workload for the date range selected which falls in one of these for categories.

If you requested the comment pages, they will appear next. They will be presented in three parts; General Comments, Workload Code Comments, and Date Comments. If there are no comments of a particular category then that part will not print.

Anatomic Pathology

AP Implementation

Implementing the Anatomic Module is quite easy, but does require some preparation and thought. This is an excellent opportunity to review the department work flow and procedures. You may introduce some improvements. The following is an outline of some things to consider in implementing the module:

1. Review the work flow in your department from specimen accessioning to the final signed report.

2. Review the Anatomic Pathology Menu.

3. Discuss with the histology supervisor and the chief secretary the features of the package. The LIM can be helpful in these discussions. There will be some additional learning and work on the part of your staff; however, there is a benefit which becomes apparent fairly soon after implementation — the number of telephone calls for reports dramatically decreases.

4. Continue having the SF 515s still follow their usual path through the cytology and surgical sections until final disposition.

5. **Equipment:** The minimum equipment needed for operation of the Anatomic module is, three CRTs (one for the log in/accession area, one for the secretary/ transcriber, and one for the pathologist) and one printer. Infoscribe 1000 or Data South are dot matrix printers with good resolution and print quality. The Genicom is not quite the quality for a report. Your site manager can recommend a good printer for your application being familiar with suppliers and the quality of repair service.

The Anatomic Pathology package/module is fashioned around the SF 515 (Tissue Examination) form, the autopsy SF 503, and SF 507 forms. Log books can be printed at whatever frequency is convenient for your situation. Identifying incomplete reports is especially easy, as are searches of the files for either a specific case or a series of cases.

Description of an Implemented Module

By Dr. Terry Ness
Fresno, CA VAMC

Anatomic specimen processing and report preparation consist of three phases (for purposes of our discussion):

1. **Log in:** This is the equivalent to accessioning in the clinical lab.

2. **Data entry:** This is the equivalent to Processing in the clinical lab package.

    a) Gross description with printout to go to pathologist with the slides
    b) Micro description and Dx to secretary for final typing

3. **Final Report:** This is a hybrid of verification and cumulative report output in the clinical lab package.

A. Log in

The surgical pathology case is accessioned using Log in menu which has four suboptions, one for (Log in, anat path [LRAPLG]) another to delete an accession (Delete accession #, anat path [LRAPKILL]) a third to (Print log book [LRAPBK]), and a fourth to print a histopathology worksheet (Histopathology Worksheet [LRAPH]). You may want to have access to some of these options limited. At the conclusion of an accessioning session, or after the last one of the day, you may want to print the Log. This can serve as a guide for embedding the next morning, since the specimen submitted is listed, as well as any comment made during accessioning.

NOTE: The routine is simple. The histotech assigns the specimen a number from the next number appearing on a roll of numbers. These rolls have sequential numbers, starting at the first of the year with S94-0001 to S94-1000 for the first roll, S94-1001 to S94-2000 for the second roll, etc. Each roll may have one or two (or whatever number you order) identical/duplicate numbers. (We have a separate roll of accession numbers for Cytology, starting with C94-0001.) One label is put on the SF 515 and one is put on the specimen container. Since there are often multiple specimens, we have rolls with four of each same accession number. After the four labels are used, manual number/labeling of the specimen container becomes necessary (e.g., multiple biopsies of the nasopharynx).

After a month of entering data for cytologies and/or surgicals is complete (i.e., there are no incompletes), the log for the month can be printed. By printing it at this time, it will contain the diagnoses of each case with the surgeon and pathologist listed. Until the permanent monthly log is printed, it might be useful to save the daily logs. Cytologies and autopsies are accessioned/logged in with similar menus under their respective divisions.

B. Data Entry

The SF 515s are delivered to the pathology secretaries with a tape for dictation in the case of the surgicals, or alone in the case of cytologies. The secretary uses the Clinical Hx/Gross Description/FS [LRAPDGD] option in the Data Entry menu and is able to call up each case by accession number and type in the data from each of the headings at the top of the SF 515. A "Gross description" word processing field comes up so that transcribing can be done. At the completion of gross transcription, there is a prompt for another case. When all the transcriptions are completed, they can be printed.

In the Print menu, Print All Reports on Queue [LRAP PRINT ALL ON QUEUE], by selecting Preliminary Reports. This can be printed double spaced or single spaced, depending on your local preferences. Even if you choose double space, the final report is single spaced. It also prints out, on a following page, any cytology, surgical, electron microscopy, or autopsy accession(s) on this particular patient which were previously entered into the system. This function will serve to gradually replace the card index file in the future. This printout is given to the pathologist with corresponding case slides. He will then dictate the microscopic findings and diagnosis. If he wants to clarify or add to the gross description, it can be done at this time. When the dictation is complete, the recording media and the reports go to the pathology secretary for final transcription.

Select the FS/Gross/Micro/DX [LRAPDGM] option and FS/Gross/Micro/Dx/ SNOMED Coding [LRAPDGS] option. At the prompts, the accession number is entered to select the case. The screen responds with the case and patient identification. The gross is displayed first. Therefore, the opportunity exists to edit any changes at this time. The microscopic appears next, permitting transcription from the tape. The pathologist free text diagnosis is entered. There are prompts for the pathologist name and for date completed. The SNOMED coding routine appears last.

C. Final Reports

When all the microscopics with diagnoses are completed, Print All Reports on Queue [LRAP PRINT ALL QUEUE] option is called up. Then select Final Reports. Take the default of "NO" unless you specifically need to print extra copies. For extra file copies and for the Tumor Registrar, the Tissue Committee, etc., the signed copy can be duplicated.

After the reports are signed, they are released through the Verify/Release Reports, Anat Path [LRAPR] option. The person doing this must have the LRVERIFY key, which functions as the legal electronic signature of the person. The reports may now either be displayed or printed, via the Clinicians options. These options are also installed on the Medical Staff menu and the Ward and Clinic clerk menus. Until such time as the report has been released, the message displayed indicates that the report is not verified.
There is no other information available unless the patient has had previous completed accessions. The number of phone calls should significantly decrease after the module is implemented.

Hint:
The title displayed by the pathologist name is found in the title (abbreviation field of the PROVIDER CLASS file (#7)).

• Since tissue Committee (TC) and Quality Assurance (QA) Codes are very similar, here is a table that summarizes the differences.

TC Codes QA Codes	
- Numeric TC codes may be assigned description in LAB DESCRIPTIONS file (#62.5) file (Screen=AP SURG)	- QA codes defined in LAB LAB DESCRIPTIONS file (#62.5) (Screen=I AP General)
- Used to review Surgical cases	- Entered for Surgical or Cytoplast reports
- Supervisor option - Edit QA Site Parameters to allow TC code entry	- Supervisor option- Edit QA Site Parameters to allow QA code entry
- TC code should be entered for surgical report to enter QA code for an accession	- QA Codes Entry/edit option used each
- Use Tissue Committee Review retrieve reports	- QA Outcome Review cases Cases to option used to retrieve reports

Implementation Plan

Implement Cytopathology first, since the SNOMED coding is simpler and will allow the histology and secretarial staff to become familiar with the module. The routine and format are identical with surgical pathology — only the files are different (Cytology vs. Surgical Path).

If your station has a Test Account, sometimes referred to as a UTL account, that would be a good place to start. If you do not have such an account, you can start in the VAH account, which is known as the Production Account. Select four or five of your completed cases, such as the first four or five of the year, or any recent month. As you go through these steps, make generous use of the "?," especially after any line starting with "Select...." the help prompt (?) can be used at any place you can enter information.

Step 1: (In Cytology/Histology Lab) Use the SF 515s which came with the specimen (or copies of the completed reports for this training run) and select the Log in menu. You will note that it has four suboptions:

1) Log in, anat path [LRAPLG]
2) Print log book [LRAPBK]
3) Delete accession #, anat path [LRAPKILL]
4) Histopathology Worksheet [LRAPH]

Select log in. When the accession number appears, you are given the option to either accept it or to select another. By all means, change the number to match the one you are accessioning if you happen to select your cases from some time after the first of the year. Follow through with the remaining prompts until the next patient is asked for. Enter the patient name of your next case. The computer accession number should now match that on the case you are accessioning. Repeat until the selected set is logged in.

Step 2: (In Cyto/Histo Lab) Print the log by selecting the Print Anat Path menu. Then select the suboption Print log book [LRAPBK]. This will ask for the Anatomic Pathology section, then the year, followed by the first # you want to start with and the last # you want. When you get to the prompt

"DEVICE" be sure you queue it to print on the printer. If you do not, your terminal and screen are tied up while the job is being run. You will be given an alert message giving you the opportunity to change the device request. This particular run of the Log can be useful to keep as a reference for both the histotech and the secretary to use while the cases are being completed. It can be saved until the cases are signed out and released, at which time a reprinting will include the sign-out pathologist and the date completed, as well as the coded diagnoses. This second printing would be the permanent hard copy of the log. It is very useful to have if terminals are in use or the system is down.

Step 3: (Secretary) Select Data entry menu. Then select the Clinical Hx/Gross Description/FS [LRAPDGD] option. This option mirrors the top part of the SF 515 and data is entered by copying from the original SF 515 submitted with the specimen. Transcription of gross description is entered at this time in the word processing mode. The originals can be sent to the cytopathologist/cytotech screener with the slides and/or you can print the forms now. The advantage of printing the forms now is that for each case, the cytology and surgical files are searched for previous entries. Any previous entry is identified by accession number and the SNOMED-coded Dx's.

Step 4: (Secretary) Select Print option - then the suboption Print All Reports on Queue [LRAP PRINT ALL ON QUEUE] and select cytopathology for the AP section. This report can have the Gross exam double spaced if you wish. Check the Anatomic path menu option Enter/Edit Lab Description File [LRAPDHR] found under the Anatomic Pathology Supervisor menu. There is an additional question/prompt regarding saving the reports on the print queue. You should take the default "NO" unless you have a very good reason to save the print queue. If you save these reports and add some more cases, the next printing will repeat those you saved, plus the new cases. As already noted, you will also have printed out a separate sheet listing any previous cytology and/or surgical cases. These printouts, with or without the original SF 515s, are given to the cytopathologist/cytotech screener with the corresponding slides. In the case of surgical pathology, the printouts are passed on with the appropriate slides.

Step 5: (Secretary after Screening) The slides are now read and a diagnosis made; the SF 515s (and a dictation tape, depending on your routine) are passed on to the secretary who will now call up Data entry. The suboption to call would be FS/Gross /Micro/Dx/SNOMED Coding [LRAPDGS]. (If you so desire, there is an alternate option which does not include any coding, and another which includes ICD9CM coding.) The Gross is modified if necessary; the microscopic and diagnosis are transcribed. A series of prompts appears so the cases can be SNOMED coded. The SNOMED entries can be made with the numeric code or by the appropriate free text word(s). This feature has really made coding much easier. There is also a separate option to enter only the SNOMED coding.

Hints:
The LAB DESCRIPTIONS file (#62.5) can also be useful for rapid entry of microscopic descriptions if the pathologists can agree on a standardized text for some of the more common diagnoses.

In the options for entry of the microscopic findings, enter * (name as it appears in File #62.5, <RET> at line 1, <RET> at line 2 and at the edit option. This will stuff the Specimen Description into the Microscopic Description field for that specimen. If some editing is required, you will need to re-enter the accession # at the next "Select Accession Number/Pt. name:" prompt. When the microscopic description is redisplayed, the text which was copied from File #62.5 can be edited. A similar use of the LAB DESCRIPTION file (#62.5) can be used to stuff the Gross description field. See the Anatomic Pathology User Manual for examples.

Step 6: (Secretary) The next step is to get the final print for signature. Select Print All Reports on Queue [LRAP PRINT ALL ON QUEUE] and the suboption Final Reports. Again, the prompt regarding saving reports on the print queue is asked. Again, take the default "NO" (unless you want to make extra copies because you do not have a copy machine). Be sure to enter the correct device to print the reports on the printer. This set of reports is now ready for signature.

Step 7: (Pathologist/Screener) Any report which requires revision of the microscopic and/or diagnosis and/or coding can be corrected and returned to the secretary for correction and reprinting for signature. Upon signing, the reports are ready for release (verifying). This is done by selecting the Verify/Release Reports, Anat Path [LRAPR] option which is under the Verify/Release Reports menu. You select the section, Cytology or Surgical, then enter the accession number. There will be a second prompt to confirm that the report is to be released. This option is locked with the LRVERIFY key and, when used, is the electronic signature equivalent of the key holder. At this moment, the report can be called up with the Clinicians options. These are options which are put on the physicians menu and on selected clerks menus.

Step 8: (Secretary) The last step is to print the log again and compare it with the one printed in Step 2 above. You will be able to tell by looking at the log which reports are completed/incomplete by the information present or absent. The Incomplete Reports [LRAPINC] option provides a listing of those not yet completed, and the List of Unverified Reports [LRAPV] option in the Verify/Release Reports menu generates a listing of all unreleased reports.

The pattern for Surgical Pathology and Electron Microscopy is identical, check the menus with the "?." Less word processing is involved with the Cytology, and it is thus easier to implement. Surgical Path has much more word processing.

The above eight steps will implement the basic pattern. There is enough flexibility to accommodate a variety of routines. For example, a station that sends its cytology and surgicals to an outside lab may drop Steps 3 and 4, and only do the SNOMED coding in Step 5 and skip Step 6. Review the steps with your staff and have them do their parts of the steps above. When everyone is confident and comfortable, implement Cytopathology. Have them repeat the above with Surgical pathology, then implement. For everyone's comfort, it is desirable to maintain your manual logs until confidence in your Module appears. An early sign of confidence is when various members of your staff want to drop the manual log.

SNOMED Coding/Searches

For these SNOMED coding and searching functions, you must have access to one set of the following CAP manuals:

a) SNOMED - Systematized Nomenclature of Medicine Vol. I and II

b) SNOMED - Micro glossary for Surgical Pathology

Depending on local site factors, you may want more than one copy of one or both of the manuals. These can be obtained from the College of American Pathologists, 5202 Old Orchard Rd., Skokie, IL 60077-1034.

Description of SNOMED

As part of an effort to standardize the coding of information regarding specific diseases, the Systematized Nomenclature of Medicine was developed. Using the various hierarchically structured systems oriented axes, it is possible to code all anatomic and physiologic elements of a disease process, both normal and abnormal. Then, sum up these elements as a class of disease or recognized syndrome that has a unique code. For example,

T	+	M	+	E	+	F	=	D
Topography		Morphology		Etiology		Function	Disease	
Lung	+	Granuloma	+	M. tuberculosis	+	Fever	=	Tuberculosis
T-2800		M-44060		E-2001		F-03003		D-0188

With the nomenclature and classification categories, any diagnostic level from a presenting problem, sign or symptom to a complex final, clinical, or pathological diagnosis can be appropriately and accurately coded for a patient. The procedure to diagnosis relationship will permit medical audit and more specific disease costing.

The two codes most commonly used by pathologists are **topography** and **morphology**. The topography field undertakes to provide a sufficiently detailed and structured nomenclature for those parts of the body whose identification might be needed for coding and retrieval of diagnostic data. The morphology field contains the normal and pathological changes or processes occurring in cells, tissues, or organs.

The AP package comes with the TOPOGRAPHY, MORPHOLOGY, and ETIOLOGY FIELD files defined. However, the person doing pathology coding will soon discover that the files are not complete, as there are many code numbers in the code books that are not in the file. If a particular topography or morphology does not enter, do not panic. Just jot down the name you are trying to enter and complete your case entry. You can go back to make the necessary code entries later. Look up the Micro glossary first, and if not satisfactory, then try Vol. II, the alphabetical list, of the coding Manual which is comprehensive and has most common synonyms listed.
Most of the time you will find it. It will also give the coding number. Now select the option Edit SNOMED Files and select the appropriate file (TOPOGRAPHY, MORPHOLOGY, ETIOLOGY FIELD, etc.,) and enter the code number from your search of the Manual. The chances are that it will show up. Step through the fields until you get to Synonym and make your entry. When you go back to the case to code, and re-enter the “problem term,” it will be accepted.

NOTE: The apparent speed of the lookups may be slightly confusing. The abbreviation is in the same B cross reference as the name. The synonyms are in the D cross reference, which is searched after the B and C cross references.

Modifying/Adding Entries to the SNOMED Files

If after the search of the Manual, you find the term and code you need, but it is not in the computer files, you will be prompted "Are you adding a new name?" and, of course, you are. Perhaps an example will be helpful at this point: Say you have looked in the Manual and find adenocarcinoma, metastatic has the code 81406. When you enter 81406 in the Enter/Edit Items in a SNOMED field [LRAPSNOM EDIT] option (or using enter/edit in FileMan) for the Morphology field you will be prompted, re-enter the new name. Answer "YES". The next prompt is for a name which has the code number you entered. Edit this to adenocarcinoma, metastatic. The next prompt is for the SNOMED code - enter 81406. The next prompt is "Abbreviation". The next prompt is "Synonym" and is a multiple field. You may want to enter metastatic adenocarcinoma. You can also add meta adeno for quick lookup.

When adding to the SNOMED files, it is crucial to use the manual as the primary reference. If you absolutely cannot find the code you need, you can enter a code which is close but with an identifying letter to indicate it is locally created. Also write the CAP about obtaining an official recommendation about introducing the code. CAP may very well be working on the problem. When an official code is obtained, the locally created code can be changed to the official one. Previously coded cases will reflect the change. Most of your editing will be confined to adding synonyms for easier lookup at the time of coding.

Using SNOMED for Searches

The technique of setting up searches is rather easy. The search routines in each Anatomic section (Cytopathology, Surgical Pathology, Electron Microscopy, and Autopsy) are identical. The searches may be as broad or as specific as desired.
Each SNOMED code has 5 characters. Generally, each successive digit narrows the specificity of the search. For example, in topography, the 20000 series if for the Respiratory system, 28000 is for lung, 28200 is for right upper lobe of lung and 28220 is for right upper lobe of lung, posterior segment. Thus, entry of the correct codes is crucial to obtaining the desired output.

Wild cards may be used for any of the SNOMED codes, to broaden the scope of a single search. Entry of wild cards (*) will allow selection of a specific portion of the code, while not requiring all 5 digits. For example, entry of 8***3 for the morphology code would compile a list of all primary tumors, regardless of type.

NOTE: The wild card should only be used if necessary as a place holder. Trailing wild cards should **not** be used, as they will slow down the search. If an asterisk (*) is entered, it will search for that digit to find a match. If nothing is entered for the digit, it will not search that digit at all.

Examples:

#1: Listing of all GU tumors in the last 2 weeks for GU conference.

```
      Topography: 7
      Morphology: 8 for all tumors
            8***3 for all primary tumors
            8***6 for all metastatic tumors

   Start with Date: TODAY// T-14
   Go   to   Date: TODAY// <RET>
```

#2: Listing of all tumors/cancers for the Tumor Registry for both Cytopathology and Surgical Pathology.

```
      Topography: ALL
      Morphology: 8
                  9
```

NOTE: It might be easier to give the necessary search options to the people handling the Tumor Registry to generate their own listing, since they are responsible for tracking all cancer cases/statistics.

Hints:

- When it comes to SNOMED coding, do it at the time of entering the microscopic and diagnosis. It will require a bit more attention from the pathologist. However, it will be most helpful to the transcriptionist. The coded diagnoses are not as descriptive nor elaborate as those dictated for the report, but they are extremely valuable. It is necessary to have both volumes of the CAP SNOMED Coding Manuals and Micro glossary for Surgical Pathology handy to look up some of the diagnoses; the Alphabetical listing is the more frequently consulted. The CAP SNOMED manuals have the synonyms listed, which are not always in the Synonym fields of the SNOMED files (#61) supplied. The easiest method is to edit these to include local synonyms as well. It would be a monumental task to review the CAP manuals and edit in every synonym.

  A talented pathology secretary can be most helpful with this editing process. It can also be an educational experience for anyone coding the anatomic reports. Coding is very important, since this will be the ONLY remaining diagnosis after you purge the word processing parts of the files. Unless your station has infinite disk space, you will have to purge word processing periodically. Initially, you might consider keeping 1-2 months, plus the current month. When you purge the word processing, you are left with the name and demographics, accession number, and SNOMED codes.

- In each section (Cytology, Surgical Path, and Autopsy), there is an option to list the incomplete reports, and in the main menu, there is an (List of Unverified Pathology Reports [LRAPV] option to list the Unverified/Unreleased reports. In the Log in for these sections, there is also a routine Show list of accessions for a patient which is rather handy at the time of doing frozen section or OR consults.

- The Search options are easy to use - consult with your LIM for assistance in queuing times and some of the set ups. The CAP SNOMED manuals are necessary for doing this, since you need the code numbers to set your search parameters. Because of the potential impact on system resources, you may want some of the menu options restricted — again your LIM can assist you in this matter. The section entitled SNOMED Coding/Searches includes a detailed explanation of the SNOMED search capabilities.

- No formatting is necessary for the final cytology or pathology reports, as far as the LIM is concerned. Each station has its own style of writing a cytology, surgical, autopsy, or electron microscopy report. The word processing mode accommodates this aspect. Instruction regarding the word processor will be necessary, especially for those who have never used MailMan.

- It is also possible to type the gross and micro text into a PC Word Processor and then upload these descriptions into DHCP. See description of the Uploading Processing section of this manual.

Cytology Workload Implementation

LMIP Overview

While some of the workload reports are geared towards production of data for the Laboratory Management Index Program (LMIP), other reports include tremendous detail which would be useful at the local level for evaluating workload and allocating resources.

In order to standardize workload recording throughout the various sections of the laboratory, the workload for cytopathology is captured in a manner consistent with the remainder of the laboratory. Since CY subscript tests and functionality are not handled in the same manner as CH subscript tests, this required some programming of background functionality which would allow workload recording to be recorded appropriately. Although data entry and functionality for cytopathology does not quite fit the traditional order a test and enter a result model, the workload is associated with specific patient specimens and the data is stored in the LAB DATA file (#63) as it is with the other CH subscript tests. In some cases the programming of various routines actually generates a test/procedure in order to have an entry to which the appropriate WKLD codes can be associated.

Although initial implementation efforts for the clinical laboratory sections is being focused on the data needed for the Laboratory Management Index Program (LMIP), this differentiation is not necessarily helpful in the Anatomic Pathology areas, including cytopathology. It is necessary to do all of the file setup before workload is turned on for this section. Once workload is turned on, the functionality of specific options, including those affecting the generation of microscopic slide labels, is entirely different.

The determination as to whether a workload code is designated as billable or not was made on a national level and is included in the exported version of WKLD CODE file (#64). This can not be edited at the local level for the five digit prefix. On reports which are generated locally and include all of the workload data, those codes which are billable are designated with a + sign in front of the name. In the case of Cytopathology, the primary billable workload code is 88056.0000 CY SPECIMEN. This is assigned for each specimen accessioned (i.e., if three specimens are accessioned for a single accession it will tally three regardless of which option is used to add additional specimens to a given accession number). This is consistent with Surgical Pathology.

In addition to the primary billable workload code (88056.0000), fine needle aspirates should be designated as billable. The codes for specimen preparation, staining, and screening should not be designated as billable since the CY Specimen code includes all of the routine workload performed.

General Overview

Consistent with the general philosophy of trying to make the majority of workload recording as transparent as possible and trying to, in general, minimize the amount of data input for the maximum benefit, a mechanism has been developed for each facility to establish routine protocols for the handling of cytology specimens. Although this requires a significant amount of planning and setup, the benefits will be visible in the impact on the functionality and the minimum amount of data entry required to record all of the necessary information for each specimen.

For each cytology specimen, there is an associated workload profile which is assigned at the time of specimen log in. These workload profiles are entries in the LABORATORY TEST file (#60) with a Cytology subscript. Since the types of specimens and the specific procedures and stains may vary from one facility to another, these profiles will need to be entered by each facility. Some specific examples are included in the following pages for reference.

In order to capture the workload associated with log in and previous record retrieval /review, each workload profile should have associated Accession WKLD Codes (i.e., 88552.0000 and 88562.0000).

In addition, the workload profile (Cytology subscript) should have one or more entries in the Lab Test field (#200). These entries must also be entered in the LABORATORY TEST file (#60) with a WORKLOAD subscript. They will function as cytology processing procedures. According to the 1992 Workload Recording Manual of the College of American Pathologists, there are four different types of specimen preparation techniques (i.e., smear prep, cell block, cytospin, and membrane filter). In addition, slides already prepared may be received either for gyne or non-gyne specimens.

For each of the WORKLOAD subscripted entries in LABORATORY TEST file (#60) to be selected for the Lab Test field, one of the following required comments in the EXECUTE CODE file (#62.07) should be selected. These required comments reflect entries in the EXECUTE CODE file (#62.07) which will need to be added. The details are included in the File Setup section. These codes control the labeling of the blocks displayed in the Blocks, Stains, and Procedures [LRAPSPDAT] option.

Required comments from Execute Code File		
PREPARED SLIDES	CYTOSPIN	CELL BLOCK
SMEAR PREP	MEMBRANE FILTER	PAP STAIN

In the case of PAP stain, the execute code will also control the prompts which the user will use to record the appropriate workload, depending on whether the results of the screening were negative or indicated abnormal cells.

In addition, each of the WORKLOAD subscript entries can have the specific staining procedures associated with that particular type of specimen/processing. These are to be entered in the Lab Tests field (#200) for that entry. The number of slides routinely prepared should be entered in the AP Multiply Factor field for the specific stain.

Specific examples of this have been included on the following pages. The choices of specific stains to be used should be present in the exported version of LABORATORY TEST file (#60) which comes with the package.

For each of the preparation techniques and the stains, they will have:

1) associated VERIFY CAP CODES which will need to be entered in order to accommodate appropriate recording of the workload for staining, and

2) associated Accession WKLD Codes which will need to be entered in order to accommodate appropriate recording of the workload for screening. In the case of the PAP Stain and GYN, no Accession WKLD Codes should be entered as these screening codes will be based on the Execute WKLD Code entries for the PAP Stain execute code. Several specific examples are provided on the following pages.

FLOW CHART

CYTOLOGY WORKLOAD PROFILES
LABORATORY TEST file (#60)
Cytology Subscript
Accession CAP codes
+1 or more LAB TESTS INCLUDED IN THE PANEL

↓

(LAB TESTS INCLUDED IN THE PANEL)
Functions as cytology processing procedures
LABORATORY TEST file (#60)
Workload Subscript
Required Comment (e.g., cytospin, cell block - File #62.07)
Verify CAP codes (optional)
+ 1 or more LAB TESTS INCLUDED IN THE PANEL

↓

(LAB TESTS INCLUDED IN THE PANEL)
Stains
LABORATORY TEST file (#60)
Surgical Pathology Subscript

Implementation Strategies

Although the file setup and overview of data capture on the following pages describe full use of the existing functionality, it is possible to utilize only certain portions.

1. Since the primary billable workload code is CY SPECIMEN (88056.0000), which is captured upon specimen log in, the site can decide to set up the workload profiles and generate labels and not capture the nonbillable workload related to the preparation techniques, stains and screening. If this decision is made, it is not necessary to use the Blocks, stains, and procedures [LRAPSPDAT] option to enter the date/time of processing or staining.

2. If the site wishes to capture the nonbillable workload for local evaluation, it is necessary to enter the date/time of processing and staining in the Blocks, stains, and procedures [LRAPSPDAT] option; however, it is probably not critical that the date/time be exact. It would probably be appropriate for the cytotech to merely accept the default of NOW which would capture the workload data for the correct date and 8 hour shift unless plans exist to accurately evaluate workload distribution for that section at the actual time level.

3. If the Blocks, stains, and procedures [LRAPSPDAT] option is used, some detailed training on how to review/edit the data will be necessary unless the user already has experience in dealing with the Blocks, stains, and procedures [LRAPSPDAT] option or other data entry option which involve multiple fields. Dealing with these multiples is not intuitive even to the more experienced user.

Workflow Analysis

Prior to doing any file setup, it is necessary for the cytotechnologist or other personnel involved in Cytology to detail the specific procedures associated with each type of specimen. While any individual specimen might have something specific to that specimen, the majority of specimens will be processed according to a specific protocol. Some specific examples include:

Example 1: Specimen = Cerebrospinal Fluid
Preparation Technique Cytology Cytospin
Stains Pap Stain x 2

Example 2: Specimen = Bronchial Brushing
Preparation Technique Prepared Slides
Stains Pap Stain x 2

Example 3: Specimen = Bronchial Washing
Preparation Technique Cytology Smear Prep &
Cytology Cell Block
Stains Pap Stain x 2
H & E Stain x 1

Example 4: Specimen = Fine Needle Aspirate W/ XRay
Preparation Technique Cytology Smear Prep, FNA &
Cytology Cell Block
Stains Pap Stain x 1
Diff Quick Stain x 2

Example 5: Specimen = Fine Needle Aspirate WO/ XRay
Preparation Technique Cytology Smear Prep, FNA &
Cytology Cell Block
Stains Pap Stain x 1
Diff Quick Stain x 2

Example 6: Specimen = PAP Smear
Preparation Technique Prepared Slides
Stains Pap Stain x 2

Sample Worksheet

```
Profile
   NAME:                                    TYPE:  NEITHER
      SUBSCRIPT:  CYTOLOGY                  HIGHEST URGENCY ALLOWED:  ROUTINE
      PRINT NAME:
   NUMBER: 1                                LAB TEST:
   NUMBER: 2                                LAB TEST:
   SYNONYM:
   ACCESSION WKLD CODE:  Init Hndlg: Cyto., Non-Gyn Spec.
      ACCESSION WKLD CODE #:  88552.0000
   ACCESSION WKLD CODE:  File/Search Update: Cytology
      ACCESSION WKLD CODE #:  88562.0000

Preparation Techniques (LAB TEST from Profile)
   NAME:                                    TYPE:  NEITHER
      SUBSCRIPT:  WORKLOAD                  HIGHEST URGENCY ALLOWED:  ROUTINE
      REQUIRED COMMENT:                     PRINT NAME:
   NUMBER: 1                                LAB TEST:
      AP MULTIPLY FACTOR:
   VERIFY WKLD CODE:
      VERIFY WKLD CODE #:
      TEST MULTIPLY FACTOR:

   NAME:                                    TYPE:  NEITHER
      SUBSCRIPT:  WORKLOAD                  HIGHEST URGENCY ALLOWED:  ROUTINE
      REQUIRED COMMENT:                     PRINT NAME:
   NUMBER: 1                                LAB TEST:
      AP MULTIPLY FACTOR:
   VERIFY WKLD CODE:
      VERIFY WKLD CODE #:
      TEST MULTIPLY FACTOR:

Stains (LAB TEST from Preparation Technique)
   NAME:                                    TYPE:  NEITHER
      SUBSCRIPT:  SURGICAL PATHOLOGY        HIGHEST URGENCY ALLOWED:  ROUTINE
      PRINT NAME:
   VERIFY WKLD CODE:
      VERIFY WKLD CODE #:                   TEST MULTIPLY FACTOR:
   ACCESSION WKLD CODE:
      ACCESSION WKLD CODE #:

   NAME:                                    TYPE:  NEITHER
      SUBSCRIPT:  SURGICAL PATHOLOGY        HIGHEST URGENCY ALLOWED:  ROUTINE
      PRINT NAME:
   SYNONYM:
   SYNONYM:
   VERIFY WKLD CODE:
      VERIFY WKLD CODE #:                   TEST MULTIPLY FACTOR:
   ACCESSION WKLD CODE:
      ACCESSION WKLD CODE #:                TEST MULTIPLY FACTOR:
```

File Setup

File #62.07 (EXECUTE CODE)

In order to establish defaults for routine workload, additional entries are needed as shown below. Your IRM department will probably have to add these execute codes for you. These names must be entered exactly as the cytology specimen subfile (#63.901) field names:

1. SMEAR PREP
2. CELL BLOCK
3. MEMBRANE FILTER
4. PREPARED SLIDES
5. CYTOSPIN

In addition, PAP STAIN will need to be entered in order to allow the entry of the appropriate screening workload.

For the following entries, TYPE=COMMENT.

NAME	HELP PROMPT
SMEAR PREP	Determines field in file 63.902 for entry of workload defaults.
CELL BLOCK	Determines field in file 63.902 for entry of workload defaults.
MEMBRANE FILTER	Determines field in file 63.902 for entry of workload defaults.
PREPARED SLIDES	Determines field in file 63.902 for entry of workload defaults.
CYTOSPIN	Determines field in file 63.902 for entry of workload defaults.
PAP STAIN	Determines field in file 63.902 for entry of workload defaults.

For the PAP STAIN entry, also enter the following Execute WKLD Codes:

```
88578.000         Screen:Cyto: Tech. Interp.,Neg Gyn

88580.000         Screen:Cyto: Tech. Interp.,Abn Gyn

88596.000         Screen:Cyto: Rescreen.,Neg Gyn (QA)
```

Sequence of File #60 Setup

NOTE: The file setup for the specific examples follows the sequence.

1. Enter the stains to be used.

These should be assigned to the SURGICAL PATHOLOGY subscript. If they are assigned to the CYTOLOGY subscript, they will be available as choices at the WORKLOAD PROFILE prompt and will probably confuse the user.

The VERIFY WKLD code will be composed of the 5 digit prefix which reflects the Stain Group to which the stain belongs and the 4 digit suffix will reflect that specific stain. For Cytology, this includes the following prefixes:

88554 Stain, Cytology Routine
88560 Staining:Cytology:Romanowski/Diff Quick Stain
88558 Staining:Cytology:Rapid Papanicolaou or H&E Stain

NOTE: The choices of suffix codes for the specific stains to be used should be present in the exported version of the SUFFIX CODE file which came with the package.

.9704 Aceto-orcein stain
.9702 Diff-Quick stain
.9700 Papinicolaou stain
.9701 Rapid Papinicolaou stain
.9703 Toluidine blue rapid stain

In general, there the ACCESSION WKLD CODE associated with each stain will be used to identify the appropriate code to be used for screening. If that screening is done by the cytotechnologist, it should be entered. If that workload is routinely done by only the pathologist, no Accession WKLD codes should be entered. This Accession WKLD Code is associated with each individual slide which is examined.

The choices for screening technique, reflected above, include:
88588 Screen:Cyto: Tech. Interp., Cell Block
88592 Screen:Cyto: Tech. Interp., Sp. St. Cell Prod.
88582 Screen:Cyto: Tech. Interp., Memb. Filt.
88590 Screen:Cyto: Tech. Interp., Sp. St. Microorg.
88584 Screen:Cyto: NonGyn CMC<50%
88586 Screen:Cyto: NonGyn CMC>50%

2. Enter the preparation techniques.

   These should be assigned to the WORKLOAD subscript.

   One of the following execute codes must be entered in the Required Comment field of the LABORATORY TEST file (#60).

PREPARED SLIDES	CYTOSPIN	CELL BLOCK
SMEAR PREP	MEMBRANE FILTER	PAP STAIN

In general, there will be no Accession WKLD code associated with the preparation technique. The Verify WKLD code will be composed of the five digit prefix which reflects the preparation technique and the four digit suffix .0000 which reflect the fact that it was a manual technique. The choices for preparation technique include:

88190 Slides: Cytology Preparation
88191 Smear: Cyto Prep/Pick & Smear
88566 Cell Block: Cytology
88568 Smear: Cyto: Accompany
88570 Smear: Cyto: Prep of Fluid/Centric.
88572 Smear: Cyto: Cytocentrifugation

In addition, each of these WORKLOAD subscript entries can have the specific staining procedures associated with that particular type of specimen/processing. These are to be entered in the Lab Tests field (#200) for that entry. The number of slides routinely prepared should be entered in the AP Multiply Factor Field in that multiple for the specific stain.

3. Enter the workload profiles.

   These should be assigned to the CYTOLOGY subscript.

These should be worded as close to the terminology used for the specimen as possible. When the specimen is entered during log in, the software will look to see if there is a corresponding entry in LABORATORY TEST file (#60) with the CY subscript. If it locates one, this will be displayed as a default and will make the entry process easier for the user.

Each workload profile should have the following two associated Accession WKLD Codes (i.e., one for the initial handling and one for the record search). Choose the appropriate one for initial handling based on the type of specimen (i.e., gyn or non gyn):

88550.0000 Init. Hndlg: Cyto., Gyn Spec.
88552.0000 Init Hndlg: Cyto., NonGyn Spec.
88562.0000 File/Search Update: Cytology

In addition, the workload profile (Cytology subscript) should have one or more entries in the Lab Test field (#200). These entries must also be entered in LABORATORY TEST file (#60) with a WORKLOAD subscript (see step 2 above). They will function as cytology processing procedures. According to the 1992 Workload Recording Manual of the College of American Pathologists, there are four different types of specimen preparation techniques (i.e., smear prep, cell block, cytospin, and membrane filter). In addition, slides already prepared can be received either for gyn or non gyn specimens.

4. Certain test names must be added exactly as they are hard coded into the routines. To facilitate this process, the tests were exported with most of the required information; however, the test names were exported with a WK- in front. Edit the WK-CYTOLOGY REPORTING entry to eliminate the WK-. This entry should have the following information.

```
NAME:  CYTOLOGY REPORTING              TYPE:  NEITHER
   SUBSCRIPT:  WORKLOAD                HIGHEST URGENCY ALLOWED:  ROUTINE
   PRINT NAME:  CY RPT
VERIFY WKLD CODE:  Report Record File Cytology
   VERIFY WKLD CODE #:  88564.0000
```

5. In order to use the Cytopathology Screen Workload [LRAPWR] option, there must be a PAP STAIN, GYN entry in File #60. While this may not necessarily ever be used at your facility, it is hard coded in the routine for this option to make sure that it exists. This is necessary because this test utilizes the PAP STAIN Execute code to which the EXECUTE WKLD CODEs are attached. The net result is a mechanism to allow choices of appropriate WKLD codes based on the interpretation of the screening results. This entry should have the following information.

```
NAME:  PAP STAIN, GYN                  TYPE:  NEITHER
   SUBSCRIPT:  SURGICAL PATHOLOGY      HIGHEST URGENCY ALLOWED:  ROUTINE
   REQUIRED COMMENT:  PAP STAIN        PRINT NAME:  CY RPT
VERIFY WKLD CODE:  Stain Cytology Routine  PAPANICOLAOU STAIN
   VERIFY WKLD CODE #:  88554.9700
```

File #60 (LABORATORY TEST) Examples of Workload Profiles

After following the sequence of File setup for LABORATORY TEST file (#60) above, the setup for specific examples previously provided would be as follows:

Example 1: Specimen = Cerebrospinal Fluid
Preparation Technique Cytology Cytospin
Stains Pap Stain x 2

```
NAME:  CSF CYTOLOGY                    TYPE:  NEITHER
   SUBSCRIPT:  CYTOLOGY                HIGHEST URGENCY ALLOWED:  ROUTINE
   PRINT NAME:  CSF CY
NUMBER: 1                              LAB TEST:  CYTOSPIN CSF
SYNONYM:  CEREBROSPINAL FLUID CYTOLOGY
SYNONYM:  SPINAL FLUID CYTOLOGY
ACCESSION WKLD CODE:  Init Hndlg: Cyto., Non-Gyn Spec.
   ACCESSION WKLD CODE #:  88552.0000
ACCESSION WKLD CODE:  File/Search Update: Cytology
   ACCESSION WKLD CODE #:  88562.0000


NAME:  CYTOLOGY CYTOSPIN               TYPE:  NEITHER
   SUBSCRIPT:  WORKLOAD                HIGHEST URGENCY ALLOWED:  STAT
   REQUIRED COMMENT:  CYTOSPIN         PRINT NAME:  CYTOSPN
NUMBER: 1                              LAB TEST:  PAP STAIN, CYTOSPIN
   AP MULTIPLY FACTOR: 2
VERIFY WKLD CODE:  Smear:Cyto: Prep of Fluid/Centrif.
   VERIFY WKLD CODE #:  88570.0000
VERIFY WKLD CODE:  Smear:Cyto: Cytocentrifugation
   VERIFY WKLD CODE #:  88572.0000


NAME:  PAP STAIN, CYTOSPIN             TYPE:  NEITHER
   SUBSCRIPT:  SURGICAL PATHOLOGY      HIGHEST URGENCY ALLOWED:  ROUTINE
   PRINT NAME:   PAP SPN
VERIFY WKLD CODE:  Stain: Cytology, Routine
   VERIFY WKLD CODE #:  88554.9700
ACCESSION WKLD CODE:  Screen: Cyto: NonGyn CMC <50%
   ACCESSION WKLD CODE #:  88584.0000
```

Example 2: Specimen = Bronchial Brushing
Preparation Technique Prepared Slides
Stains Pap Stain x 2

```
NAME:  BRONCHIAL BRUSHING CYTOLOGY     TYPE:  NEITHER
   SUBSCRIPT:  CYTOLOGY                HIGHEST URGENCY ALLOWED:  ROUTINE
   PRINT NAME:  BB CY
NUMBER: 1                              LAB TEST:  CYTOLOGY PREPARED SLIDES
SYNONYM:  BBC
ACCESSION WKLD CODE:  Init Hndlg: Cyto., Non-Gyn Spec.
   ACCESSION WKLD CODE #:  88552.0000
ACCESSION WKLD CODE:  File/Search Update: Cytology
   ACCESSION WKLD CODE #:  88562.0000


NAME:  CYTOLOGY PREPARED SLIDES        TYPE:  NEITHER
   SUBSCRIPT:  WORKLOAD                HIGHEST URGENCY ALLOWED:  ROUTINE
   REQUIRED COMMENT:  PREPARED SLIDES  PRINT NAME:  SLIDES
NUMBER: 1 LAB TEST:  PAP STAIN, PREPARED SLIDES
   AP MULTIPLY FACTOR: 2
VERIFY WKLD CODE: None entered since they were submitted as prepared slides


NAME:  PAP STAIN, PREPARED SLIDES      TYPE:  NEITHER
   SUBSCRIPT:  SURGICAL PATHOLOGY      HIGHEST URGENCY ALLOWED:  ROUTINE
   PRINT NAME:   PAP PRE
VERIFY WKLD CODE:  Stain: Cytology, Routine
   VERIFY WKLD CODE #:  88554.9700     TEST MULTIPLY FACTOR:  1
   (NOTE:  This suffix is specific for the PAP Stain)
ACCESSION WKLD CODE:  Screen: Cyto: NonGyn CMC>50%
   ACCESSION WKLD CODE #:  88586.0000
```

Example 3: Specimen = Bronchial Washing
Preparation Technique Cytology Smear Prep &
Cytology Cell Block Stains Pap Stain x 2
H & E Stain x 1

```
NAME:  BRONCHIAL WASHING CYTOLOGY      TYPE:  NEITHER
   SUBSCRIPT:  CYTOLOGY                HIGHEST URGENCY ALLOWED:  ROUTINE
   PRINT NAME:  BR WASH
NUMBER: 1                              LAB TEST:  CYTOLOGY SMEAR PREP
NUMBER: 2                              LAB TEST:  CYTOLOGY CELL BLOCK
SYNONYM:  BWC
ACCESSION WKLD CODE:  Init Hndlg: Cyto., Non-Gyn Spec.
   ACCESSION WKLD CODE #:  88552.0000
ACCESSION WKLD CODE:  File/Search Update: Cytology
   ACCESSION WKLD CODE #:  88562.0000


NAME:  CYTOLOGY SMEAR PREP             TYPE:  NEITHER
   SUBSCRIPT:  WORKLOAD                HIGHEST URGENCY ALLOWED:  ROUTINE
   REQUIRED COMMENT:  SMEAR PREP       PRINT NAME:  SMEAR
NUMBER: 1                              LAB TEST:  PAP STAIN, SMEAR PREP
   AP MULTIPLY FACTOR: 2
VERIFY WKLD CODE:  Smear:Cyto: Cytocentrifugation
   VERIFY WKLD CODE #:  88572.0000


NAME:  CYTOLOGY CELL BLOCK             TYPE:  NEITHER
   SUBSCRIPT:  WORKLOAD                HIGHEST URGENCY ALLOWED:  ROUTINE
   REQUIRED COMMENT:  CELL BLOCK       PRINT NAME:  BLOCK
NUMBER: 1                              LAB TEST:  H & E STAIN,CYTO
   AP MULTIPLY FACTOR: 1
VERIFY WKLD CODE:  Cell Block: Cytology   VERIFY WKLD CODE #:  88566.0000
   TEST MULTIPLY FACTOR:  1


NAME:  PAP STAIN, SMEAR PREP           TYPE:  NEITHER
   SUBSCRIPT:  SURGICAL PATHOLOGY      HIGHEST URGENCY ALLOWED:  ROUTINE
   PRINT NAME:   PAP SMP
VERIFY WKLD CODE:  Stain: Cytology, Routine
   VERIFY WKLD CODE #:  88554.9700     TEST MULTIPLY FACTOR:  1
   (NOTE:  This suffix is specific for the PAP Stain)
ACCESSION WKLD CODE:  Screen: Cyto: NonGyn CMC <50%
   ACCESSION WKLD CODE #:  88584.0000


NAME:  H & E STAIN, CYTO               TYPE:  NEITHER
   SUBSCRIPT:  SURGICAL PATHOLOGY      HIGHEST URGENCY ALLOWED:  ROUTINE
   PRINT NAME:   H & E
SYNONYM:  HEMATOXYLIN & EOSIN STAIN
SYNONYM: H&E
VERIFY WKLD CODE:  Stain: Cytology, Routine
   VERIFY WKLD CODE #:  88558.9000     TEST MULTIPLY FACTOR:  1
   (NOTE:  This suffix is specific for the manual H&E Stain)
ACCESSION WKLD CODE:  Screen:Cyto:Tech. Interp., Cell Block
   ACCESSION WKLD CODE #: 88588.0000   TEST MULTIPLY FACTOR: 1
```

Example 4: Specimen = Fine Needle Aspirate W/XRay
Preparation Technique
Cytology Smear Prep, FNA &
Cytology Cell Block Stains
Pap Stain x 1 Diff Quick Stain x 2

```
NAME:  FINE NEEDLE ASPIRATE W/XRAY     TYPE:  NEITHER
   SUBSCRIPT:  CYTOLOGY                HIGHEST URGENCY ALLOWED:  ROUTINE
   PRINT NAME:  FNA D
NUMBER: 1                              LAB TEST:  CYTOLOGY SMEAR PREP, FNA
NUMBER: 2                              LAB TEST:  CYTOLOGY CELL BLOCK
SYNONYM:  DEEP FNA
SYNONYM:  FNA, DEEP ASPIRATE
ACCESSION WKLD CODE:  TRAVEL TIME      ACCESSION WKLD CODE #:  89355.0000
ACCESSION WKLD CODE:  File/Search Update: Cytology
   ACCESSION WKLD CODE #:  88562.0000
ACCESSION WKLD CODE:  Smear:Cyto: Complicated Special Proced.
   ACCESSION WKLD CODE #:  88576.0000


NAME:  CYTOLOGY SMEAR PREP, FNA        TYPE:  NEITHER
   SUBSCRIPT:  WORKLOAD                HIGHEST URGENCY ALLOWED:  ROUTINE
   REQUIRED COMMENT:  SMEAR PREP       PRINT NAME:  SMR FNA
NUMBER: 1                              LAB TEST:  PAP STAIN, SMEAR PREP
   AP MULTIPLY FACTOR: 10
NUMBER: 2                              LAB TEST:  DIFF QUICK, SMEAR PREP
   AP MULTIPLY FACTOR: 10
VERIFY WKLD CODE:  Smear:Cyto: Cytocentrifugation
   VERIFY WKLD CODE #:  88572.0000


NAME:  CYTOLOGY CELL BLOCK             TYPE:  NEITHER
   SUBSCRIPT:  WORKLOAD                HIGHEST URGENCY ALLOWED:  ROUTINE
   REQUIRED COMMENT:  CELL BLOCK       PRINT NAME:  BLOCK
NUMBER: 1                              LAB TEST:  H & E STAIN, CYTO
   AP MULTIPLY FACTOR: 1
VERIFY WKLD CODE:  Cell Block: Cytology   VERIFY WKLD CODE #: 88566.0000
   TEST MULTIPLY FACTOR:  1


NAME:  PAP STAIN, SMEAR PREP           TYPE:  NEITHER
   SUBSCRIPT:  SURGICAL PATHOLOGY      HIGHEST URGENCY ALLOWED:  ROUTINE
   PRINT NAME:   PAP SMP
VERIFY WKLD CODE:  Stain: Cytology, Routine
   VERIFY WKLD CODE #:  88554.9700     TEST MULTIPLY FACTOR:  1
   (NOTE:  This suffix is specific for the PAP Stain)
ACCESSION WKLD CODE:  Screen: Cyto: NonGyn CMC <50%
   ACCESSION WKLD CODE #:  88584.0000

NAME:  DIFF QUICK , SMEAR PREP         TYPE:  NEITHER
   SUBSCRIPT:  SURGICAL PATHOLOGY      HIGHEST URGENCY ALLOWED:  ROUTINE
   PRINT NAME:   DQ SP
VERIFY WKLD CODE:  Staining: Cytology:Romanowski/Diff Quick Stain
   VERIFY WKLD CODE #:  88554.9702     TEST MULTIPLY FACTOR:  1
   (NOTE:  This suffix is specific for the Diff Quick Stain)
ACCESSION WKLD CODE: Screen, Cyto: NonGyn CMC>50%
   ACCESSION WKLD CODE #: 88586.0000   TEST MULTIPLY FACTOR:  1


NAME:  H & E STAIN, CYTO               TYPE:  NEITHER
   SUBSCRIPT:  SURGICAL PATHOLOGY      HIGHEST URGENCY ALLOWED:  ROUTINE
   PRINT NAME:   H & E
```

```
SYNONYM:  HEMATOXYLIN & EOSIN STAIN
SYNONYM: H&E
VERIFY WKLD CODE:  Stain: Cytology, Routine
   VERIFY WKLD CODE #:  88558.9000     TEST MULTIPLY FACTOR:  1
   (NOTE:  This suffix is specific for the manual H&E Stain)
ACCESSION WKLD CODE:  Screen:Cyto:Tech. Interp., Cell Block
   ACCESSION WKLD CODE #: 88588.0000   TEST MULTIPLY FACTOR: 1
```

Example 5: Specimen = Fine Needle Aspirate WO/ XRay
Preparation Technique Cytology Smear Prep, FNA &
Cytology Cell Block
Stains Pap Stain x 1
Diff Quick Stain x 2

```
NAME:  FINE NEEDLE ASPIRATE WO/XRAY    TYPE:  NEITHER
   SUBSCRIPT:  CYTOLOGY                HIGHEST URGENCY ALLOWED:  ROUTINE
   PRINT NAME:  FNA
NUMBER: 1                              LAB TEST:  CYTOLOGY SMEAR PREP, FNA
NUMBER: 2                              LAB TEST:  CYTOLOGY CELL BLOCK
SYNONYM:  SUPERFICIAL FNA
SYNONYM:  FNA, SUPERFICIAL
ACCESSION WKLD CODE:  TRAVEL TIME      ACCESSION WKLD CODE #:  89355.0000
ACCESSION WKLD CODE:  File/Search Update: Cytology
   ACCESSION WKLD CODE #:  88562.0000
ACCESSION WKLD CODE:  Smear:Cyto: Simple Special Proced.
   ACCESSION WKLD CODE #:  88574.0000


NAME:  CYTOLOGY SMEAR PREP, FNA        TYPE:  NEITHER
   SUBSCRIPT:  WORKLOAD                HIGHEST URGENCY ALLOWED:  ROUTINE
   REQUIRED COMMENT:  SMEAR PREP       PRINT NAME:  SMR FNA
NUMBER: 1                              LAB TEST:  PAP STAIN, SMEAR PREP
   AP MULTIPLY FACTOR: 10
NUMBER: 2                              LAB TEST:  DIFF QUICK, SMEAR PREP
   AP MULTIPLY FACTOR: 10
VERIFY WKLD CODE:  Smear:Cyto: Cytocentrifugation
   VERIFY WKLD CODE #:  88572.0000


NAME:  CYTOLOGY CELL BLOCK             TYPE:  NEITHER
   SUBSCRIPT:  WORKLOAD                HIGHEST URGENCY ALLOWED:  ROUTINE
   REQUIRED COMMENT:  CELL BLOCK       PRINT NAME:  BLOCK
NUMBER: 1                              LAB TEST:  H & E STAIN, CYTO
   AP MULTIPLY FACTOR: 1
VERIFY WKLD CODE:  Cell Block: Cytology   VERIFY WKLD CODE #: 88566.0000
   TEST MULTIPLY FACTOR:  1


NAME:  PAP STAIN, SMEAR PREP           TYPE:  NEITHER
   SUBSCRIPT:  SURGICAL PATHOLOGY      HIGHEST URGENCY ALLOWED:  ROUTINE
   PRINT NAME:   PAP SMP
VERIFY WKLD CODE:  Stain: Cytology, Routine
   VERIFY WKLD CODE #:  88554.9700     TEST MULTIPLY FACTOR:  1
   (NOTE:  This suffix is specific for the PAP Stain)
ACCESSION WKLD CODE:  Screen: Cyto: NonGyn CMC <50%
   ACCESSION WKLD CODE #:  88584.0000


NAME:  DIFF QUICK , SMEAR PREP         TYPE:  NEITHER
   SUBSCRIPT:  SURGICAL PATHOLOGY      HIGHEST URGENCY ALLOWED:  ROUTINE
   PRINT NAME:   DQ SP
VERIFY WKLD CODE:  Staining: Cytology:Romanowski/Diff Quick Stain
   VERIFY WKLD CODE #:  88554.9702     TEST MULTIPLY FACTOR:  1
   (NOTE:  This suffix is specific for the Diff Quick Stain)
ACCESSION WKLD CODE: Screen, Cyto: NonGyn CMC>50%
   ACCESSION WKLD CODE #: 88586.0000   TEST MULTIPLY FACTOR:  1
```

```
NAME:  H & E STAIN, CYTO                TYPE:  NEITHER
   SUBSCRIPT:  SURGICAL PATHOLOGY       HIGHEST URGENCY ALLOWED:  ROUTINE
   PRINT NAME:   H & E
SYNONYM:  HEMATOXYLIN & EOSIN STAIN
SYNONYM: H&E
VERIFY WKLD CODE:  Stain: Cytology, Routine
   VERIFY WKLD CODE #:  88558.9000      TEST MULTIPLY FACTOR:  1
   (NOTE:  This suffix is specific for the manual H&E Stain)
ACCESSION WKLD CODE:  Screen:Cyto:Tech. Interp., Cell Block
   ACCESSION WKLD CODE #: 88588.0000   TEST MULTIPLY FACTOR: 1
```

Example 6: Specimen = PAP Smear

Preparation Technique	Prepared Slides
Stains	Pap Stain x 2

```
NAME:  PAP SMEAR                        TYPE:  NEITHER
   SUBSCRIPT:  CYTOLOGY                 HIGHEST URGENCY ALLOWED:  ROUTINE
   PRINT NAME:  PAP SMR
NUMBER: 1                               LAB TEST:  CYTOLOGY PREPARED
SLIDES,GYN
ACCESSION WKLD CODE: Init. Hndlg: Cyto., Gyn Spec.
   ACCESSION WKLD CODE #:  88550.0000
ACCESSION WKLD CODE:  File/Search Update: Cytology
   ACCESSION WKLD CODE #:  88562.0000


NAME:  CYTOLOGY PREPARED SLIDES,GYN     TYPE:  NEITHER
   SUBSCRIPT:  WORKLOAD                 HIGHEST URGENCY ALLOWED:  ROUTINE
   REQUIRED COMMENT:  PREPARED SLIDES   PRINT NAME:  CYT PRE
NUMBER: 1                               LAB TEST:  PAP STAIN, PREPARED
SLIDES
   AP MULTIPLY FACTOR: 2


NAME:  PAP STAIN, PREPARED SLIDES       TYPE:  NEITHER
   SUBSCRIPT:  SURGICAL PATHOLOGY       HIGHEST URGENCY ALLOWED:  ROUTINE
   PRINT NAME:   PAP PRE
VERIFY WKLD CODE:  Stain: Cytology, Routine
   VERIFY WKLD CODE #:  88554.9700      TEST MULTIPLY FACTOR:  1
   (NOTE:  This suffix is specific for the PAP Stain)
ACCESSION WKLD CODE:  Screen: Cyto: NonGyn CMC >50%
   ACCESSION WKLD CODE #:  88586.0000
```

Overview Of Data Capture

Log in/Accessioning

In the Log in, Anat Path [LRAPLG], when a cytology is accessioned, the WKLD codes are entered in the ACCESSION file (#68) based on the response to the "Workload Profile" prompt which has been added to the beginning of the option. Profiles of WKLD codes appropriate for accessioning have been added to LABORATORY TEST file (#60) as described above. The programming will attempt to echo the entry in the Specimen field. If this matches an entry in File #60, it will be displayed as a default. If it does not match, a profile will need to be entered. The choices available for response to this prompt must be entered as tests in the LABORATORY TEST file (#60) as SUBSCRIPT=CYTOLOGY and TYPE=NEITHER.

For cases involving more than one specimen, such as Bronchial Washing and Bronchial Brushing, the workload profiles will accumulate data. Thus, instead of creating a third profile for the combination, the entry of each individually will produce the desired result.

The date/time assigned to the accessioning WKLD codes is based on the Date/Time Specimen Received.

Based on the entries for Lab Test in the workload profile, information is stuffed into the fields which appear in the Blocks, stains, and procedures [LRAPSPDAT] option.

In addition, a CY Specimen Verify WKLD Code (?????.0000) is automatically captured for each specimen. The date/time assigned is based on the Date/Time Specimen Received.

NOTE: If additional specimens are added through other data entry or edit options, this count will be appropriately incremented; however, if a specimen is removed, the count is not decremented.

Processing (Specimen Preparation)

The workload for specimen preparation/processing comes from the Verify code attached to the preparation technique in LABORATORY TEST file (#60). The data/time assigned to this Verify code is based on the response to the "Date/Time Processed" prompt.

Example 1: Log in/Accessioning & Specimen Preparation from (Display workload for an accession).

NOTE:	The display order is not determined by the sequence of events or the date/time.

```
 TEST: CYTOLOGY CELL BLOCK              URGENCY OF TEST: WKLD
  TECHNOLOGIST: HOFF,LYNN               COMPLETE DATE: APR  1, 1993@13:15
WKLD CODE: Cell Block: Cytology         TEST MULTIPLY FACTOR: 1
  WKLD CODE COUNTED: NO                 WKLD CODE TALLY: 0
  COMPLETION TIME: APR  1, 1993@13:15   USER: HOFF,LYNN
  INSTITUTION: HINES, IL                MAJOR SECTION: CYTOPATHOLOGY
  LAB SUBSECTION: CYTOPATHOLOGY         WORK AREA: CYTOPATHOLOGY
 TEST: CYTOLOGY SMEAR PREP              URGENCY OF TEST: WKLD
  TECHNOLOGIST: HOFF,LYNN        COMPLETE DATE: APR  1, 1993@13:15
WKLD CODE: Smear:Cyto: Cytocentrifugation
  TEST MULTIPLY FACTOR: 1               WKLD CODE COUNTED: NO
  WKLD CODE TALLY: 0                    COMPLETION TIME: APR  1, 1993@13:15
  USER: HOFF,LYNN                       INSTITUTION: HINES, IL
  MAJOR SECTION: CYTOPATHOLOGY          LAB SUBSECTION: CYTOPATHOLOGY
  WORK AREA: CYTOPATHOLOGY
 TEST: BRONCHIAL WASHING CYTOLOGY       URGENCY OF TEST: WKLD
  TECHNOLOGIST: HOFF,LYNN               COMPLETE DATE: APR  1, 1993@13:15
WKLD CODE: Init Hndlg: Cyto., Non-Gyn Spec.
  TEST MULTIPLY FACTOR: 1               WKLD CODE COUNTED: NO
  WKLD CODE TALLY: 0                    COMPLETION TIME: APR  1, 1993@13:15
  USER: HOFF,LYNN                       INSTITUTION: HINES, IL
  MAJOR SECTION: CYTOPATHOLOGY          LAB SUBSECTION: CYTOPATHOLOGY
  WORK AREA: CYTOPATHOLOGY
WKLD CODE: File/Search Update: Cytology TEST MULTIPLY FACTOR: 1
  WKLD CODE COUNTED: NO                 WKLD CODE TALLY: 0
  COMPLETION TIME: APR  1, 1993@13:15   USER: HOFF,LYNN
  INSTITUTION: HINES, IL                MAJOR SECTION: CYTOPATHOLOGY
  LAB SUBSECTION: CYTOPATHOLOGY         WORK AREA: CYTOPATHOLOGY
WKLD CODE: CY SPECIMEN                  TEST MULTIPLY FACTOR: 1
  WKLD CODE COUNTED: NO                 WKLD CODE TALLY: 0
  COMPLETION TIME: APR  1, 1993@13:15   USER: HOFF,LYNN
  INSTITUTION: HINES, IL                MAJOR SECTION: CYTOPATHOLOGY
  LAB SUBSECTION: CYTOPATHOLOGY         WORK AREA: CYTOPATHOLOGY
```

Staining

Additional prompts have been added to the Blocks, Stain, and Procedures [LRAPSPDAT] edit template to accommodate workload recording.

It is possible to establish defaults for routine workload by making the tests in LABORATORY TEST file (#60) (described under accessioning) with CYTOLOGY subscripts into panels of tests with WORKLOAD subscripts. In addition, if entries are made in the Required Comment field and the Lab Test field as described above, defaults will be set up to accommodate the routine stains. Not only do these stains appear as defaults in this option, but it will be possible to generate labels for these routine stains without entering additional data via this option.

Example 2: Staining workload

```
Date/time  slides stained: NOW// <RET>  (APR 01, 1994@15:06) OK ? YES// <RET>
(YES)
WASH,GEORGE 8888 Acc #: 11 Date: APR  1, 1993
                                        Slide/Ctrl   Last stain date
BRONCHIAL WASHING
Smear Prep
   SMEAR PRE         Stain/Procedure
                PAP STAIN, SMEAR PREP     2          APR  1, 1993  15:06
Cell Block
   CELL BLOC         Stain/Procedure
                H & E STAIN               1          APR  1, 1993  15:06

Data displayed ok ? NO// Y  (YES)


(Extracted from Display  accession workload - not complete)

Select CYTOPATHOLOGY Accession Number for  1993: 11

 TEST: H & E STAIN                       URGENCY OF TEST: WKLD
  TECHNOLOGIST: HOFF,LYNN               COMPLETE DATE: APR  1, 1993@15:06
WKLD CODE: Stain: H&E               TEST MULTIPLY FACTOR: 1
  WKLD CODE COUNTED: NO                  WKLD CODE TALLY: 0
  COMPLETION TIME: APR  1, 1993@15:06    USER: HOFF,LYNN
  INSTITUTION: HINES, IL                 MAJOR SECTION: CYTOPATHOLOGY
  LAB SUBSECTION: CYTOPATHOLOGY          WORK AREA: CYTOPATHOLOGY

TEST: PAP STAIN, SMEAR PREP            URGENCY OF TEST: WKLD
  TECHNOLOGIST: HOFF,LYNN              COMPLETE DATE: APR  1, 1993@15:06
WKLD CODE: Stain: Cytology, Routine     TEST MULTIPLY FACTOR: 2
  WKLD CODE COUNTED: NO                  WKLD CODE TALLY: 0
  COMPLETION TIME: APR  1, 1993@15:06    USER: HOFF,LYNN
  INSTITUTION: HINES, IL                 MAJOR SECTION: CYTOPATHOLOGY
  LAB SUBSECTION: CYTOPATHOLOGY          WORK AREA: CYTOPATHOLOGY
```

Hints:

Regarding the Blocks, Stains, and Procedures [LRAPSPDAT] option

l. Workload will not be automatically recorded until the system is provided with a date/time at the beginning of this option. WKLD codes are then pulled out of LABORATORY TEST file (#60) and entered into ACCESSION file (#68) to be tallied when LRNIGHT is run.

2. At the beginning of the option, five choices are displayed which control the fields automatically included in the edit template while in that option. If only a <RET> is entered, all fields will be included.

3. The default for last stain date becomes NOW, if there is no date for the entry. If there is an entry in the date/time field for the stain, no change is made.

4. Once an accession number is entered, the accession numbers will be defaulted to expedite the review process. Because of the need to review and allowing editing of the data, entry of a range of accession numbers is not possible.

5. Once the accession number is entered, all of the data already stuffed/entered will be displayed for review. The user can then accept the information and enter a date/time for the slide staining or he/she will be offered the opportunity to edit the data.

6. If the data is edited, the new date/time of staining is only changed for any new entries. This will allow accumulation of workload for recuts, etc. This option does NOT edit the previously recorded workload. Editing must be done through a separate option.

7. Once the stain information has been verified, labels can be generated using the Anat. path. Slide Labels [LRAPLM] option. Several changes have been made to this option, as follows:

   a) If there are no labels to print, a message will be printed on the printer to that effect.

   b) A new prompt has been added to allow reprinting of slide labels, with a default of “NO”. If labels are reprinted, it is done by indicating accession numbers.

Screening

A new option, Cytopathology Screen Workload [LRAPWR] has been added to enter the workload for screening by the cytotechnologist. If this is not done by a cytotech, but is done by the pathologist no workload should be tallied.

Example 3: Cytopathology screening workload

```
WASHINGTON,GEORGE 8888 Acc #: 11 Date: APR  1, 1993

                                        Slide/Ctrl     Date Slides Examined

BRONCHIAL WASHING
Smear Prep
   SMEAR PRE    Stain/Procedure
               * 1) PAP STAIN, SMEAR PREP  2          APR  1, 1993  15:09
Cell Block
   CELL BLOC    Stain/Procedure
               * 2) H & E STAIN            1          APR  1, 1993  15:09
Data displayed ok ? NO// Y  (YES)

Select Accession Number:
```

NOTE: Extracted from Display Workload for an Accession not Complete [LRUWL] option.

```
 TEST: H & E STAIN                       URGENCY OF TEST: WKLD
  TECHNOLOGIST: HOFF,LYNN                COMPLETE DATE: APR  1, 1993@15:06
WKLD CODE: Stain: H&E Automated          TEST MULTIPLY FACTOR: 1
  WKLD CODE COUNTED: NO                  WKLD CODE TALLY: 0
  COMPLETION TIME: APR  1, 1993@15:06    USER: HOFF,LYNN
  INSTITUTION: HINES, IL                 MAJOR SECTION: CYTOPATHOLOGY
  LAB SUBSECTION: CYTOPATHOLOGY          WORK AREA: CYTOPATHOLOGY
WKLD CODE: Screen:Cyto: Tech. Interp., Cell Block
  TEST MULTIPLY FACTOR: 1                WKLD CODE COUNTED: NO
  WKLD CODE TALLY: 0                     COMPLETION TIME: APR  1, 1993@15:09
  USER: HOFF,LYNN                        INSTITUTION: HINES, IL
  MAJOR SECTION: CYTOPATHOLOGY           LAB SUBSECTION: CYTOPATHOLOGY
  WORK AREA: CYTOPATHOLOGY

TEST: PAP STAIN, SMEAR PREP             URGENCY OF TEST: WKLD
  TECHNOLOGIST: HOFF,LYNN               COMPLETE DATE: APR  1, 1993@15:06
WKLD CODE: Stain: Cytology, Routine      TEST MULTIPLY FACTOR: 2
  WKLD CODE COUNTED: NO                  WKLD CODE TALLY: 0
  COMPLETION TIME: APR  1, 1993@15:06    USER: HOFF,LYNN
  INSTITUTION: HINES, IL                 MAJOR SECTION: CYTOPATHOLOGY
  LAB SUBSECTION: CYTOPATHOLOGY          WORK AREA: CYTOPATHOLOGY
WKLD CODE: Screen:Cyto: Tech. Interp., Cell Block
  TEST MULTIPLY FACTOR: 1                WKLD CODE COUNTED: NO
  WKLD CODE TALLY: 0                     COMPLETION TIME: APR  1, 1993@15:09
  USER: HOFF,LYNN                        INSTITUTION: HINES, IL
  MAJOR SECTION: CYTOPATHOLOGY           LAB SUBSECTION: CYTOPATHOLOGY
  WORK AREA: CYTOPATHOLOGY
```

Hints: Screening

1. Screening WKLD codes are captured based on the date/time entered for screening. However, if the data for the staining date/time has not been entered yet, the information for screening cannot be entered. The date/time examined must be later than the date/time stained.

2. In the case of the codes for PAP smears, determination of the appropriate code may not be totally transparent since the selection of the code is based on whether the PAP smear result is negative or positive. Based on the PAP STAIN execute code which is controlled by the Required Comment, the software will check the SNOMED morphology code. If the right codes have been entered for suspicious or positive (M69760 or M80013) or negative (M09460), the appropriate code will be selected. If the morphology code has not been entered or does not match a prompt will be displayed to select the correct code.

3. If an accession is reentered once the date/time screened has been entered, a prompt will appear to allow entry of a code for rescreening of negative GYN PAP smears for QA purposes. Previously accumulated workload cannot be edited using this option.

Report

In the Verify/Release reports, anat path [LRAPR] edit template, the WKLD code is pulled from the LABORATORY TEST file (#60) for Cytology Report and entered into ACCESSION file (#68) to be tallied when LRNIGHT is run. The date/time will be based on the Release Date/Time.

Example 4: Reporting using Extracted from Display Workload for an Accession not Complete [LRUWL] option.

```
 TEST: CYTOLOGY REPORTING                URGENCY OF TEST: WKLD
  TECHNOLOGIST: HOFF,LYNN                COMPLETE DATE: APR  1, 1993@15:13
WKLD CODE: Report/Record/File: Cytology TEST MULTIPLY FACTOR: 1
  WKLD CODE COUNTED: NO                  WKLD CODE TALLY: 0
  COMPLETION TIME: APR  1, 1993@15:13    USER: HOFF,LYNN
  INSTITUTION: HINES, IL                 MAJOR SECTION: CYTOPATHOLOGY
  LAB SUBSECTION: CYTOPATHOLOGY          WORK AREA: CYTOPATHOLOGY
```

Verification Of Data Capture

During the time when verification of data capture is necessary (i.e., testing software implementation or software changes) can be accomplished by using the Display workload for an accession [LRUWL] option in the Anatomic Pathology [LRAPW] menu. Keep in mind that this display reflects the last date/time entered for each test as it is based on data in the ACCESSION file (#68). In order to look at the actual date/time for workload for a given test when part of the workload was done at one time and part of the workload was done at a later time, it is necessary to look at WKLD DATA file (#64.1).

Surgical Pathology Workload Implementation

Overview

According to the 1992 CAP Workload Recording Manual only the workload which is performed by the non-physician staff is to be included. The work performed by the resident or attending pathologists is not included in workload calculations. Overall, it is assumed that the technical personnel do the specimen processing and staining, including frozen sections. Conversely, it is assumed that the pathologists (including residents) are responsible for performing the gross dissection and dictation. However, a provision is made for entry of the workload associated with those times when the histology personnel assist in the performance of the gross description. While some of the workload reports are geared towards production of data for the Laboratory Management Index Program (LMIP), other reports include tremendous detail that would be useful at the local level for evaluating workload and allocating resources.

In order to standardize workload recording throughout the various sections of the laboratory, the workload for surgical pathology is captured in a manner consistent with the remainder of the laboratory. Since Surgical Pathology (SP) subscript tests and functionality are not handled in the same manner as Chemistry (CH) subscript tests, this required some programming of background functionality that would allow workload recording to be recorded appropriately. Although data entry and functionality for anatomic pathology does not quite fit the traditional "order a test and enter a result model," the workload is associated with specific patient specimens and the data is stored in the LAB DATA file (#63) as it is with the other CH subscript tests. In some cases, the programming of various routines actually generates a test/procedure in order to have an entry to which the appropriate WKLD codes can be associated.

Although initial implementation efforts for the clinical laboratory sections is being focused on the data needed for the Laboratory Management Index Program (LMIP), this differentiation is not necessarily helpful in the Anatomic Pathology areas. It is necessary to do all of the file setup before workload is turned on for this section. Once workload is turned on, the functionality of specific options, including those affecting the generation of microscopic slide labels, is entirely different. The determination as to whether a workload code is designated as billable or not was made on a national level and is included in the exported version of File #64. On reports which are generated locally and include all of the workload data, those codes which are billable are designated with a "+" sign in front of the name. In the case of Surgical Pathology, the primary billable workload code is 88000.0000 SP SPECIMEN. This is assigned for each specimen accessioned. If three specimens are accessioned for a single accession it will tally three regardless of which option is used to add additional specimens to a given accession number.

In addition to the primary billable workload code 88000.0000 special stains can be designated as billable. The nine digit workload codes for these are based on a five digit prefix which specifies the group to which the stain belongs and a four digit suffix which is stain specific. At the time the nine digit workload is created, it can be designated as billable (based on the fact that special stains can be billed under the CPT system as 88311-88314. However, the codes for the H & E stains 88530.9000 and 88326.9001 should not be designated billable since the SP Specimen code includes all of the routine workload performed by the technical personnel.

The workload examples described are based on the CAP Workload Recording Manual, 1992. Recognizing that each facility might wish to select slightly different Lab Tests for the stains done at that facility, notes have been added to indicate areas that need to be entered as described.

Although there is a much larger variety of specific stains performed on surgical pathology tissue than on specimens submitted for Cytology, the basic computation of the workload seems more straightforward. For each accession, there are certain Accession WKLD Codes that are appropriate, regardless of the specimen. In addition, there is generally at least 1 paraffin block and at least 1 H & E stain for each individual specimen captured as Verify WKLD Codes. Additional stains and associated Verify WKLD Codes may then be added through the Blocks, Stains, and Procedures [LRAPSPDAT] option as appropriate for the individual case.

For each specimen there are three choices for specimen processing (i.e., paraffin blocks, plastic blocks, or frozen tissue blocks). There may be more than one of these choices for each specimen, and there may be more than one of each choice. For example, a large specimen might have a frozen tissue and several paraffin blocks.

Frozen sections should be entered as frozen tissue blocks to receive the appropriate workload credit. The workload codes associated with frozen sections (i.e., 88350, 88354, 88360, and 88353) are designated as billable tests (also in accordance with the CPT rationale). For each of these blocks, there is an associated block identification and there can be any number of stains done on that particular block. These stains can be done at the same time or at different times and should reflect the actual work flow, in as much as is possible.

Implementation Strategies

Although the file setup and overview of data capture on the following pages describe full use of the existing functionality, it is possible to utilize only certain portions.

1. Since the primary billable workload code is SP Specimen (88000.0000), which is captured upon specimen log in, the site may decide to set up the required tests and generate labels and not capture the nonbillable workload related to the stains. If this decision is made and no changes need to be made in the content of the microscopic slide labels, it is not necessary to utilize the Blocks, Stains, and Procedures [LRAPSPDAT] option to enter the date/time of staining or to add the additional special stains.

2. If the site wishes to capture the nonbillable workload for local evaluation, it is necessary to enter the date/time of processing and staining in the Blocks, Stains, and Procedures [LRAPSPDAT] option however, it is probably not critical that the date/time be exact. It would probably be appropriate for the cytotech to merely accept the default of now which would capture the workload data for the correct date and 8 hour shift unless plans exist to accurately evaluate workload distribution for that section at the actual time level.

3. If the Blocks, Stains, and Procedures [LRAPSPDAT] option will be used some detailed training on how to review/edit the data will be necessary. If the user already has experience in dealing with the Blocks, Stains, and Procedures [LRAPSPDAT] option or other data entry option which involve multiple fields, dealing with these multiple fields is not intuitive even to the more experienced user.

File Setup

File #64 (Selection of Workload Codes)

Obtain a list of the stains that are performed at your facility including routine, stains, special stains, and immunohistochemistry stains. For those stains performed at your facility create the necessary nine digit codes that will be associated with the stains.

1. There are two WKLD codes for H & E stains in the CAP Workload Recording Manual, 1992, and these have been retained as the prefixes to be used. These are 88530 for the automated and 88326 for the manual.

2. There are six groups of special stains in the CAP Workload Recording Manual, 1992, and these have been retained as the prefixes to be used. For each of the groups, several stains have been included. In some cases, these were specifically listed in the Manual. However, in other cases, field experts have indicated the appropriate groupings. These listings are not intended to be all inclusive. For stains performed at your facility that are not specifically listed, have the Histology supervisor determine the appropriate group.

Group 1 Stains (88300)

Acridine Orange/Fungus
Bile, Stein or Gmelin
Crystal Violet
Giemsa
Hemosiderin
PTAH
Amyloid
Calcium
Elastin Tissue (including Verhoeff)
Halis
Mast Cell
Unna Pappenheim

Group 2 Stains (88305)

Acid Fast (includes Auramine O)
Bodian
DNA/Feulgin
Gram
Lipofuscin
Masson Trichrome
Mucin/Mucicrum, PAS or Alcian Blue
Oil Red O
Saffron
Argentaffin
Connective Tissue Masson
Glycogen
Lendrums Phloxrin Tartrazine
Manns
Melanin
Myelin, Luxol Fast Blue Stain
PTAH/Neuropath

Group 3 Stains (88310)

Alcohol Hyaline
Bowie Juxt Glom
Fat Neutral/Nile Blye
Fungus/Gridley
Myelin/Heldenhain
Reticulin
Amido Black/Hemosiderin
Enzymes
Fatty Acid/Fischler
Fungus/Silver
Orcein Giemsa
Romanes

Group 4 Stains (88315)

Glees and Marsland	Holmes
Holzer	

Group 5 Stains (88320)

Myeline/Marchi

Group 6 Stains (88325)

Bielschowsky	Cone and Penfield

3. In order to minimize confusion, two generic codes have been created for immunohistochemistry stains done by immunoperoxidase or immunofluorescence and 88058 and 88059 respectively.

4. A specific four digit suffix code has been created for each special stain, including each of the immunopath stains. The basic scheme for number assignment for the suffixes is as follows:

.9000 - .9299	regular special stains listed above even numbers used for manual techniques odd numbers used for automated techniques
.9300 - .9599	immunohistochemistry stains (IP)
.9600 - .9699	immunohistochemistry stains (IF)
.9700 - .9899	cytology stains
.9900 - .9999	electron microscopy stains

Examples:

H & E (manual)	88526.9000	Not billable
H & E (automated)	88330.9001	Not billable
Mucin/Mucicrum Stain	88305.9080	Billable
VanGieson Stain	88300.9028	Billable
IP Alpha-1 Antichymotrypsin Stain	88058.9305	Billable

File #60

1. Certain tests names must be added exactly. To facilitate this process the tests will be exported with most of the required information; however, the test names will be exported with a WK - in front. Please edit these test names to remove the WK.

The ones that concern Surgical Pathology are:

```
WK-EXTENSIVE GROSS SURGICAL
WK-FROZEN SECTION ADDITIONAL C
WK-FROZEN SECTION BLOCK NOT RU
WK-FROZEN SECTION BLOCK RUSH
WK-FROZEN SECTION BLOCK RUSH A
WK-FROZEN SECTION H & E
WK-PARAFFIN BLOCK
WK-PARAFFIN BLOCK, ADDITIONAL
WK-PLASTIC SECTION
WK-ROUTINE GROSS SURGICAL
WK-SURG PATH REPORT PREP
WK-SURGICAL PATH REPORTING
WK-SURGICAL PATHOLOGY LOG IN
WK-TECHNICAL ASSISTANCE SURGIC
```

For those in which the addition of the WK - cut off the last portion of the name will add the last few characters as follows:

```
FROZEN SECTION ADDITIONAL CUT
FROZEN SECTION BLOCK NOT RUSH
FROZEN SECTION BLOCK RUSH ADD
PARAFFIN BLOCK, ADDITIONAL CUT
TECHNICAL ASSISTANCE SURGICAL
```

2. For the test name SURGICAL PATHOLOGY LOG IN, enter the associated accession workload codes which will be automatically credited upon log in with one of each code counted per case accessioned.

SUBSCRIPT: WORKLOAD TYPE: NEITHER

TEST NAME	PRINT NAME	ACCESSION WKLD CODE (Field 500.1)
SURGICAL PATHOLOGY LOG IN	SPLOG	88520.0000
		88522.0000

3. For the tests below, enter the associated verify workload codes. These will be counted as part of the routine data capture, as detailed in that section.

SUBSCRIPT: WORKLOAD TYPE: NEITHER

TEST NAME	PRINT NAME	VERIFY WKLD CODE (Field 500)
EXTENSIVE GROSS SURGICAL	GROSS	88502.0000
FROZEN SECTION ADDITIONAL CUT	FSAC	88360.0000
FROZEN SECTION BLOCK NOT RUSH	FSNR	88354.0000
FROZEN SECTION BLOCK RUSH	FSR	88350.0000
FROZEN SECTION BLOCK RUSH ADD	FSRA	88353.0000
PARAFFIN BLOCK	PAR BLK	88528.0000
PARAFFIN BLOCK, ADDITIONAL CUT	PARBLKA	88365.0000
PLASTIC SECTION	PLASTIC	88363.0000
ROUTINE GROSS SURGICAL	GRS SUR	88500.0000
SURG PATH REPORT PREP	RPT PR	88524.0000
SURGICAL PATH REPORTING	RPT DIS	88526.0000
TECHNICAL ASSISTANCE SURGICAL	ASSGRS	88501.0000

SUBSCRIPT: SURGICAL PATHOLOGY TYPE: NEITHER

FROZEN SECTION H & E	FS H&E	88355.0000

Example: LABORATORY TEST file (#60) entries filled out as specified for frozen section workload.

```
NAME: FROZEN SECTION ADDITIONAL CUT TYPE: NEITHER
 SUBSCRIPT: WORKLOAD    HIGHEST URGENCY ALLOWED: ROUTINE
 PRINT NAME: FSAC
 VERIFY WKLD CODE: Frozen Section: Add Cut
  VERIFY WKLD CODE #: 88360.0000 TEST MULTIPLY FACTOR: 1

NAME: FROZEN SECTION ADDITIONAL H&E TYPE: NEITHER
  SUBSCRIPT: WORKLOAD   HIGHEST URGENCY ALLOWED: STAT
  PRINT NAME: FSAH
 VERIFY WKLD CODE: Frozen Section: Add Section
 VERIFY WKLD CODE #: 88355.0000  TEST MULTIPLY FACTOR: 1

NAME: FROZEN SECTION BLOCK NOT RUSH TYPE: NEITHER
  SUBSCRIPT: WORKLOAD   HIGHEST URGENCY ALLOWED: ROUTINE
  PRINT NAME: FSNR
 VERIFY WKLD CODE: Frozen Section: Not Rush
  VERIFY WKLD CODE #: 88354.0000 TEST MULTIPLY FACTOR: 1
```

```
NAME: FROZEN SECTION BLOCK RUSH  TYPE: NEITHER
  SUBSCRIPT: WORKLOAD   HIGHEST URGENCY ALLOWED: STAT
  PRINT NAME: FSR
VERIFY WKLD CODE: Frozen Section: Rush Dx
 VERIFY WKLD CODE #: 88350.0000

NAME: FROZEN SECTION BLOCK RUSH ADD TYPE: NEITHER
 SUBSCRIPT: WORKLOAD HIGHEST URGENCY ALLOWED: STAT
 PRINT NAME: FSRA
VERIFY WKLD CODE: Frozen Section: Add Rush
 VERIFY WKLD CODE #: 88353.0000
```

4. Add tests to the LABORATORY TEST file (#60) as appropriate for those stains done at your facility. These will be available as choices at the "STAIN" prompt when entering the specific stains done on a given paraffin block, plastic section, or frozen section. These should be designated as:

```
SUBSCRIPT: SURGICAL PATHOLOGY  TYPE: NEITHER
```

The associated nine digit verify workload code for each stain should be selected from the WKLD CODE file (#64) as detailed on the previous pages.

NOTE: As detailed under data capture, a set of defaults has been established to capture routine stains (i.e., 1 H & E for each specimen entered for the accession). The LABORATORY TEST file (#60) entry for the H & E Stain must be exact!

5. If your facility performs immunoperoxidase (IP) or immunofluorescent (IF) stains, add tests to LABORATORY TEST file (#60) for those stains done at your facility. These will be available as choices at the "STAIN" prompt when entering the specific stains done on a given paraffin block, plastic section, or frozen section.

Example:

```
SUBSCRIPT: SURGICAL PATHOLOGY       TYPE: NEITHER

NAME                                PRINT NAME

IP CYTOKERATIN AE1                  I/C-AE1
88058.9327
```

Overview Of Data Capture

Log in/Accessioning

In the Log in Anat Path [LRAPLG] option, when a surgical pathology specimen(s) is accessioned the WKLD codes are entered in the ACCESSION file (#68) based on the Accession WKLD Codes entered in the LABORATORY TEST file (#60) for Surgical Pathology Log in.

The date/time assigned to the accessioning WKLD codes is based on the Date/Time Specimen Received.

For each accession there are certain Accession WKLD Codes that are appropriate regardless of the specimen (i.e., one for the initial handling and accessioning process and one for the file search for previous records).

In addition, an SP Specimen Verify WKLD Code (88000.0000) is automatically captured for each specimen. The date/time assigned is based on the Date/Time Specimen Received.

NOTE: If additional specimens are added through other data entry or edit options, this count will be appropriately incremented; however, if a specimen is removed, the count is not decremented.

Staining

In the Blocks, Stain and Procedures [LRAPSPDAT] option, additional prompts have been added to accommodate workload recording.

For each accession, there is at least one paraffin block and at least 1 H & E stain for each individual specimen captured as Verify WKLD Codes. As part of the log in process one paraffin block is created using the first nine characters of the specimen name as the paraffin block ID and one H & E is entered for each of the paraffin blocks created. This results in the ordering of a Paraffin Block test with the date/time assigned based on the data entered in this option.

If there is more than one slide cut on a paraffin block the Paraffin Block, Additional Cut test with the associated verify workload code is added with the Test Multiply Factor being incremented by the appropriate number and the date/time assigned based on the data entered in this option.

Additional Verify WKLD Codes associated with individual special stains may then be added as appropriate for the individual case by entering the appropriate data for stains through this option. The additional workload codes will be associated with the date/time stained. For those cases in which additional special stains are done, the date/time staining will be different than the original staining.

Not only do these stains appear as defaults in this option, but it will be possible to generate labels for these routine stains without entering additional data via this option.

Hints: Regarding Blocks, Stain and Procedures [LRAPSPDAT] option

l. Workload will not be automatically recorded until the system is provided with a date/time at the beginning of the Blocks, Stain and Procedures [LRASPDAT] option. WKLD codes are then pulled out of the LABORATORY TEST file (#60) and entered into the ACCESSION file (#68) to be tallied when LRNIGHT is run.

2. At the beginning of the option, three choices are displayed which control the fields automatically included in the edit template while in that option. If only a <RET> is entered all fields will be included.

3. The default for last stain date becomes NOW if there is no date for the entry. If there is a previous entry in the date/time field for the stain, this will be displayed as the default.

4. Once an accession number is entered and completed, the next accession number will be defaulted to expedite the review process. Because of the need to review and allowing editing of the data, entry of a range of accession numbers is not possible.

5. Once the accession number is entered, all of the data already available will be displayed for review. The user can then accept either the information and enter a date/time for the slide staining or he/she will be offered the opportunity to edit the data if the data is not OK as displayed.

6. If the data is edited, the new date/time of staining is only changed for any new entries. This will allow accumulation of workload for recuts, etc. This option does NOT edit the previously recorded workload. Editing previously recorded workload must be done through the Workload Manual Input [LR WKLD MANUAL INPUT] option.

7. If additional specimens are added through other data entry or edit options, paraffin blocks & associated stains are not automatically created. This only occurs in the Log in Anat Path [LRAPLG] option.

8. Once the stain information has been verified, labels can be generated using the Anat. Path. Slide Labels [LRAPLM] option. Several changes have been made to this option, as follows:

   a) If there are no labels to print, a message will be printed on the printer to that effect.

   NOTE: This is based on the New Counter field (#63.8122.07) which keeps track of whether the label has been printed or not.

   b) A new prompt has been added to allow reprinting of slide labels, with a default of "NO". If labels are reprinted, it is done by indicating accession numbers.

Frozen sections

As shown in Example 2 in the AP User Manual, additional prompts have been added Blocks, Stain, and Procedures [LRAPSPDAT] edit template, to accommodate workload recording for frozen sections. When entering the option, specify #3, Frozen Section Block. If you do this, you will only see prompts relating to the frozen section in the edit template.

For each frozen section, enter the date/time the frozen section was performed and stained. The display will include everything it has accumulated for that accession to date and ask if the data displayed is OK. Enter a <RET> for "NO" and the prompts will allow entry of the data for the frozen section, including the Frozen Tissue ID (e.g., the nine digits might be ESO FS1 for esophagus frozen section #1 followed by ESO FS2 etc.,). Once the date/time is entered the Frozen Tissue Block Type Rush or Not Rush can be entered so that the appropriate workload credit is captured.

NOTES:
1. Slide labels for the frozen sections can be generated at this time if desired.

2. The SNOMED Procedure codes have no relationship to the capture of the WKLD codes for the frozen sections.

Recuts

As shown in Examples #2 and #3 in the AP User Manual, additional prompts have been added to the Blocks, Stain and Procedures [LRAPSPDAT] edit template, to accommodate workload recording. This includes additional workload for recuts which are requested and performed at a later time than the original processing/staining.

When going into the option, additional recuts of blocks for the same stain or additional stains can be added by just adjusting the data accordingly. The new date/time of staining is only changed for any new entries. This will allow accumulation of the new workload for recuts, etc.

NOTE: If additional blocks are created for RECUTS (to allow identification of recuts to print on the label), this will increment the PARAFFIN BLOCK count by 1 (or the number of new blocks created).

When looking at the data display, the total number slides/controls will be displayed; however, only the most recent date/time of staining will be displayed. This may seem confusing; however, the workload data will reflect the actual numbers for each date/time based on the data entry.

Example: Two H & E done at 7:10 a. m. and two H & E done at 4:00 p. m. would appear as four H & E done at 4:00 p. m. using the Display accession workload option, however the workload data captured in the WKLD DATA file (#64.1) reflects two at 7:10 a. m. and two at 4:00 p. m.

NOTES:
1. This option does not edit the previously recorded workload. Editing of previously recorded workload (i.e., changing or eliminating) previously captured data must be done through a separate manual edit using the Workload Manual Input [LR WKLD MANUAL INPUT] option.

2. Slide labels for the recuts can be generated at this time if desired. Only the new labels will be included since the software keeps track of which ones have already printed.

Technical Assistance during Surgical Path Gross

If the histology personnel (i.e., non physician) assist in the performance of the surgical pathology gross description, this workload can be recorded using the Surg Path Gross Assistance [LRAPWRSP] option. This option will allow entry of the date/time of the gross description/cutting and will allow designation of the type of assistance (i.e., routine gross, extensive gross, or technical assistance). Workload data entered through this option is tallied in the usual manner and is accession specific, (i.e., it is not treated as manual input workload).

Report

In the Verify/Release Reports, anat Path [LRAPR] edit template the WKLD code is pulled from LABORATORY TEST file (#60) for Surgical Pathology Report and entered into ACCESSION file (#68) to be tallied when LRNIGHT is run. The date/time will be based on the Release Date/Time.

Verification Of Data Capture

During those times when verification of data capture is necessary (i.e., testing software implementation or software changes) can be accomplished by using the Display Workload for an Accession [LRUWL] option in the Anatomic Pathology menu. Keep in mind that this option display reflects the last date/time entered for each test as it is based on data in the ACCESSION file (#68). In order to look at the actual date/time for workload for a given test (when part of the work was done at one time and part of the work was done at a later time) it is necessary to look at WKLD DATA file (#64.1).

Example 1: Data captured for initial portion (staining/report not completed).

```
Select Anatomic pathology workload Option: DW  Display workload for an
accession

Select ACCESSION AREA: SURG  SURGICAL PATHOLOGY

Select SURGICAL PATHOLOGY Date: 1993// <RET>  1993

Select SURGICAL PATHOLOGY Accession Number for  1993: 16

 TEST: SURGICAL PATHOLOGY LOG IN        URGENCY OF TEST: WKLD
  TECHNOLOGIST: HOFFSTADTER,LYNN        COMPLETE DATE: JUL  2, 1993@06:48
WKLD CODE: Surgical Path. Init. Handling
  TEST MULTIPLY FACTOR: 1               WKLD CODE COUNTED: YES
  WKLD CODE TALLY: 1                    COMPLETION TIME: JUL  2, 1993@06:48
  USER: HOFFSTADTER,LYNN                INSTITUTION: HINES, IL
  MAJOR SECTION: SURGICAL PATHOLOGY     LAB SUBSECTION: SURGICAL PATHOLOGY
  WORK AREA: SURGICAL PATHOLOGY
WKLD CODE: Transcription File Search Retrieve
  TEST MULTIPLY FACTOR: 1               WKLD CODE COUNTED: YES
  WKLD CODE TALLY: 1                    COMPLETION TIME: JUL  2, 1993@06:48
  USER: STADTER,LYNN                    INSTITUTION: HINES, IL
  MAJOR SECTION: SURGICAL PATHOLOGY     LAB SUBSECTION: SURGICAL PATHOLOGY
  WORK AREA: SURGICAL PATHOLOGY
WKLD CODE: SP SPECIMEN                  TEST MULTIPLY FACTOR: 1
  WKLD CODE COUNTED: YES                 WKLD CODE TALLY: 1
  COMPLETION TIME: JUL  2, 1993@06:48   USER: HOFFSTADTER,LYNN
  INSTITUTION: HINES, IL                MAJOR SECTION: SURGICAL PATHOLOGY
  LAB SUBSECTION: SURGICAL PATHOLOGY    WORK AREA: SURGICAL PATHOLOGY
```

NOTE: There is one test (SURGICAL PATHOLOGY LOG IN) with two associated accession workload codes (Surgical Path. Init. Handling and Transcription File Search Retrieve). In addition the SP Specimen workload code was added with no associated test.

Example 2: Additional data captured for staining & completion/release of report.

```
Select SURGICAL PATHOLOGY Accession Number for  1993: 16
 TEST: H & E STAIN                      URGENCY OF TEST: WKLD
  TECHNOLOGIST: HOFFSTADTER,LYNN        COMPLETE DATE: JUL  2, 1993@07:10
WKLD CODE: Stain H&E Automated          TEST MULTIPLY FACTOR: 4
  WKLD CODE COUNTED: YES                WKLD CODE TALLY: 4
  COMPLETION TIME: JUL  2, 1993@07:10   USER: HOFFSTADTER,LYNN
  INSTITUTION: HINES, IL                MAJOR SECTION: SURGICAL PATHOLOGY
  LAB SUBSECTION: SURGICAL PATHOLOGY    WORK AREA: SURGICAL PATHOLOGY
 TEST: MASSON S TRICHROME STAIN         URGENCY OF TEST: WKLD
  TECHNOLOGIST: HOFFSTADTER,LYNN        COMPLETE DATE: JUL  2, 1993@07:10
WKLD CODE: Connective Tissue Masson     TEST MULTIPLY FACTOR: 2
  WKLD CODE COUNTED: YES                WKLD CODE TALLY: 2
  COMPLETION TIME: JUL  2, 1993@07:10   USER: HOFFSTADTER,LYNN
  INSTITUTION: HINES, IL                MAJOR SECTION: SURGICAL PATHOLOGY
  LAB SUBSECTION: SURGICAL PATHOLOGY    WORK AREA: SURGICAL PATHOLOGY
 TEST: PARAFFIN BLOCK                   URGENCY OF TEST: WKLD
  TECHNOLOGIST: HOFFSTADTER,LYNN        COMPLETE DATE: JUL  2, 1993@07:10
WKLD CODE: Sections Paraffin  Surg. Path.
  TEST MULTIPLY FACTOR: 3               WKLD CODE COUNTED: YES
  WKLD CODE TALLY: 3                    COMPLETION TIME: JUL  2, 1993@07:10
  USER: HOFFSTADTER,LYNN                INSTITUTION: HINES, IL
  MAJOR SECTION: SURGICAL PATHOLOGY     LAB SUBSECTION: SURGICAL PATHOLOGY
  WORK AREA: SURGICAL PATHOLOGY
 TEST: PARAFFIN BLOCK, ADDITIONAL CUT   URGENCY OF TEST: WKLD
  TECHNOLOGIST: HOFF,LYNN               COMPLETE DATE: JUL  2, 1993@07:10
```

```
WKLD CODE: Sections Paraffin  SP  Cut   TEST MULTIPLY FACTOR: 4
  WKLD CODE COUNTED: YES                WKLD CODE TALLY: 4
  COMPLETION TIME: JUL  2, 1993@07:10   USER: HOFFSTADTER,LYNN
  INSTITUTION: HINES, IL                MAJOR SECTION: SURGICAL PATHOLOGY
  LAB SUBSECTION: SURGICAL PATHOLOGY    WORK AREA: SURGICAL PATHOLOGY
 TEST: SURGICAL PATH REPORTING          URGENCY OF TEST: WKLD
  TECHNOLOGIST: HOFFSTADTER,LYNN        COMPLETE DATE: JUL  3, 1993@16:00
WKLD CODE: Transcription Report Disp.   TEST MULTIPLY FACTOR: 1
  WKLD CODE COUNTED: YES                 WKLD CODE TALLY: 1
  COMPLETION TIME: JUL  3, 1993@16:00   USER: STADTER,LYNN
  INSTITUTION: HINES, IL                MAJOR SECTION: SURGICAL PATHOLOGY
  LAB SUBSECTION: SURGICAL PATHOLOGY    WORK AREA: SURGICAL PATHOLOGY
TEST: SURGICAL PATHOLOGY LOG IN        URGENCY OF TEST: WKLD
  TECHNOLOGIST: HOFFSTADTER,LYNN        COMPLETE DATE: JUL  2, 1993@06:48
WKLD CODE: Surgical Path. Init. Handling
  TEST MULTIPLY FACTOR: 1               WKLD CODE COUNTED: YES
  WKLD CODE TALLY: 1                    COMPLETION TIME: JUL  2, 1993@06:48
  USER: HOFFSTADTER,LYNN                INSTITUTION: HINES, IL
  MAJOR SECTION: SURGICAL PATHOLOGY     LAB SUBSECTION: SURGICAL PATHOLOGY
  WORK AREA: SURGICAL PATHOLOGY
WKLD CODE: Transcription File Search Retrieve
  TEST MULTIPLY FACTOR: 1               WKLD CODE COUNTED: YES
  WKLD CODE TALLY: 1                    COMPLETION TIME: JUL  2, 1993@06:48
  USER: HOFFSTADTER,LYNN                INSTITUTION: HINES, IL
  MAJOR SECTION: SURGICAL PATHOLOGY     LAB SUBSECTION: SURGICAL PATHOLOGY
  WORK AREA: SURGICAL PATHOLOGY
WKLD CODE: SP SPECIMEN                  TEST MULTIPLY FACTOR: 3
  WKLD CODE COUNTED: YES                 WKLD CODE TALLY: 3
  COMPLETION TIME: JUL  2, 1993@06:48   USER: HOFFSTADTER,LYNN
  INSTITUTION: HINES, IL                MAJOR SECTION: SURGICAL PATHOLOGY
  LAB SUBSECTION: SURGICAL PATHOLOGY    WORK AREA: SURGICAL PATHOLOGY
```

NOTE: There are five additional tests which have been added since Example 1.

```
   TEST: H & E STAIN                      URGENCY OF TEST: WKLD
   TEST: MASSON S TRICHROME STAIN         URGENCY OF TEST: WKLD
   TEST: PARAFFIN BLOCK                   URGENCY OF TEST: WKLD
   TEST: PARAFFIN BLOCK, ADDITIONAL CUT   URGENCY OF TEST: WKLD
   TEST: SURGICAL PATH REPORTING          URGENCY OF TEST: WKLD
```

There are two additional SP Specimen counts as additional specimens were received or entered at a later time; however, since the date/time is only entered at the time the first specimen is accessioned, all three are assigned to the same date/time completed.

Autopsy Workload Implementation

Overview

According to the 1992 CAP Workload Recording Manual, only workload which is performed by the non- physician staff is to be included. The work performed by the resident or attending pathologists is not included in workload calculations. Conversely, it is assumed that the pathologists (including residents) are responsible for performing the gross dissection and dictation. While some of the workload reports are geared towards production of data for the Laboratory Management Index Program (LMIP), other reports include tremendous detail that would be useful at the local level for evaluating workload and allocating resources. These local reports will include workload data for autopsy if entered.

Although extensive efforts have been made to standardize workload recording throughout the various sections of the laboratory and the other sections of anatomic pathology, the workload for autopsy pathology is not captured in a manner totally consistent with the remainder of the laboratory. Since there are only two autopsy specific workload codes included in the 1992 CAP Workload Recording Manual and since autopsy workload is considered to be nonbillable, the workload associated with the clerical functions (i.e., 88045.0000) identification, logging, reporting, coding, and filing is all assigned to the date/time accessioned. The same is true of the deiner activities (i.e. 88040.0000) assisting with the autopsy, morgue cleaning, and supplies.

Since Autopsy Chemistry (AU) subscript tests and functionality are not handled in the same manner as CH subscript tests, this required some programming of background functionality that would allow workload recording to be recorded appropriately. Although data entry and functionality for anatomic pathology does not quite fit the traditional order a test and enter a result model, the workload is associated with specific patients and the data is stored in the LAB DATA file (#63) as it is with the other CH subscript tests. In some cases the programming of various routines actually generates a test/procedure in order to have an entry to which the appropriate WKLD codes can be associated.

Although initial implementation efforts for the clinical laboratory sections is being focused on the data needed for the Laboratory Management Index Program (LMIP), this differentiation is not necessarily helpful in the Anatomic Pathology areas. It is necessary to do all of the file setup before workload is turned on for this section. Once workload is turned on, the functionality of specific options, including those affecting the generation of microscopic slide labels, is entirely different.

The determination as to whether a workload code is designated as billable or not was made on a national level and is included in the exported version of WKLD CODE file (#64). The five-digit prefix cannot be edited at the local level. Reports that are generated locally and includes all of the workload data for those codes which are billable are designated with a + sign in front of the name. For the Autopsy area, there are no billable tests. The Autopsy area tests would be counted in the total on site tests column.

File Setup

File #64 (Selection of Workload Codes)

For the most part, the only stain used for autopsy is the Autopsy H & E stain, which is done on paraffin blocks. For other special stains done on specific cases, see the section on Surgical Pathology for the necessary details.

File #60

1. Certain tests names must be added exactly. To facilitate this process, the tests will be exported with most of the required information; however, the test names will be exported with a WK- in front. Please edit these test names to remove the WK-.

The ones that concern Autopsy Pathology are:

```
WK-AUTOPSY H & E
WK-AUTOPSY LOG IN
WK-AUTOPSY SECTION COMPLETE

NAME: AUTOPSY H & E                  TYPE: NEITHER
  SUBSCRIPT: SURGICAL PATHOLOGY         HIGHEST URGENCY ALLOWED: ROUTINE
  FORCED URGENCY: WKL                   PRINT NAME: H & E
VERIFY WKLD CODE: Sections Paraffin Aut Slide
  VERIFY WKLD CODE #: 88055.0000        TEST MULTIPLY FACTOR: 1


NAME: AUTOPSY LOG IN                 TYPE: NEITHER
  SUBSCRIPT: WORKLOAD                   HIGHEST URGENCY ALLOWED: ROUTINE
  FORCED URGENCY: WKL                   PRINT NAME: AU LOG
ACCESSION WKLD CODE: Autopsy  Attendant ACCESSION WKLD CODE #: 88040.0000
  TEST MULTIPLY FACTOR: 1
ACCESSION WKLD CODE: Initial Handling Clerical Aut
  ACCESSION WKLD CODE #: 88045.0000     TEST MULTIPLY FACTOR: 1


NAME: AUTOPSY SECTION COMPLETE       TYPE: NEITHER
  SUBSCRIPT: WORKLOAD                   HIGHEST URGENCY ALLOWED: ROUTINE
  FORCED URGENCY: WKL                   PRINT NAME: AUT SEC
VERIFY WKLD CODE: Sections Paraffin Aut compl
  VERIFY WKLD CODE #: 88050.0000        TEST MULTIPLY FACTOR: 1
```

File #69.2

In order to create default paraffin block ID for autopsy cases the multiple field Generic Labels exists in LAB SECTION PRINT file (#69.2). Enter the text as you want it to appear on the paraffin block ID and the label considering the number of characters which will appear on the label is limited to nine.

Overview Of Data Capture

Log in/Accessioning

In the Log in, Anat Path [LRAPLG] option, when an AUTOPSY is accessioned the WKLD codes are entered in the ACCESSION file (#68) based on the Accession WKLD Codes entered in LABORATORY TEST file (#60) for Autopsy Log in.

There are only two autopsy specific workload codes included in the 1992 CAP Workload Recording Manual (i.e., 88045.0000 Initial Handling Clerical Autopsy and 88040.0000 Autopsy Attendant). The 88045.0000 workload code includes all of the workload associated with the clerical functions (i.e., identification, logging, reporting, coding, and filing). The 88040.0000 workload code included the workload associated with the deiner activities (i.e., assisting with the autopsy, morgue cleaning, and supplies).

The date/time assigned to both the Accession WKLD Codes is based on the Date/Time the autopsy is performed.

Processing/Staining

There are two mechanisms by which workload related to blocks and stains may be captured and two mechanisms by which labels can be generated. Workload will be captured only if the user access the Blocks, stains, and procedures [LRAPSPDAT] option.

(1) If generic labels are utilized as described in Example #4 of the Anat Path Slide Labels [LRAPLM] option in the Anatomic Pathology User Manual, this data will display as the defaults in the Blocks, Stains, and Procedures [LRAPSPDAT] option.

(2) If generic labels are not utilized data can be entered as desired. If this is done, workload will be captured for each of the stains entered as detailed for special stains in the Surgical Pathology workload section.

If the user does not care about the capture of workload for blocks and stains for autopsies, the user can still generate labels using the Autopsy Slide Labels [LRAUMLK] option. Since these are nonbillable tests, it is totally up to the user to determine which best suits the workflow.

If the generic label information is defined in the LAB SECTION PRINT file (#69.2) it will be displayed as defaults, with the AUTOPSY H & E shown as the stain. The associated Verify WKLD Code will be 88055.0000, Sections Paraffin Aut Slide.

Example: Based on the following setup created by using Edit pathology parameters [LRAPHDR] option.

```
Select GENERIC LABEL: PROSTATE// ?
 ANSWER WITH GENERIC LIST
CHOOSE FROM:
   1               HEART
   2               R LUNG
   3               L LUNG
   4               LIVER
   5               SPLEEN
   6               L KIDNEY
   7               R KIDNEY
   8               L ADRENAL
   9               R ADRENAL
   10              PROSTATE
```

The labels then generated by the Anat Path Slide Labels [LRAPLM] option would be:

```
Select Anatomic pathology labels Option: LM  Anat path slide labels

Select ANATOMIC PATHOLOGY section: AU  AUTOPSY
Enter year: 1993// <RET>  (1993)  1993

Reprint slide labels ? NO// <RET>  (NO)

Add/Delete slide labels to print ? NO//  <RET> (NO)

Print AUTOPSY slide labels for 1993

Start with accession number: 3
Go    to   accession number: LAST// 3
DEVICE: HOME//  (Enter Your Printer's Name) <RET>

AU          AU          AU          AU          AU          AU
93-3        93-3        93-3        93-3        93-3        93-3
HEART       R LUNG      L LUNG      LIVER       SPLEEN      L KIDNEY
H & E       H & E       H & E       H & E       H & E       H & E
VAMC 578    VAMC 578    VAMC 578    VAMC 578    VAMC 578    VAMC 578

AU          AU          AU          AU          AU          AU
93-3        93-3        93-3        93-3
R KIDNEY    L ADRENAL   R ADRENAL   PROSTATE
H & E       H & E       H & E       H & E
VAMC 578    VAMC 578    VAMC 578    VAMC 578    VAMC 578    VAMC 578
```

Additional prompts have been added to the Blocks, Stains, and Procedures [LRAPSPDAT] option to accommodate workload recording if the user wishes to record the workload for the blocks/stains. If the user merely enters the date/time stain and accepts the defaults based on the generic labels, this results in the test Autopsy Section Complete and a Verify WKLD Code of 88050.0000 (Sections Paraffin Aut compl) with an appropriate Test Multiply Factor which reflects the number of labels.

Example: Based on the generic list shown above

Select Blocks, Stains, and Procedures option

```
Select ANATOMIC PATHOLOGY section: AU  AUTOPSY

Enter year: 1993//  <RET> (1993)  1993

Select Accession Number: 1  for 1993
AMUNDSON,HOUSTON  ID: 102-03-8340

Date/time blocks prepared: NOW// <RET> (AUG 03, 1993@15:01) OK ? YES// <RET>
(YES)
Date/time  slides stained: NOW// <RET> (AUG 03, 1993@15:01) OK ? YES// <RET>
(YES)

AMUNDSON,HOUSTON 8340 Acc #: 1 Date: JUN 28, 1993  08:26
                                      Slide/Ctrl  Last stain/block date
HEART
Paraffin Block
HEART             Stain/Procedure                        AUG  3, 1993  15:01
                AUTOPSY H & E                   1        AUG  3, 1993  15:01
R LUNG
Paraffin Block
   R LUNG            Stain/Procedure                     AUG  3, 1993  15:01
                AUTOPSY H & E                   1        AUG  3, 1993  15:01
L LUNG
Paraffin Block
   L LUNG            Stain/Procedure                     AUG  3, 1993  15:01
                AUTOPSY H & E                   1        AUG  3, 1993  15:01
LIVER
Paraffin Block
   LIVER             Stain/Procedure                     AUG  3, 1993  15:01
                AUTOPSY H & E                   1        AUG  3, 1993  15:01
SPLEEN
Paraffin Block
   SPLEEN            Stain/Procedure                      AUG  3, 1993  15:01
                AUTOPSY H & E                   1         AUG  3, 1993  15:01
L KIDNEY
 ^  TO STOP: ^

Data displayed ok ? NO//YES
```

Report

Although autopsy reports can now be verified/released, the workload associated with reported is included in the Accession WKLD Code 88045.0000, which is captured upon log in. No additional Verify WKLD Codes are captured in the Verify/Release Reports, Anat Path [LRAPR] edit template for autopsies.

Verification Of Data Capture

During those times when verification of data capture is necessary (i.e., testing software implementation or software changes) can be accomplished by using the Display Workload for an Accession [LRUWL] option in the Anatomic Pathology [LRAPW] menu. Keep in mind that this display reflects the last date/time entered for each test as it is based on data in the ACCESSION file (#68). In order to look at the actual date/time for workload for a given test when part of the workload was done at one time and part of the workload was done at a later time, it is necessary to look at the WORKLOAD WKLD DATA file (#64.1).

Example 1: Data captured based on examples included above

> **NOTE:** The routine which tallies workload has not yet run.

```
Select AUTOPSY Accession Number for  1993: 3

 TEST: AUTOPSY LOG IN                    URGENCY OF TEST: WKLD
  TECHNOLOGIST: HOFFSTADTER,LYNN         COMPLETE DATE: AUG 16, 1993@08:00
WKLD CODE: Autopsy  Attendant            TEST MULTIPLY FACTOR: 1
  WKLD CODE COUNTED: NO                  WKLD CODE TALLY: 0
  COMPLETION TIME: AUG 16, 1993@08:00    USER: HOFFSTADTER,LYNN
  INSTITUTION: HINES, IL                 MAJOR SECTION: AUTOPSY
  LAB SUBSECTION: AUTOPSY                WORK AREA: AUTOPSY
WKLD CODE: Initial Handling Clerical Aut
  TEST MULTIPLY FACTOR: 1                WKLD CODE COUNTED: NO
  WKLD CODE TALLY: 0                     COMPLETION TIME: AUG 16, 1993@08:00
  USER: HOFFSTADTER,LYNN                 INSTITUTION: HINES, IL
  MAJOR SECTION: AUTOPSY                 LAB SUBSECTION: AUTOPSY
  WORK AREA: AUTOPSY
TEST: AUTOPSY SECTION COMPLETE          URGENCY OF TEST: WKLD
  TECHNOLOGIST: HOFFSTADTER,LYNN         COMPLETE DATE: AUG 16, 1993@15:01
WKLD CODE: Sections Paraffin Aut compl   TEST MULTIPLY FACTOR: 10
  WKLD CODE COUNTED: NO                  WKLD CODE TALLY: 0
  COMPLETION TIME: AUG 16, 1993@15:01    USER: HOFFSTADTER,LYNN
  INSTITUTION: HINES, IL                 MAJOR SECTION: AUTOPSY
  LAB SUBSECTION: AUTOPSY                WORK AREA: AUTOPSY
```

> **NOTE:** Only accessioning workload codes will be captured if **a)** No data is entered through Blocks, Stain and Procedures [LRAPSPDAT] option and **b)** Slide labels are generated by the Autopsy Slide Label option [LRAUMLK].

Electron Microscopy Workload Implementation

LMIP Overview

While some of the workload reports are geared towards production of data for the Laboratory Management Index Program (LMIP), other reports include tremendous detail which would be useful at the local level for evaluating workload and allocating resources.

In order to standardize workload recording throughout the various sections of the laboratory, the workload for electron microscopy is captured in a manner consistent with the remainder of the laboratory. Since Electron Microscopy (EM) subscript tests and functionality are not handled in the same manner as Chemistry (CH) subscript tests, this required some programming of background functionality which would allow workload recording to be recorded appropriately. Although data entry and functionality for electron microscopy does not quite fit the traditional order a test and enter a result model, the workload is associated with specific patient specimens and the data is stored in File #63 as it is with the other CH subscript tests. In some cases, the programming of various routines actually generates a test/procedure in order to have an entry to which the appropriate WKLD codes can be associated.

Although initial implementation efforts for the clinical laboratory sections is being focused on the data needed for the Laboratory Management Index Program (LMIP), this differentiation is not necessarily helpful in the Anatomic Pathology areas, including electron microscopy. It is necessary to do all of the file setup before workload is turned on for this section; however, data entry for workload for electron microscopy is very simple. Although the microscopic slide label option will print labels based on the data entered, these labels are not generally of use in this area.

The determination as to whether a workload code is designated as billable or not was made on a national level and is included in the exported version of WKLD CODE file (#64). That is not editable at the local level for the five digit prefix. On reports which are generated locally and include all of the workload data, those codes which are billable are designated with a + sign in front of the name. In the case of Electron Microscopy, the primary billable workload code is 88057.0000 EM SPECIMEN. This is assigned for each specimen accessioned (i.e., if three specimens are accessioned for a single accession, it will tally three, regardless of which option is used to add additional specimens to a given accession number). This is consistent with Surgical Pathology and Cytopathology.

In addition to the primary billable workload code 88057.0000, there are some other Accession WKLD Codes and some Verify WKLD Codes which can be captured for local evaluation purposes. The codes for specimen preparation, embedding, cutting, mounting, etc., should not be designated as billable.

General Overview

Consistent with the general philosophy of trying to make the majority of workload recording as transparent as possible and trying to, in general, minimize the amount of data input for the maximum benefit, a mechanism has been developed for each facility to establish routine protocols for handling of electron microscopy specimens. Although this requires a small amount of planning and setup, the benefits will be visible in the minimum amount of data entry required to record all of the workload information for each specimen, even for that which is nonbillable.

In order to capture the workload associated with log in and previous record retrieval /review, the EM LOG IN test should have associated ACCESSION WKLD CODE (Electron Micro Preparation 88200.0000). This includes logging, processing, knife preparation, scope maintenance, recording, and reporting.

For each electron microscopy specimen, this creates an EPON BLOCK which has the two procedures attached, either GRID EM or THICK SECTION EM. The default number of slides for each procedure is one. But this can be defined throughout the Edit pathology parameters [LRAPHDR] option, using the fields ROUTINE PROCEDURE 1 and ROUTINE PROCEDURE 2.

Implementation Strategies

Although the file setup and overview of data capture on the following pages describe full use of the existing functionality, it is possible to utilize only certain portions.

1. Since the primary billable workload code is EM SPECIMEN (88057.0000), which is captured upon specimen log in, the site can decide to set up the workload profiles and generate labels and not capture the nonbillable workload related to the preparation techniques, stains and screening. If this decision is made, it is not necessary to utilize the Blocks, Stains, and Procedures [LRAPSPDAT] option to enter the date/time blocks and sections are prepared.

2. If the site wishes to capture the nonbillable workload for local evaluation, it is necessary to enter the date/time blocks and sections are prepared in the Blocks, Stains, and Procedures [LRAPSPDAT] option; however, it is probably not critical that the date/time be exact. It would probably be appropriate for the user to merely accept the default of now which would capture the workload data for the correct date and 8 hour shift unless plans exist to accurately evaluate workload distribution for that section at the actual time level.

3. If the Blocks, Stains, and Procedures [LRAPSPDAT] option will be used, some detailed training on how to review/edit the data will be necessary unless the user already has experience in dealing with the Blocks, Stains, and Procedures [LRAPSPDAT] option or other data entry option which involve multiple fields. Dealing with these multiple fields is not intuitive even to the more experienced user; however, since there is only a single preparation technique (multiple) for Electron Microscopy, this is not as difficult to understand as it is in Surgical Pathology or Cytopathology.

File Setup

File #64

The entry in File #64 for the billable code should be as follows:

```
PROCEDURE: +EM Specimen                  WKLD CODE: 88057.0000
  WKLD UNIT WEIGHT: 1                    BILLABLE PROCEDURE: YES
  UNIT FOR COUNT: SPEC                   MANUFACTURER: NOT SPECIFIED
  WKLD CODE LAB SECTION: Electron Microscopy
SYNONYM: SPECIMEN EM
```

File #60

1. Certain tests names must be added exactly. To facilitate this process, the tests will be exported with most of the required information; however, the test names will be exported with a "WK-" in front. Please edit these test names to remove the WK-. The ones that concern Electron Microscopy are:

```
WK-EM EMBEDDING
WK-EM LOG IN
WK-EM PRINT/ENLARGEMENT
WK-EM SCAN AND PHOTO
WK-GRID EM
WK-THICK SECTION EM
```

2. Once the names are edited, the information should be as follows:

```
NAME: EM EMBEDDING                      TYPE: NEITHER
  SUBSCRIPT: WORKLOAD                   HIGHEST URGENCY ALLOWED: ROUTINE
  PRINT NAME: EM-EMB
SYNONYM: ELECTRON MICROSCOPY EMBEDDING
VERIFY WKLD CODE: Electron Micro Embedding
  VERIFY WKLD CODE #: 88202.0000        TEST MULTIPLY FACTOR: 1
NAME: EM LOG IN                         TYPE: NEITHER
  SUBSCRIPT: WORKLOAD                   HIGHEST URGENCY ALLOWED: ROUTINE
  PRINT NAME: EM LOG
SYNONYM: ELECTRON MICROSCOPY LOG IN
ACCESSION WKLD CODE: Electron Micro Preparation
  ACCESSION WKLD CODE #: 88200.0000     TEST MULTIPLY FACTOR: 1
NAME: EM PRINT/ENLARGEMENT              TYPE: NEITHER
  SUBSCRIPT: WORKLOAD                   HIGHEST URGENCY ALLOWED: ROUTINE
  PRINT NAME: PRINT
VERIFY WKLD CODE: Photography Print Enlarge
  VERIFY WKLD CODE #: 88435.0000        TEST MULTIPLY FACTOR: 1
NAME: EM SCAN AND PHOTO                 TYPE: NEITHER
  SUBSCRIPT: WORKLOAD                   HIGHEST URGENCY ALLOWED: ROUTINE
  PRINT NAME: EMSCAN
SYNONYM: ELECTRON MICROSCOPY SCAN AND PHOTO
VERIFY WKLD CODE: Electron Micro Scan and Photo
  VERIFY WKLD CODE #: 88204.0000        TEST MULTIPLY FACTOR: 1

NAME: GRID EM                           TYPE: NEITHER
  SUBSCRIPT: ELECTRON MICROSCOPY        TEST COST: 2920113.11
  HIGHEST URGENCY ALLOWED: ROUTINE      PRINT NAME: GRID
SYNONYM: EM THIN SECTION
VERIFY WKLD CODE: Electron Micro Thin Section
  VERIFY WKLD CODE #: 88208.0000        TEST MULTIPLY FACTOR: 1

NAME: THICK SECTION EM                  TYPE: NEITHER
  SUBSCRIPT: ELECTRON MICROSCOPY        HIGHEST URGENCY ALLOWED: ROUTINE
  PRINT NAME: EM SLDE
SYNONYM: EM THICK SECTION
SYNONYM: SLIDE, ELECTRON MICROSCOPY
VERIFY WKLD CODE: Electron Micro Thick Section
  VERIFY WKLD CODE #: 88206.0000        TEST MULTIPLY FACTOR: 1
```

Overview of Data Capture

Log in/Accessioning

In the Log in, Anat Path [LRAPLG] option, when an (EM) is accessioned, the Accession WKLD Codes associated with EM Log in and the WKLD Code EM Specimen are entered in the ACCESSION file (#68).

The date/time assigned to the accessioning WKLD codes is based on the Date/Time Specimen Received.

If additional specimens are added through other data entry or edit options, this count will be appropriately incremented. However, if a specimen is removed, the count is not decremented.

Example: If no other data entry is done, the accumulated workload from Display Workload for an Accession [LRUWL] would be as follows:

```
Select EM Date: 1993//  <RET>  1993

Select EM Accession Number for  1993: 6

 TEST: EM LOG IN                          URGENCY OF TEST: WKLD
  TECHNOLOGIST: LOFTSADTER,FLYNN          COMPLETE DATE: AUG 19, 1993@12:13
WKLD CODE: Electron Micro Preparation     TEST MULTIPLY FACTOR: 1
  WKLD CODE COUNTED: NO                   WKLD CODE TALLY: 0
  COMPLETION TIME: AUG 19, 1993@12:13     USER: LOFTSADTER,FLYNN
  INSTITUTION: HINES, IL                  MAJOR SECTION: EM
  LAB SUBSECTION: EM                      WORK AREA: EM
WKLD CODE: EM Specimen                    TEST MULTIPLY FACTOR: 1
  WKLD CODE COUNTED: NO                   WKLD CODE TALLY: 0
  COMPLETION TIME: AUG 19, 1993@12:13     USER: LOFTSADTER,FLYNN
  INSTITUTION: HINES, IL                  MAJOR SECTION: EM
  LAB SUBSECTION: EM                      WORK AREA: EM
```

NOTE: There is a test with an associated ACCESSION WKLD CODE and the billable EM SPECIMEN WKLD CODE which is not related to a specific test in the LABORATORY TEST file (#60).

Processing

The workload for specimen preparation/processing comes from the Verify code attached to the EM EMBEDDING test in the LABORATORY TEST file (#60) if data is entered through the Blocks, Stains, and Procedures [LRAPSPDAT] option. The data/time assigned to this Verify code is based on the response to the "DATE/TIME PROCESSED" prompt.

Example 1: No changes made to default setup

```
Select Accession Number: 5  for 1993
BEAR,YOGI  ID: 004-95-8671
Date/time blocks prepared: NOW// <RET> (AUG 19, 1993@10:48) OK ? YES// <RET>
(YES)
Date/time sections prepared: NOW// <RET> (AUG 19, 1993@10:48) OK ? YES// <RET>
(YES)
BEAR,YOGI 8671 Acc #: 5 Date: AUG 19, 1993
Count                   Last section/block date
LIVER BX
Epon Block
   EPON 1            Stain/Procedure                    AUG 19, 1993  10:48
                     GRID EM              4             AUG 19, 1993  10:48
                     THICK SECTION EM     1             AUG 19, 1993  10:40

Data displayed ok ? NO// Y  (YES)
```

NOTE: Extract from Display workload for an accession based on the above data entry.

```
Select EM Accession Number for  1993: 5
 TEST: EM LOG IN                          URGENCY OF TEST: WKLD
  TECHNOLOGIST: LOFTSADTER,FLYNN          COMPLETE DATE: AUG 19, 1993@10:46
WKLD CODE: Electron Micro Preparation     TEST MULTIPLY FACTOR: 1
  WKLD CODE COUNTED: NO                   WKLD CODE TALLY: 0
  COMPLETION TIME: AUG 19, 1993@10:46     USER: LOFTSADTER,FLYNN
  INSTITUTION: HINES, IL                  MAJOR SECTION: EM
  LAB SUBSECTION: EM                      WORK AREA: EM
WKLD CODE: EM Specimen                    TEST MULTIPLY FACTOR: 1
  WKLD CODE COUNTED: NO                   WKLD CODE TALLY: 0
  COMPLETION TIME: AUG 19, 1993@10:46     USER: LOFTSADTER,FLYNN
  INSTITUTION: HINES, IL                  MAJOR SECTION: EM
  LAB SUBSECTION: EM                      WORK AREA: EM
 TEST: GRID EM                            URGENCY OF TEST: WKLD
  TECHNOLOGIST: LOFTSADTER,FLYNN          COMPLETE DATE: AUG 19, 1993@10:48
WKLD CODE: Electron Micro Thin Section    TEST MULTIPLY FACTOR: 4
  WKLD CODE COUNTED: NO                   WKLD CODE TALLY: 0
  COMPLETION TIME: AUG 19, 1993@10:48     USER: LOFTSADTER,FLYNN
  INSTITUTION: HINES, IL                  MAJOR SECTION: EM
  LAB SUBSECTION: EM                      WORK AREA: EM
 TEST: THICK SECTION EM                   URGENCY OF TEST: WKLD
  TECHNOLOGIST: LOFTSADTER,FLYNN          COMPLETE DATE: AUG 19, 1993@10:48
WKLD CODE: Electron Micro Thin Section    TEST MULTIPLY FACTOR: 1
  WKLD CODE COUNTED: NO                   WKLD CODE TALLY: 0
  COMPLETION TIME: AUG 19, 1993@10:48     USER: LOFTSADTER,FLYNN
  INSTITUTION: HINES, IL                  MAJOR SECTION: EM
  LAB SUBSECTION: EM                      WORK AREA: EM
 TEST: EM EMBEDDING                       URGENCY OF TEST: WKLD
  TECHNOLOGIST: LOFTSADTER,FLYNN          COMPLETE DATE: AUG 19, 1993@10:48
WKLD CODE: Electron Micro Embedding       TEST MULTIPLY FACTOR: 1
  WKLD CODE COUNTED: NO                   WKLD CODE TALLY: 0
  COMPLETION TIME: AUG 19, 1993@10:48     USER: STADTER,LYNN
```

```
  INSTITUTION: HINES, IL                MAJOR SECTION: EM
  LAB SUBSECTION: EM                    WORK AREA: EM
```

Example 2: Addition of thick sections in the Blocks, Stain and Procedures [LRASPDAT] option.

```
Select Accession Number: 6  for 1993
BEAR,YOGI  ID: 004-95-8671

Date/time blocks prepared: NOW// <RET> (AUG 19, 1993@10:48) OK ? YES// <RET>
(YES)
Date/time  sections prepared: NOW// <RET> (AUG 19, 1993@10:48) OK ? YES//
<RET> (YES)

BEAR,YOGI 8671 Acc #: 5 Date: AUG 19, 1993

                                        Count         Last section/block date
LIVER BX
Epon Block
   EPON 1            Stain/Procedure                     AUG 19, 1993  10:48
                     GRID EM                  4          AUG 19, 1993  10:48

Data displayed ok ? NO// <RET>  (NO)
Select SPECIMEN: LIVER BX// <RET>
  Select EPON BLOCK: EPON 1// <RET>
    EPON BLOCK: EPON 1// <RET>
    DATE/TIME BLOCK PREPARED: AUG 19,1993@12:14// <RET>
    Select EM PROCEDURE: GRID EM// THICK SECTION-EM    EM
      SECTIONS PREPARED(#): 4
      DATE/TIME SECTIONS PREPARED: AUG 19,1993@12:14//  <RET> (AUG 19,
1993@12:14)
    Select EM PROCEDURE: <RET>
  Select EPON BLOCK: <RET>
Select SPECIMEN: <RET>

BEAR,YOGI 8671 Acc #: 6 Date: AUG 19, 1993

                                          Count       Last section/block date

LIVER BX
Epon Block
   EPON 1       Stain/Procedure                        AUG 19, 1993  12:14
                GRID EM                     4          AUG 19, 1993  12:14
                THICK SECTION  EM           4          AUG 19, 1993  12:14

Data displayed ok ? NO// Y  (YES)


Select EM Accession Number for  1993: 6

 TEST: EM LOG IN                        URGENCY OF TEST: WKLD
  TECHNOLOGIST: LOFTSADTER,FLYNN        COMPLETE DATE: AUG 19, 1993@12:13
WKLD CODE: Electron Micro Preparation   TEST MULTIPLY FACTOR: 1
  WKLD CODE COUNTED: NO                 WKLD CODE TALLY: 0
  COMPLETION TIME: AUG 19, 1993@12:13   USER: LOFTSADTER,FLYNN
  INSTITUTION: HINES, IL                MAJOR SECTION: EM
  LAB SUBSECTION: EM                    WORK AREA: EM
1  WKLD CODE COUNTED: NO                 WKLD CODE TALLY: 0
  COMPLETION TIME: AUG 19, 1993@12:13   USER: STADTER,LYNN
  INSTITUTION: HINES, IL                MAJOR SECTION: EM
  LAB SUBSECTION: EM                    WORK AREA: EM
 TEST: GRID EM                          URGENCY OF TEST: WKLD
  TECHNOLOGIST: STADTER,LYNN            COMPLETE DATE: AUG 19, 1993@12:14
```

```
WKLD CODE: Electron Micro Thin Section  TEST MULTIPLY FACTOR: 4
  WKLD CODE COUNTED: NO                 WKLD CODE TALLY: 0
  COMPLETION TIME: AUG 19, 1993@12:14   USER: LOFTSADTER,FLYNN
  INSTITUTION: HINES, IL                MAJOR SECTION: EM
  LAB SUBSECTION: EM                    WORK AREA: EM
 TEST: THICK SECTION EM                 URGENCY OF TEST: WKLD
  TECHNOLOGIST: LOFTSADTER,FLYNN        COMPLETE DATE: AUG 19, 1993@12:14
WKLD CODE: Electron Micro Thick Section TEST MULTIPLY FACTOR: 4
  WKLD CODE COUNTED: NO                 WKLD CODE TALLY: 0
  COMPLETION TIME: AUG 19, 1993@12:14   USER: HOFF,LYNN
  INSTITUTION: HINES, IL                MAJOR SECTION: EM
  LAB SUBSECTION: EM                    WORK AREA: EM
 TEST: EM EMBEDDING                     URGENCY OF TEST: WKLD
  TECHNOLOGIST: STADTER,LYNN            COMPLETE DATE: AUG 19, 1993@12:14
WKLD CODE: Electron Micro Embedding     TEST MULTIPLY FACTOR: 1
  WKLD CODE COUNTED: NO                 WKLD CODE TALLY: 0
  COMPLETION TIME: AUG 19, 1993@12:14   USER: HSTADTER,LYNN
  INSTITUTION: HINES, IL                MAJOR SECTION: EM
  LAB SUBSECTION: EM                    WORK AREA: EM
```

EM scanning/photography

In the EM Scanning and Photo Workload [LRAPLWE] option, it is possible to record additional nonbillable workload. See the example in the AP User Manual. If data is entered via this option, the tests EM PRINT/ENLARGEMENT and EM SCAN AND PHOTO will be added to the accession, depending on how the prompts are answered.

Example: Additional workload four grids scanned and ten prints made.

> **NOTE:** Workload has not been tallied yet when the example was extracted.

```
Select EM Accession Number for  1993: 6

 TEST: EM SCAN AND PHOTO                URGENCY OF TEST: WKLD
  TECHNOLOGIST: LOFTSADTER,FLYNN        COMPLETE DATE: AUG 19, 1993@12:59
WKLD CODE: Electron Micro Scan and Photo
  TEST MULTIPLY FACTOR: 4               WKLD CODE COUNTED: NO
  WKLD CODE TALLY: 0                    COMPLETION TIME: AUG 19, 1993@12:59
  USER: LOFTSADTER,FLYNN                INSTITUTION: HINES, IL
  MAJOR SECTION: EM                     LAB SUBSECTION: EM
  WORK AREA: EM
 TEST: EM PRINT/ENLARGEMENT             URGENCY OF TEST: WKLD
  TECHNOLOGIST: LOFTSADTER,FLYNN        COMPLETE DATE: AUG 19, 1993@12:58
WKLD CODE: Photography Print Enlarge    TEST MULTIPLY FACTOR: 10
  WKLD CODE COUNTED: NO                 WKLD CODE TALLY: 0
  COMPLETION TIME: AUG 19, 1993@12:58   USER: LOFTSADTER,FLYNN
  INSTITUTION: HINES, IL                MAJOR SECTION: EM
  LAB SUBSECTION: EM                    WORK AREA: EM
```

Report

Although electron microscopy reports must be verified/released, the workload associated with reported is included in the ACCESSION WKLD CODE 88200.0000 which is captured upon log in. No additional VERIFY WKLD CODEs are captured in the Verify/Release Reports, Anat Path [LRAPR] edit template for electron microscopy.

Microfiche of Path Reports

The storage of Anatomic Pathology reports over a number of years requires a considerable amount of space for the bound volumes, whether they are all retained in the Pathology Service or stored off site. Other methods of compact storage can greatly economize on use of this space. Some such methods include microfilming and microfiche. Newer techniques such as compact laser discs are emerging, and may already be available, but at considerable expense. This section provides instructions for setting up and using microfiche within the Anatomic Pathology module of the Laboratory package.

Microfiche and microfilming are technologies well developed at this time and are relatively inexpensive. Many hospitals are using these techniques in various departments on a daily basis, even those which are computerized. The equipment and service costs to microfiche anatomic pathology reports are reasonable and can be accommodated by almost any budget.

A microfiche reader/printer in the Anatomic Pathology department is an absolute necessity for using microfiche. Reader/printers range in cost from about $550 to $600 for the low usage installations, and from $2500 for the higher volume pathology laboratories. A Xerox or copy machine is a helpful asset.

Creating a microfiche tape

Example 1: Cytopathology, Electron Microscopy, and Surgical Pathology

```
Select Print, anat path Option: ?

   PQ    Print all reports on queue
   DQ    Delete report print queue
   LQ    List pathology reports in print queue
   PS    Print single report only
   AD    Add patient(s) to report print queue
   AU    Autopsy administrative reports
   AR    Anat path accession reports
   CS    Cum path data summaries
   LA    Anatomic pathology labels
   LT    Edit/print/display preselected lab tests
   PB    Print log book
   PO    Prisoner of war veterans
   PA    Print final path reports by accession #

Enter ?? for more options, ??? for brief descriptions, ?OPTION for help text.

Select Print, anat path Option: PA PRINT FINAL PATH REPORTS BY ACCESSION #
```

```
Select ANATOMIC PATHOLOGY SECTION: SURGICAL PATHOLOGY
      (or Cytopathology or Electron Microscopy)
DATE: 90 (1990)
Start with accession #: 1362
Got to accession: 1735
DEVICE: MICROFICHE/81
MICROFICHE MAGTAPE 81

                       This device is not a printer!
                       ARE YOU SURE you want to use it? NO// Y (YES)

            Since you have not queued the report it will print
            immediately on the device selected.

            But you will not be able to use your terminal
            during the printing.
            Is this what you want? NO// Y (YES)

Select Print, anat path Option: <RET>
```

Example 2: Autopsy

```
Select ANATOMIC PATHOLOGY option: P PRINT, ANAT PATH OPTION

Select Print, anat path Option: AD ADD PATIENT(S) TO REPORT PRINT QUEUE
Select PATIENT NAME: YOKUM,SALLY    08-08-48    234567891      NON-VETERAN
YOKUM,SALLY ID:234-56-7891 Physician:  STUHR,GARY

DIED JU 27, 1990

Autopsy performed: JUL 28, 1990 08:00  Acc # 2

Select PATIENT NAME: <RET>
Select Print, anat path Option: PQ PRINT ALL REPORTS ON QUEUE
Select ANATOMIC PATHOLOGY section: AU AUTOPSY
1.             Autopsy protocols
2.             Autopsy supplementary reports
Select 1 or 2: 1

                               Autopsy Protocols

(D)ouble or (S)ingle spacing of report(s): D

Print weights, measures and coding (if present): ? YES// <RET> (YES)

Save protocol list for reprinting ? NO// <RET> (NO)
DEVICE: MICROFICHE/81
MICROFICHE MAGTAPE 81
                        This device is not a printer!
                        ARE YOU SURE you want to use it? NO// Y (YES)

            Since you have not queued the report it will print
            immediately on the device selected.

            But you will not be able to use your terminal
            during the printing.
            Is this what you want? NO// Y (YES)
Select Print, anat path Option,: <RET>
```

Enhancements To Reports On Microfiche

A number of improvements are recommended to enhance reports on microfiche.

Data Pages: Double or triple the size of the data header with key index data on top of each page. Bold or italic data field anywhere in data--double size data available under some conditions.

Titling: Normal and reverse polarity. By title segments or portion of segments
Multiple number and variable size of characters by title segments.

Eyeball Pages: Eye readable data to highlight major changes within data.

Example: New report, or change in departments. Data breaks can be used with the eyeball pages to advance to the top of the next column for quicker user access to their data.

Bypass Options: Ability to bypass selected data pages not meaningful to the end user. This could include system generated data, banner pages, alignment pages or selected reports in multiple report file.

Data Break Options: Ability to break to the next microfiche or the next column whenever a significant change in data occurs. This allows selective grouping of specific reports to various user groups, or a selective breakdown of a large report to specific user areas.

Indexing Options: Standard page index in lower right corner of the microfiche. Column index at the bottom of each column. The index page is enhanced by suppressing the printing of identical index values, which makes it easier and quicker to read and use.

Benefits: Information retrieval from microfiche becomes much easier and, as a result user productivity will dramatically improve. User departments have reported retrieval time improvements of 25% to 50% with these techniques. User acceptance of microfiche will also dramatically improve as information retrieval becomes easier and quicker. Increased user productivity will result in direct dollar savings to VAMCs.

Paper Versus Microfiche Saving Comparison

This example will use 10,000 pages/month on 48x microfiche with an original to duplicate ratio of 1 to 2. Price per paper is estimated at $0.04/page, which represents a loaded cost to include material, labor, equipment, maintenance, etc., with prices for microfiche services as quoted.

Microfiche Cost: 10,000 pages divided by 269 data pages/fiche = 30 original and 76 duplicate microfiche.

38 original fiche	x	$3.50	=	$133.00
76 duplicate fiche	x	.20	=	15.20
	Total microfiche			$148.20

Paper Costs:

10,000 original pages	x	.04	=	$404.56
20,000 duplicate pages	x	.04	=	809.12

Total paper	$1,213.68
Monthly Savings	$1,065.00
Annual Savings	$12,785.00

As you can see, potential savings of approximately seven to one are available to data processing by using microfiche to replace paper. Additional savings are also realized by other packages (e.g., Radiology).

Benefits

- Increased Productivity

  Retrieval time cut by 65% using titled and indexed microfiche.
  Active reports at point of use for quick and easy access. Microfiche viewers and copies are relatively inexpensive, and lend themselves to distributed information systems.
  Ready accessibility to archived reports.
  Elimination of extensive filing and retrieval of computer reports on special forms.
  Labor savings and elimination of lost or misfiled documents.

- Storage Requirements

  Reduced by 98%, saving costly and limited storage space and allowing unlimited storage of report data at the user location.

Implementation for VAX Sites

1. First define the terminal type:

The IRM office will need to set up the characteristics of the mag tape in the DEVICE file. Make these entries in the VA FileMan Enter/edit option:

```
Select DEVICE NAME:  MICROFICHE/VAX MICROFICHE

NAME: MICROFICHE/VAX
Select MNEMONIC: <RET>

LOCAL SYNONYM: <RET>
$1: VA7$[USER.DOTAPE]MFICHE.TXT
TYPE: HOST FILE SERVER
SUBTYPE: P-OTHERS80
ASK PARAMETERS: NO
ASK HOST FILE: NO
ASK HFS I/O OPERATION: YES
MARGIN WIDTH: 80
FORM FEED: #
PAGE LENGTH: 66
BACK SPACE: $C(8)
```

NOTE:

```
VA7$ = Dlsk Label
[USERDOTAPE] = Directory
MFICHE.TXT = File Name
```

2. Using the Microfiche Path Reports option from the Anatomic Pathology Menu

```
Select OPTION: PA (PRINT FINAL PATH REPORTS BY ACCESSION #)
Select ANATOMIC PATHOLOGY SECTION: SURG
SURGICAL PATHOLOGY
DATE: 1-90 (JAN 1990)
Start with accession #:1
Go to accession #: 900

DEVICE: HOME// MICROFICHE       INPUT/OUTPUT OPERATION: N

   Do you want to queue this report ? No// N (NO)
```

Setup for Non-VAX Sites

1. First define the terminal type:

The IRM office will need to set up the characteristics of the mag tape in the DEVICE file (using FileMan).

```
Select OPTION: ENTER OR EDIT FILE ENTRIES

INPUT TO WHAT FILE: TERMINAL TYPE// <RET>
EDIT WHICH FIELD: <RET>

Select TERMINAL TYPE NAME: MAG/81
         ARE YOU ADDING MAG/81 AS A NEW TERMINAL TYPE (THE 145TH)? Y (YES)
         TERMINAL TYPE DESCRIPTION: Magnetic Tape 81 character for Microfiche
RIGHT MARGIN:81
FORM FEED: #
PAGE LENGTH: 66
BACK SPACE: $C(8)
```

2. Make these entries in the VA FileMan Enter/edit option:

(Keep in mind that three basic types are needed — an 80 column, a 96 column, and a 132 column format, to accommodate the various output styles.)

```
NAME: MICROFICHE/81           MICROFICHE  47
NAME: MICROFICHE/81// <RET>
LOCATION OF TERMINAL: MICROFICHE// <RET>
$I: 47// (This response is system dependent.)
TYPE: MAGTAPE// <RET>
SUBTYPE:    MAG/81
MARGIN: 81// <RET>
PAGE LENGTH: 66// <RET>
OPEN PARAMETERS;("CFAL4":81:2048)// <RET>
```

The reason for adding one column to the standard column width is to accommodate the O (zero) column, which has the control characters (“!” and “#”). It is also very important to use “F” instead of “V” in the Open Parameters field. We chose to call the devices “Microfiche” for ease of use at the device queuing prompt.

To Use at a Non-VAX Site

1. Coordinate the procedure with your IRM office.

The IRM office will have to load the tape drive with tape and place it on line. Do not purge the text in the files until you have the fiche and are satisfied with the result.

Be sure to lock the [LRAPFICH] option with a security key to prevent accidental use by inappropriate users.

2. Enter the menu option, Print final path reports by accession #.

Follow the prompts as you would to print any list in the selected Laboratory AP section.

3. At the Device prompt, enter: "MICROFICHE/81."

This will now print to the magtape and also tie up your terminal until the job is complete. Thus, it is recommended that it be done during a known low user time period.

4. When the job is completed give the tape to a service bureau.

The service bureau will convert it into fiche. The service bureau will need to know the drive settings and how many frames per fiche, etc. The turnaround time is as short as overnight once they have the characteristics for your AP jobs. You may have to do several runs to fine tune the fiche. We recommend practicing with about ten cases before doing the serious run.

Blood Bank

Implementation Objectives

Upon completion of this section, the Blood Bank Supervisor/Lab Information Manager should be able to:

1. Edit the general lab package files that interact with or have impact on the functions of the blood bank module.

2. Review and edit the BLOOD BANK files.

3. Set up procedural/workflow modifications to allow computerization of the current manual system.

4. Determine the best methods for handling the input of inventory, patient and donor data bases.

5. Assign appropriate site-configured menus to the various users.

6. Establish a time schedule for implementing the blood bank module.

Hints:

1. READ ALL OF THIS SECTION BEFORE BEGINNING!

2. Use the Training Exercises or locally modified exercises to get an overview of the entire module before beginning training on individually customized menus (Possible Exceptions: personnel working only with donor data).

3. Set up a realistic training/implementation schedule, taking the following into consideration:

   a. Limit training in a test account to that absolutely necessary, so as not to waste time on data that may not be included when the module is put into production.

   b. Continue parallel runs of both the manual system and the computer records until you are confident that all of the necessary data is being captured. This will prevent loss of data as a result of inexperience or inadequate workflow procedures detailing entry of specific data. The backup system can be phased out gradually according to a schedule rather than overnight.

Implementation Topics

1. Non-BB files interacting with the BB module:

   a) Non-Laboratory files used by the BB module
      File #19 - OPTION
      File #19.1 - SECURITY KEY
      File #44 - HOSPITAL LOCATION

   b) Laboratory files used by the BB module
      File #60 - LABORATORY TEST
      File #61.3 - FUNCTION FIELD (SNOMED)
      File #62 - COLLECTION SAMPLE
      File #62.07 - EXECUTE CODE
      File #62.6 - ACCESSION TEST GROUP
      File #69.2 - LAB SECTION PRINT
      File #68 - ACCESSION
      File #69.9 - LABORATORY SITE

2. Building/editing BB files
   File #66 - BLOOD PRODUCT
   File #65.4 - BLOOD DONOR UTILITY
   File #62.5 - LABORATORY DESCRIPTION

3. BB file print templates for reviewing file entries

4. Transferring BB files from TEST to LIVE

5. Entering the data base

6. Adapting the Blood Bank menu to fit your needs

7. Specific Menu Management Suggestions

8. Computerizing a manual system

9. Bar code specifications

10. Training information

11. Accreditation Requirements

12. Blood Bank Workload Implementation

Interaction of Blood Bank with Non-BB Files

Since the Blood Bank Module is designed to be an integral part of the entire Laboratory package, there is a significant amount of interaction between this module and the files and functions of the remainder of the Laboratory package (except for Microbiology). Therefore, the LIM and the Blood Bank Supervisor should work very closely to ensure a smooth implementation.

Depending on the responsibilities assigned to each of these persons in any given facility, the tasks discussed in this section may be performed by different individuals from the ones the discussion appears to be addressing. However, setting up the menus, determining the facility s policies, etc., follows the same process as described.

Non-Laboratory Files used by the Blood Bank

Files Pointed to:	By:
File 200 (NEW PERSON)	LOG IN PERSON (#.09) DISPOSITION ENTERING PERSON (#4.3) TECH ENTERING-ABO INTERPRETATION (#10.2) TECH ENTERING-RH INTERPRETATION (#11.2) BLOOD SAMPLE DATE/TIME: XMATCH TECH (#65.02,.05) DATE/TIME UNIT RELOCATION: TECH INSPECTING (#65.03,.03) DATE RE-ENTERED PREVIOUS DISP ENTERING PERSON (#65.15,.04) DATE RE-ENTERED PREVIOUS LOG IN PERSON (#65.15,.07) DEMO ENT/EDIT BY (#65.5,.09) DEFERRAL ENTER/EDIT BY (#65.5,.12) DONATION OR DEFERRAL DATE: DONATION ENTERED/EDIT BY (#65.54,.011) PROCESSING TECH (#65.54,4.8) TECH ENTERING-ABO INTERP (#65.54,10.2) TECH ENTERING-ABO RECHECK (#65.54,10.5) TECH ENTERING-RH INTERP (#65.54,11.2) TECH ENTERING-RH RECHECK (#65.54,11.5) TECH -SYPHILIS SEROLOGY (#65.54,12.2) TECH -HBsAg (#65.54,13.2) TECH -HIV (#65.54,14.2) TECH -ANTIBODY SCREEN (#65.54,15.2) TECH -HBcAb (#65.54,16.2) TECH -ALT (#65.54,17.2) TECH -HTLV-I (#65.54,18.2) TECH -HCV ANTIBODY (#65.54,19.2) TECH LABELING (#65.66,.06) DISPOSITION TECH (#65.66,.07) BLOOD BANK: PHYSICIAN (#63.01,.07) PROVIDER NUMBER (#6.6) BLOOD SAMPLE DATE/TIME: PROVIDER NUMBER (#65.02,.08)

```
File 2 (PATIENT)                    VA PATIENT NUMBER (#65.03,.07)

File 5 (STATE)                      STATE (#65.54,1.5)
                                    STATE (#65.5,1.5)
                                    SUPPLIER:
                                       STATE (#66.01,.07)

File 45.7 (FACILITY TREATING SPECIALTY)

                                    BLOOD COMPONENT REQUEST:
                                       TREATING SPECIALTY (#63.084,2.3)
                                    TREATING SPECIALTY NUMBER field (#6.7)
                                    BLOOD SAMPLE DATE/TIME:
                                       TREATING SPECIALTY NUMBER  (#65.02,.07)

File 50 (DRUG)                      Routine LRBLPE1

File 52 (PRESCRIPTION)              Routine LRBLPE1

File 52.6 (IV ADDITIVES)            Routine LRBLPE1

File 55 (PHARMACY PATIENT)          Routine LRBLPE1

File 62 (UNIT DOSE)                 Routine LRBLPE1
```

NOTES:

1. In routine LRBLPE1, patient medications can be listed if the direct antiglobulin test is positive. In addition, they can be listed using the Patient Medication List [LRBLPH] option.

2. For Outpatient Pharmacy Items, field (#52) Prescription Profile field of File #55 is a pointer to File #52. In addition, field #6 (Drug) of File #52 is a pointer to File #50.

3. For Inpatient Pharmacy Items, field #52 Unit Dose of File #55 has a multiple field #55.06, 2 Drug which is a pointer to File #50.

4. For IV Drugs, File #55 has a multiple field #100 IV, which contains a multiple field #55.01, called Additive and a multiple #55.02 which points to IV ADDITIVES file (#52.6).

In addition to data being stored as pointers, data is pulled from other files and stored as free text, as follows:

```
DATA PULLED FROM:                    By:
(stored as free text)

File 2 (PATIENT)
                                     PATIENT XMATCHED/ASSIGNED (#65.01,.01)
                                     FOR PATIENT (#65.03,.06)
                                     PATIENT TRANSFUSED (#65,6.1)

PRIMARY PHYSICIAN (.104)             BLOOD SAMPLE DATE/TIME:
                                        PHYSICIAN (#65.02,.03)
PRIMARY PHYSICIAN (.104)             PHYSICIAN (#6.2)
TREATING SPECIALTY (.103)            TREATING SPECIALTY (#65,6.3)
```

NOTE: The fields #.103 and #.104 are updated based on changes made in PATIENT MOVEMENT file (#405.)

```
File 44 (HOSPITAL LOCATION)
TYPE (#2)                            DATE/TIME UNIT RELOCATION:
                                        LOCATION (#65.03,.04)

File 45.7 (FACILITY TREATING SPECIALTY)
TREATING SPECIALTY field (#6.1)      BLOOD SAMPLE DATE/TIME:
                                        TREATING SPECIALTY (#65.02,.02)
```

- **File #19 - OPTION**
  The OPTION file (#19) MUST contain all of the Blood Bank [LRBL] menu options, as well as Test Description Information [LREV], Accession List by Number [LRUPA], Show list of Accessions for a Patient [LRUPT], and Outline for One or More Files [LRUFILE]. It will be necessary in some cases to create site specific menus which are modifications of the exported blood bank menu options. Suggested menu listings (with appropriate security keys) for different groups of blood bank users can be found at the end of this section.

- **File #19.1 - SECURITY KEY**
  The SECURITY KEY file (#19.1) MUST contain both the LRBLOODBANK and LRBLSUPER keys, as they will be given to the appropriate blood bank personnel using the package.

- **File #44 - HOSPITAL LOCATION**
  The HOSPITAL LOCATION file (#44) contains all hospital locations as set up by the Medical Administration Service at your facility. It MUST include two additional locations, BLOOD BANK (all in capital letters) and SURGERY (or OR) to reflect actual locations of a unit of blood. Check with the MAS Applications coordinator to make sure these two locations are added.

Laboratory files used by the BB module

Following is a list of the general laboratory package files which interact with or have impact on the functions of the Blood Bank Module. These files should be reviewed for the appropriate information and edited, if necessary, BEFORE the Blood Bank Module is implemented.

- **File #60 - LABORATORY TEST**

  There are five tests (four if Type & Hold is not used by the facility), ABO/RH Typing, Coombs, Direct/Indirect, Transfusion Request, Type & Screen and Type & Hold, which must exist with a BB subscript. This file also contains certain tests which are pointed to by the BLOOD PRODUCT file (#66) or specific supervisory edit options. They will be discussed individually.

Entries for these five (or four) tests should be as follows:

```
SUBSCRIPT: BLOOD BANK                    ACCESSION AREA:BLOOD BANK
UNIQUE COLLECTION SAMPLE: YES
LAB COLLECTION SAMPLE:BLOOD              REQUIRED TEST:NO
HIGHEST URGENCY ALLOWED:STAT
FORCED URGENCY:ROUTINE                   COLLECTION SAMPLE:BLOOD
CONTAINER:FOR BB
MIN VOL (in ml): 10
```

In addition, entries specific for each of the tests should be as follows:

```
ABO/Rh typing
EDIT CODE: ABO/RH             PRINT NAME: ABO/RH
TYPE: INPUT

COOMBS, DIRECT/INDIRECT
EDIT CODE: COOMBS             PRINT NAME: COOMBS
TYPE: BOTH

TRANSFUSION REQUEST
EDIT CODE: LRBLSCREEN         REQUIRED COMMENT:    TRANSFUSION
PRINT NAME: XMATCH            TYPE: INPUT

TYPE & SCREEN
EDIT CODE: LRBLSCREEN         PRINT NAME: T & S
TYPE: INPUT

TYPE & HOLD
EDIT CODE: ABO/RH             PRINT NAME: T & H
TYPE: INPUT
```

NOTE: Additional entries for synonyms are site configurable.

- **File #61.3 - FUNCTION FIELD (of SNOMED file)**

  This file contains entries in field #.04, Corresponding Antigen/Antibody, which are able to be edited only by those users holding the LRLIAISON security key. The Blood Bank Supervisor can edit only this field of this file, using the Edit Corresponding Antigen/Antibody [LRBLSEF] option.

- **File #62 - COLLECTION SAMPLE**

  As part of the process of selecting units for crossmatching during pretransfusion testing, the system searches for samples accessioned within the specified time limit. Since this search is restricted to samples for which the Default Specimen Is Blood, The Default Specimen for all of the BB Subscript Tests (ABO/Rh Typing, Coombs, Direct/Indirect, Transfusion Request, Type & Screen, and Type & Hold) must be **Blood**.

- **File #62.07 - EXECUTE CODE**

  The following entries must be included in this file: ABO/RH, Coombs, and Transfusion.

  For TRANSFUSION, you must have the following entries:

  ```
  NAME: TRANSFUSION
  TYPE: COMMENT
  EXECUTE CODE: I $D(LRSS),LRSS="BB" D EN2^LRBLU,EN1^LRBLPCS
  DESCRIPTON: DISPLAYS RECENT BB ACCESSIONS AND ASKS
  FOR BLOOD COMPONENTS
  ```

- **File #62.6 - ACCESSION TEST GROUP**

  There must be an entry of Blood Bank in this file, and this group should include the 5 tests, ABO/Rh Typing, Coombs, Direct/Indirect, Transfusion Request, Type & Screen and Type & Hold, all of which are BB subscripted entries in the LABORATORY TEST file (#60).

- **File #68 - ACCESSION**

  The entry in the ACCESSION file MUST have the following information:

  ```
  ACCESSION TRANSFORM: DAILY
  BYPASS ROLLOVER: YES
  ```

- **File #69.2 - LAB SECTION PRINT**

  This file must have a corresponding entry of **BB** with the number of lines in a label field filled in with the proper number of lines to be printed on blood bank labels. Check with the blood bank supervisor for the label information.

- **File #69.9 - LABORATORY SITE**

  This file contains entries which are editable through FileMan option 1 to enable each site to define certain parameters controlling the way in which the system operates for that given facility. The Blood Bank Supervisor can edit ONLY field 8, Blood Bank option, using the Edit Blood Bank Site Parameters file [LRBLSSP] option.

Supervisor Menu

The following list of options in the Supervisor Menu rely on the entries in File #60. These tests/options should be reviewed to ensure that the current entries are compatible with the general Laboratory package data for your facility BEFORE the Blood Bank Module is implemented.

1. LD - Tests for Display on Patient Look-up [LRBLST] option

In options, Specimen Log in [LRBLPLOGIN] and Blood Component Requests [LRBLPCS] in the Patient menu, the most recent laboratory values for tests designated through this option are automatically displayed following the patient demographic information.

- This is a multiple field that contains entries of test names from File #60. These tests must have a CH subscript, and be defined as either type BOTH or OUTPUT. NO panel/profile tests are allowed.

- It is important that the test names entered here are the same ones that the rest of the lab uses (e.g., the HCT entered here points to the same one used in hematology on the Coulter). A good way to do this is to enter the location (data name) from File #63 for each of the tests to be included here, instead of their names.

- The most common tests included in this option are: hemoglobin, hematocrit, platelet count, prothrombin time (PT), and partial thromboplastin time (PTT). Again, this will be based on current hospital policies.

2. TH - Tests for Inclusion in Transfusion Report [LRBLSET] option

In the Patient Transfusions and Hematology Results [LRBLPCH] option in the Reports menu, the laboratory values for tests designated through this option are included for the time period specified.

- This is a multiple field that contains entries of test names from File #60. As in the above option, these must be single tests with a CH subscript, and type BOTH or OUTPUT. They also should be the same tests currently in use in the other departments of the lab.

- The order in which the tests print out on the report is determined at the time of initial entry into this field. If the order needs to be changed, the entry must first be deleted, and re-entered in the appropriate spot.

- The number of tests that can be displayed on the report depends on the size of the paper stock to be used. Standard report stock (8 1/2 x 11, margin width 80 columns) will fit up to five test names. Using a larger size paper with a margin width of 132 columns allows a display of up to 11 test names.

- Entries in this field also require entry of the corresponding specimen types. This can be found for each test name in the Site/Specimen field in File #60. If more than one site/specimen type is listed, ask the blood bank supervisor which type to use here.

3. DU - Edit Donor Utility File [LRBLSEU] option

This file contains a number of entries pointed to by most of the donor menu options. The entries are free text and are screened into one of five separate categories. Depending on the category, appropriate field prompts will appear so that the correct donor information can be entered.

4. BP - Edit Blood Product File [LRBLSEB] option

◦ This file is critical to the function of the blood bank module, as it contains everything you ever wanted to know about the different types of blood products. It is very site specific, and will most likely be edited extensively.

◦ For each entry, there are two fields (TESTS TO CHECK and PRE-OP TESTS TO CHECK) which point to test names in File #60. Entries made to these multiple fields specify test name (CH subscript and type BOTH or OUTPUT), specimen (from the Site/Specimen field of the entry in File #60), and > or < test value (which determines the upper or lower test value limit).

◦ When blood components are requested, the entries in these fields are checked to determine if the request is a reasonable one. Your blood bank supervisor, based on current hospital policies, decides this.

Building/Editing Blood Bank Files

Unlike the main files for the general Laboratory package (i.e., File #60 and File #63), most of the files for the Blood Bank Module will contain data. Therefore, it will be necessary to review and edit only the data in the files that meet the needs of your facility rather than building the files from scratch.

Use the Outline for One or More Files (FD) option, [LRUFILE] in the Supervisor's Menu, to print the outline for each of the following files:

File #66 BLOOD PRODUCT
File #65.4 DONOR UTILITY (optional)
File #62.5 LABORATORY DESCRIPTIONS
File #65 INVENTORY
File #65.5 BLOOD DONOR (optional)

By reviewing these outlines, you can become familiar with the data dictionaries for each of these files. Should you wish to review the detailed information for any of these files, use option, List file Attributes of VA FileMan.

Using option, Print file Entries of VA FileMan, print the entries for the following files in standard captioned output.

File #66 BLOOD PRODUCT
File #65.4 DONOR UTILITY (optional)
File #62.5 LABORATORY DESCRIPTIONS

1. Review the contents of the BLOOD PRODUCT file (#66).

   a. Although it is possible to delete the products which are not received or transfused by your facility, careful consideration should be given to doing so. Deletions require certain security keys, and therefore may have to be done by the Lab Applications Coordinator. The same effect can be obtained by simply leaving the product in the file with no supplier and by editing the data in the file to indicate that the product cannot be requested.

   b. Add any product(s) not included.

   c. Add all possible suppliers for each of the blood products, including all necessary information. Those subfields which must be completed for each supplier (field #66.4) in order for other options to function are:

      (1) Preference number (.001)
      (2) Supplier (.01)
      (3) Cost (.02)
      (4) Supplier prefix number - if any (.1)
      (5) Unit label non-standard - if applicable (.12)

NOTE: If any attempt is made to enter any unit into inventory for a product which does not have the necessary entries, the system will not proceed past the prompt "Select component".

d. Add the Tests to Check each component that you will be using. The Tests to Check each component have not been included as part of the data that comes with the BLOOD PRODUCT file (#66) since they point to entries in the LABORATORY TEST file (#60) and, therefore, must be site specific.

e. Review the remainder of the entries for each of the blood products and make whatever changes you feel are appropriate. Use of the templates available in this section will assist you in reviewing the data in a methodical manner.

2. If you will be using the Donor portion, review the contents of the BLOOD BANK UTILITY file (#65.4) to determine what changes you will need to make. Consult the Edit Blood Bank Utility File [LRBLSEU] option description in the Blood Bank User Manual for a detailed discussion of how to make changes.

   a. Because the donor data base for each facility will be different, you will need to enter data for all groups and collection sites, specifying either G (Group affiliation only), C (Collection site only) or GC (Group affiliation and Collection site) as the SCREEN.

   b. Do not use DNRHX as the name for any future entries, as this entry is necessary to control display of the donor history questions in the Donor History, Physical and Consent Form [LRBLDR] option.

3. Review the contents of the LABORATORY DESCRIPTIONS file (#62.5), to determine what changes you will want to make. Consult the Edit Blood Bank Descriptions File [LRBLSEF] option description for a detailed discussion of how to make changes.

   a. If you are not intending to use any portion of the donor module, the entries for the BB COLLECT screen may be deleted.

   b. If you do not intend to use any portion of the donor module, you may wish to delete some of the entries for the BB DISP screen; however, these entries are also used in the inventory module.

4. The contents of the Function field (SNOMED) File #61.3 may be reviewed; however this file should not be altered, as it is a standardized file with cross referenced entries. Any antibodies not included should be addressed using the Blood Bank Comments field instead of the Antibodies Identified field.

Blood Bank File Print Templates

To make review of the data in the Blood Bank files easier, a list of suggested print template specifications is included for these files, to be used in addition to standard captioned outputs. These should be printed out and given to your blood bank supervisor for review before any changes are made to the file contents. Use option 2, Print File Entries of VA FileMan to produce the following formats:

File #62.5 - LABORATORY DESCRIPTIONS

```
Name: FILE #62.5                          Read access: L Write access: l
       BLOOD BANK DESCRIPTION;C 1;L8
       SYNONYM;C 12;L15
       EXPANSION; C30;L50
       SORTING GROUP;C82;L15
       DESCRIPTION;C100;L30
```

File #65.4 - BLOOD DONOR UTILITY

```
Name: GROUP COLLECTION & SITE LIST         Read access: L1 Write access: L1
       NAME;C1;L10;"NAME"
       FULL NAME;C12;L60;"FULL NAME"

Name: GROUP AFFILIATION LIST              Read access: L1 Write access: L1
       NAME;C11;L10;"NAME"
       FULL NAME;C12;L60;"FULL NAME"
```

File #66 - BLOOD PRODUCT

```
Name: Blood Product Req                   Read access: L Write access: L
       NAME;C1;L40;"PRODUCT"
       PRODUCT CODE;C42;L5;"CODE"
       CAN BE REQUESTED;C49;L4;"RQST"
       PATIENT SPECIMEN AGE ALLOWED;C55;L18;"SPEC.AGE"
       PATIENT/PRODUCT ABO;C65;L18;"PAT/PRODUCT ABO"
       PATIENT/PRODUCT RH;C85;L18;"PAT/PRODUCT RH"
       PATIENT/PRODUCT REQUIREMENT;C105;L118;"XM or PLASMA
       COMP"

Name: BLOOD PRODUCT MODIF.                Read access: L Write access: L
       NAME;C1;L40;"PRODUCT"
       CAN BE MODIFIED;C42;L12;"CAN BE MOD.?"
       MODIFY TO (multiple)
       MODIFY TO;C56;L40;"MODIFY TO"
       NOT ONLY ONE                       ALLOWED;C98;L10;">1 ALLOWED"

Name: BLOOD PRODUCT LIST                  Read access: L Write access: L
       NAME;C1;L40;"PRODUCT"
       PRODUCT CODE;C42;L5;"CODE"
       ABBREVIATION;C40;L6;"ABBREV"
       DESCRIPTION;C58;L30;"DESCRIPTION"
```

```
Name: BLOOD PRODUCT TESTS                 Read access: L Write access: L
       NAME;C1;L40;"PRODUCT"
       TESTS TO CHECK (multiple)
            TEST TO CHECK;C42;L5;"TESTS"
            >OR<TEST VALUE;C49;L12;">OR<VALUE"
       REQUISITION INSTRUCTIONS;C63;L55;"REQUISITION  INSTRUCTIONS"

Name: BLOOD PRODUCT SYNONYMS              Read access: L Write access: L
       NAME;C1;L40;"PRODUCT"
       PRODUCT CODE;C42;L5;"CODE"
       ABBREVIATION;C49;L6;"ABBREV"
       SYNONYM (multiple)
       SYNONYM;C56;L40;"SYNONYMS"

Name: BLOOD PRODUCT INFO                  Read access: L Write access: L
       NAME;C140;"PRODUCT"
       VOLUME (ml);C42;L3;"VOL"
       COLLECTION/PREP HOURS;C47;L15;"COLLEC/PREP HRS"
       DAYS LEFT;C64;L14;"NEW EXP.(DAYS)"
       DESCRIPTION;C80;L30
```

Transferring Blood Bank Files from a test account to a live account

Files could be transferred from a TEST account to a LIVE account as follows:

File #62.55	AGGLUTINATION STRENGTH	with data
File #65	INVENTORY	No data
File #62.5	LABORATORY DESCRIPTIONS	with data
File #65.4	BLOOD DONOR UTILITY	with data
File #65.5	BLOOD DONOR	No data
File #66	BLOOD PRODUCT	with data

NOTES:

1. When loading future versions, the prompt as to whether to add the data to the already existing data should be answered "YES". If it is not, the original donor history questions will reappear rather than the site configured changes. This can be eliminated by either adding to the existing data or transferring this file with no data.

2. Whatever data has been entered for donors or units in inventory in the TEST account during evaluation and training will have to be sacrificed. Entries in the inventory file acquire pointers to the PATIENT file which will not be identical in the LIVE account, thus producing MAJOR problems.

Entering the Database

INVENTORY

Input of data in the Blood Bank Module is not limited to testing of patient samples as in other sections of the Laboratory System. The transfusion service portion uses data related to entries (i.e., units of blood/blood components) in the INVENTORY file (#65), as well as that related to patient samples. In order for units to be selected for crossmatching or transfusion to patients, the units in stock must first be entered into the system. This should be done using the Log in Regular [LRBLILR] option in the Inventory menu.

For each component for which entries will be made, enter OLD STOCK in the BLOOD PRODUCT file (#66) as a supplier with a cost of $0.00. In this way, the supplier invoice and transactions report for the first billing period will not be adversely affected by units received before the beginning date. The individual units may then be entered into inventory using the Log in Regular [LRBLILR] option, specifying OLD STOCK as the supplier.

Once the entire stock in inventory has been entered, use the Inventory ABO/Rh Testing Worksheet [LRBLIW] option to obtain a worksheet which will include all units entered for the entry in the BLOOD PRODUCT file (#66) field Contains Red Cells. This printout can then be used or discarded, depending on the specific procedures of each site as to how the rechecks on the units are to be recorded.

NOTE: Before entering the units into inventory, a procedure for handling the units currently crossmatched must be resolved.

PATIENT

Since not all of the patients on whom the Blood Bank would have previous records regarding transfusions or the presence of irregular antibodies will be found in the patient data base, entering this information in bulk would require a great deal of effort and would be very labor intensive. Instead, consideration should be given to entering merely the historical data as the patients reappear, using a specific cutoff date for the old transfusion data.

If a decision is made to go ahead and enter all of those patients with previous antibody problems or special transfusion comments, the data could be entered using the Special Instructions [LRBLPSI] option in the patient menu rather than the Previous Records [LRBLPER] option. This would significantly decrease the number of prompts, since it would not include those related to previous transfusions. However, it would restrict the entry of the antibodies to the free script comment rather than using the Antibodies Identified field.

If a decision is made to go ahead and enter all of those patients with previous antibody problems or special transfusion comments using the Previous Records [LRBLPER] option, the antibodies and any previous phenotypings may be entered, followed by the free script entry for the comments. However, it is not possible to use the "^" to speed up the entry process by skipping unnecessary prompts.

DONOR

If the donor portion of the module is to be used, the recruitment aspects will only be useful once the donor data base (i.e., donor demographics, previous donation information and group affiliations) is entered. While entering the information will be very labor intensive, the advantages may be worth

the effort. However, a specific date should be selected to be used as a cutoff in determining the likelihood of the donor's returning for future donations. For example, only those individuals who have donated within the last twelve months will be entered initially, with any others being entered only if they reappear.

All historical donation data must be entered using the Old Donor Records [LRBLDO] option before entering the current donation. Once the donor is entered into the system, access to the donor using the Old Donor Records [LRBLDO] option is eliminated. Therefore, in the event that a previous donor, whose previous donation has not yet been entered into the system, returns to donate, the historical data must be entered before the data can be registered for the current donation, if a decision was made to use the previous donation data for purposes of recruitment, determining awards, etc.

Adapting the Blood Bank Menu to Fit Your Needs

In addition to the LRLAB and LRVERIFY security keys, the Blood Bank Module requires only the LRBLOODBANK key to access the majority of the options. The LRBLSUPER key is, however, necessary to access all of the options in the Supervisor's Menu, as well as to release incompatible blood using the Disposition Relocation [LRBLIDR] option in the Inventory Menu.

Since the various options, excluding those in the Supervisor's menu, do not require specific security keys, regulating access to the options must be accomplished via strict menu management. Menus must be constructed at each site, tailored to the actual needs of the individuals using the module.

Limiting the menu options available to the individual user will decrease confusion until the techs become more familiar with the module. This should be done by using revised versions of the submenus rather than by rearranging the entire menu. If the entire menu is rearranged, the Blood Bank Module User Manual will be more confusing than helpful. An example of revising submenus is provided by the Suggested Menu for the Routine Evening/Night Shift Technologist.

When entering the options to be assigned to each individual, consult the Suggested Menus. If all of the submenu options under the main menu option (e.g., DONOR Menu [LRBLD]) are to be assigned, only the [LRBLD] needs to be entered. All of the submenu options will be included under the main option. If only some of the options are to be used, as shown by the REPORTS (modified) example on the following pages, each of the desired options will need to be entered.

It is first necessary to determine which options will be used by the facility and which will not, based on input from the Blood Bank Supervisor.

1. Determine whether you will be using any portion of the donor applications of the module.

   a. If you are not drawing any homologous blood donors and do not wish to use the system to record data for either autologous blood donors or their therapeutic phlebotomies, you will NOT need:

      - the Donor Menu options [LRBLD],
      - the Reports Menu Option entitled Donor Summary Reports [LRBLDSR]
      - the Inquiries Menu Option entitled Single Donor Information [LRBLQSD]
      - the Supervisor Menu Option entitled Blood Donor Edit options [LRBLSD] or

- the Supervisor Menu suboptions entitled Edit Donor Utility File [LRBLSEU] Free Unit from Autologous Donor [LRBLSEE], Cumulative Donations and Awards [LRBLDCU], Acknowledge Donor Awards by Deletion [LRBLDAWARD], Print Ex-Donors [LRBLDEX], and Remove Ex-Donors [LRBLDK] all of which relate to donors and donor recruitment.

b. If you will be using the system to record data for either autologous blood donors or therapeutic phlebotomies, but will NOT be drawing homologous donors, you will need:

- the Donor Menu Options [LRBLD],
- some of the Reports Menu Submenu Options entitled Donor Summary Reports [LRBLDSR] and
- some of the Supervisor Menu Submenu Options relating to donor data.

However, you would NOT need:

- the Reports Menu option Donor Summary Reports [LRBLDSR], Submenu options entitled Donor Recruitment Reports [LRBLDRPTS], or
- the Supervisor Menu Submenu option entitled Acknowledge Donor Awards by Deletion [LRBLDAWARD] which deals with various aspects of recruiting donors. You will need the Supervisor Menu Submenu option entitled Edit Donor Utility File [LRBLSEU] only if the collection site and/or group affiliation data for the donations are to be entered.

c. If you will be using the Donor Menu Options, it might be prudent to remove access to the Donor Menu Option entitled Old Blood Donor Records [LRBLDO] once the donor data base has been entered. This option is intended only as a mechanism to enter historical data and should not be used to enter current data.

2. Determine whether the Blood Bank Supervisor will have responsibility for editing the BLOOD PRODUCT file (#66), the DONOR UTILITY file (#65.4) and the LABORATORY DESCRIPTIONS file (#62.5). If not, he/she will not need the Supervisor Menu option entitled Edit Blood Bank Files [LRBLEF]. However, if the Blood Bank Supervisor does not have these options, whoever will be responsible for updating these files, including the addition of new supplier information for the various blood products, will need access to these options. Changes in these files should be done using these options Edit Blood Bank Description File [LRBLSEF], Edit Blood Product File [LRBLSEB] and Edit Donor Utility File [LRBLSEU], rather than using the FileMan option #1, since the intended types of entries and their purpose in the module are included in the documentation for these options.

3. Determine whether the Blood Bank will be using the system generated worksheet for recording ABO/Rh rechecks on units received from other facilities. If not, you will not need the Inventory Menu option Inventory ABO/Rh Testing Worksheet [LRBLIW]. In fact, incorporating this into a menu could result in the accidental printing of a VERY lengthy document.

4. Determine whether you wish to make the information available through the options in the Ward Menu accessible to appropriate ward personnel, nursing or medical staff. These options are display only options and merely provide information to the user, in an effort to decrease the number of telephone inquiries (as in Order Test Status [LROS] in the general Laboratory package).

5. If neither the Surgery module nor the CURRENT PROCEDURAL TERMINOLOGY file (#73) is available, the Supervisor Menu option entitled Maximum Surgical Blood Order Edit [LRBLSMS] will not be needed immediately. However, since this option allows entry of the site specific parameters for the Maximum Surgical Blood Order Schedule, it will be vital to the performance of transfusion request audits once the necessary files become available.

This manual presumes the use of the menu names and option names as they have been developed. In order for this documentation to be useful to the Blood Bank staff, changing the documentation must be done in conjunction with the changes in the system. Since options are cross referenced within the text of the documentation, the impact of any changes should be realistically evaluated before making the changes.

Because of the manner in which the Blood Bank options for data entry are set up, the same options are used regardless of the environment in which the data are being entered (i.e., urgency status). Since the module was designed to assume that all requests could be emergencies there is no option in the module that would equate with the Bypass Normal Data Entry [LRFAST] option in the general Laboratory package. By looking at the suggested menu for the Evening/Night Shift Technologist, you can determine the basic set of options necessary to use this module.

Specific Menu Management Suggestions

Review the suggested menus, as well as the position descriptions of each of the individuals who will be using the module, to determine specifically which options should be assigned to which individuals. Points to be taken under consideration in determining access to menu options include the following:

1. whether the individual will be using the option during the performance of his/her regularly assigned duties;

2. whether the individual should have access to information available from using the option, based on the patient's or donor's right to privacy; and

3. whether the individual has sufficient knowledge of the option/system to minimize the negative ramifications of accessing commands which could result in the generation of unnecessary reports and decreased response time resulting from requests for reports which require lengthy data searches.

Options which involve actual deletion of data or editing of files have been placed in the Supervisor's menu and therefore require the additional security key.

NOTE: If an entire menu is given, only the highest level will be listed.

Blood Bank Supervisor

File Manager access needed: Ll

Security keys needed: LRLAB, LRVERIFY, LRBLOODBANK, LRBLSUPER

DONOR	[LRBLD]
REPORTS	[LRBLR]
SUPERVISOR	[LRBLS]

Routine Bench Technologist

Security keys needed: LRLAB, LRVERIFY, LRBLOODBANK

DONOR	[LRBLD]
INVENTORY	[LRBLI]
PATIENT	[LRBLP]
INQUIRIES	[LRBLQ]

REPORTS (modified)

BR -	Blood Bank Tests reports	[LRBLPBR]
CT -	Unit CAUTION tag labels	[LRBLILA]
CV -	CMV antibody status report	[LRBLICV]
ED -	Emergency donor report	[LRBLDEDR]
IS -	Blood inventory status reports	[LRBLIS]

Evening/Night Shift Technologist

Security Keys Needed: LRLAB, LRVERIFY, LRBLOODBANK

INVENTORY (modified)

DN	-	Disposition-not transfused	[LRBLIDN]
DR	-	Disposition-relocation	[LRBLIDR]
LR	-	Log in regular (invoices)	[LRBLILR]
LS	-	Log in special (special typing charges)	[LRBLILS]
SH	-	Shipping invoices	[LRBLISH]
UP	-	Unit phenotyping	[LRBLIUP]
UR	-	Units release to stock (cancel) by patient	[LRBLIUR]
UW	-	Inventory ABO/Rh testing worksheet	[LRBLIW]

PATIENT [LRBLP]

DA	-	Remove an accession	[LRDELOG]

INQUIRIES (modified)

PA	-	Show list of accessions for a patient	[LRUPA]
PR	-	Patient blood bank record	[LRBLQDR]
ST	-	Single unit status	[LRBLQST]
UA	-	Units assigned/components requested	[LRBLQPR]

REPORTS (modified)

BR	-	Blood Bank Tests reports	[LRBLPBR]
CT	-	Unit CAUTION tag labels	[LRBLILA]
CV	-	CMV antibody status report	[LRBLICV]
PL	-	Patient accession list	[LRBLPAL]
UP	-	Phenotyped units available	[LRBLIPH]
UX	-	Units on Xmatch by date/time xmatched	[LRBLIX]

Workload Recording Technologist

Security keys needed: LRLAB, LRVERIFY, LRBLOODBANK

DONOR	[LRBLD]
INVENTORY	[LRBLI]
PATIENT	[LRBLP]
INQUIRIES	[LRBLQ]
REPORTS (modified)	
BR - Blood Bank Tests reports	[LRBLPBR]
CT - Unit CAUTION tag labels	[LRBLILA]
CV - CMV antibody status report	[LRBLICV]
DR - Donor summary reports	[LRBLDSR]
CD - Collection disposition report	[LRBLDCD]
DR - Donor recruitment reports	[LRBLDRPTS]
DD - Donor deferral report	[LRBLDDR]
DL - List of donors by last attempt date	[LRBLDPL]
ED - Emergency donor report	[LRBLDEDR]
PL - Apheresis donor list	[LRBLDAP]
SD - Donor short draw report	[LRBLDSD]
DS - Donor unit supplemental testing prooflist	[LRBLDTRS]
DT - Donor unit testing prooflist	[LRBLDTR]
PD - Permanent donor deferral report	[LRBLDPD]
PR - Blood product rejection report	[LRBLDPRR]
IS - Blood inventory status reports	[LRBLIS]
IT - Blood inventory transaction reports	[LRBLITX]
PL - Patient accession list	[LRBLPAL]
UP - Phenotyped units available	[LRBLIPH]
UR - Blood utilization and summary reports	[LRBLIUS]
WK - Workload reports	[LRBLRWK]

Ward/Nursing Personnel/Physicians

Security keys needed: No lab keys required

WARD	[LRBLW]
PO - Show list of accessions for a patient	[LRUPT]
PR - Patient blood bank record	[LRBLQDR]
TI - Test description information	[LREV]
UA - Units assigned/components requested	[LRBLQPR]

Donor Room Supervisor/Bench Technologist

Security keys needed: LRLAB, LRVERIFY, LRBLOODBANK

DONOR [LRBLD]

INVENTORY [LRBLI]

PATIENT [LRBLP]

INQUIRIES [LRBLQ]

REPORTS (modified)

BR	-	Blood Bank Tests reports	[LRBLPBR]
CT	-	Unit CAUTION tag labels	[LRBLILA]
CV	-	CMV antibody status report	[LRBLICV]
DR	-	Donor summary reports	[LRBLDSR]
IS	-	Blood inventory status reports	[LRBLIS]
PL	-	Patient accession list	[LRBLPAL]
UP	-	Phenotyped units available	[LRBLIPH]

Donor Room/Recruitment Personnel

Security keys needed: LRLAB, LRBLOODBANK

DONOR (modified)

CP	-	Collection disposition/component preparation	[LRBLDCP]
DC	-	Donor collection/processing	[LRBLDC]
DD	-	Donor demographics	[LRBLDD]
DH	-	Donor history, physical and consent form	[LRBLDR]
DO	-	Old blood donor records	[LRBLDO]
DP	-	Donor phenotyping	[LRBLDPH]
DR	-	Donor registration	[LRBLDLG]

REPORTS (modified)

DR	-	Donor recruitment reports	[LRBLDRPTS]

Computerizing a Manual System

As in the other areas of the lab, the most important step in converting the Blood Bank from a manual system to a computerized system is planning. While most of the work will need to be done by the Blood Bank Supervisor, the LIM should provide assistance and moral support based on his/her own experiences with the general Laboratory package.

While the technologists are getting used to the system by practicing in a TEST account, procedures need to be developed for how to handle the day to day functions of the Blood Bank.

1. The Blood Bank Supervisor should compile copies of each form that the Blood Bank uses and identify the following information:

   a. the purpose of the form
   b. the origin of the data
   c. the personnel using the form

2. The Blood Bank Supervisor should categorize the forms into those that revolve around either a blood donor, a unit of blood/blood component in inventory, or a patient.

3. Determine which forms can be totally replaced by the system generated reports by comparing the forms which have been compiled and sorted to the reports generated by the various options in the Reports Menu. Keep in mind that it may be necessary to make minor adjustments in one's expectations of which pieces of data are included in which report. However, it is possible to create your own sort and print templates using appropriate FileMan options.

4. Evaluate the origin of the data to be entered and determine which option will be appropriate for inputting the data. Consult the Data Flow Charts included in the Blood Bank User Manual for the Donor Menu, the Inventory Menu and the Patient Menu to see an abbreviated version of the function of the various options.

5. Make an abbreviated listing for the most common procedural tasks in the Blood Bank, including how each is to be handled, both manually and in the computer.

Example 1: Incoming red blood cell components:

a. Use option, Log in Regular (Invoices) (I-LR) [LRBLILR] to log the units into the computer.

b. Verify the information on the invoice.

c. Put the units onto the quarantine shelf.
   1) Take a segment and put it into a labeled tube for use in performing the ABO/Rh recheck.
   2) Use option, Inventory ABO/RH Testing Worksheet (I-UW) [LRBLIW] to request the worksheet for the ABO/Rh rechecks.

d. Tally the # of units by month/day into the tally book.

e. Deliver the invoices to the Administrative Assistant.

Example 2: Phenotyping units of red blood cells:

a. If we do the typings,
1) Record the tests results in the Phenotyping workbook.
2) Use option, Unit Phenotyping (I-UP) [LRBLIUP] to enter the results.

b. If we receive units already typed by the blood center,
1) Use option, Unit Phenotyping (I-UP) [LRBLIUP] to enter the results.
2) Use option, Enter Blood Inventory Typing Charges (I-LT) [LRBLILS] to enter the special typing charges.

6. Evaluate the reports to be generated by the various options in the Reports Menu and determine when these reports should be generated, keeping in mind which reports could have an adverse effect on the response time of the system. Consult the Blood Bank User's Manual to review both the Reports Menu Data Flow chart and the documentation of each specific option.

7. Make an abbreviated listing of which reports are to be printed at specific times, including who is responsible for generating the report.

Example 1: Routinely, as needed during all shifts:

a. Print labels for Caution tags using option, MT Unit CAUTION Tag Labels (R-CT) [LRBLILA] performing testing.

b. Print listing of units already phenotyped using option, Phenotyped Units Available (R-UP) [LRBLIPH].

c. Print single unit information using option, Single Unit Information Print (R-IS-SU-SP) [LRBLIPSP].

d. Print patient accession listing to review incompletes using option, Patient Accession List (R-PL) [LRBLPAL].

Example 2: Daily, before 8:30 A.M.:

a. Print ABO/Rh testing worksheet, using MT assigned option, Inventory ABO/Rh Testing Worksheet (I-UW) [LRBLIW] to processing.

b. Print patient accession listing for MT assigned previous day using option, Patient Accession List (R-PL) [LRBLPAL] to cross-specifying alphabetical listing matching.

c. Print listing of units crossmatched, using MT assigned option Units on Xmatch by Date/Time Xmatched (R-IS-UX) [LRBLIX] to canceling.

Example 3: Periodically, before 8:30 A.M.:

a. Print listing of units with no disposition, using option, Units with No Disposition (R-IS-UN) [LRBLRUN] (only if the paper-work is caught up).

b. Print listing of supplier transactions Niki to verify billing using option, Supplier transactions (Inventory) (R-IT-IT) [LRBLRIT] (print 1-15th on the 16th AND 16th-31st on the 1st of the next month).

c. Print listing of special typing charges Niki to verify billing using option, Special Typing Charges Inventory (R-IT-IS) [LRBLRIT] (same dates as in b).

d. Print listing of emergency blood donors, Karen using option Emergency Donor Report (R-DR-DR-ED) [LRBLDEDR] (for blood shortages ONLY!).

Blood Bank Computer Software Requirements

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1.01 INTRODUCTION

The following is a suggested policy for documenting the software requirements for Blood Bank.

Laboratory Service	Blood Bank Policy #XX
Generic VA Hospital	Date

Blood banking involves many sophisticated analyses which without automation/ computerization can only be performed by highly skilled persons. The human ability to look for things is more flexible than the computer's, but the ability to flexibly and intelligently search for and analyze information starts to break down as the quantity of information becomes larger. Computers, however, can handle vast amounts of information without suffering any deleterious effects.

Therefore, a sophisticated computer system allows the highly trained technical staff to devote more time and energy to those problems and sophisticated analyses not within the realm of a computer. However, in order to provide appropriate quality assurance of the computer system, there are specific detailed requirements from the AABB, the CAP and the FDA. See M-2, Part VI, Chapter 5 and/or paragraphs 1.09 for specific details.

The hospital computer system is a fully integrated medical center system. Information is accessible from a variety of packages, including laboratory, pharmacy, and medical administration service (admission/discharge/transfer).

The goals of the Blood Bank module of the Laboratory package of the Decentralized Hospital Computer Program (DHCP) software are to:

A. Improve the safety of blood/blood component transfusion by decreasing the number and severity of errors, through retrieval of previous records, verification of present results, detection of inconsistencies in data, bar code entry of unit ID, ABO/Rh, etc., and computer assisted donor labeling.

B. Improve the quality of patient care through evaluation of transfusion appropriateness, flags for specific components, and evaluation of transfusion increments.

C. Decrease the clerical workload through bar code entry of unit information, printing of transfusion requests, transfer of information to multiple records and preparation of labels for specimens and unit tags.
D. Improve resource management through statistics by location, physician, and/or treating specialty, through access of information by other medical staff and by optimizing inventory control.

1.02 GENERAL POLICY

A. Statement of Policy

1. Computer software used in the daily operations of the blood bank transfusion service and/or blood donor activities must meet the requirements of the various regulatory and accrediting agencies, including the Food and Drug Administration (FDA), the American Association of Blood Banks (AABB), and the College of American Pathologists (CAP), as mandated in M-2, Part VI, Chapter 5.

2. Computer software used in the daily operations of the blood bank transfusion service and/or blood donor activities must be properly verified and validated. See paragraph 1.05 for details.

3. Computer software used in the daily operations of the blood bank transfusion service and/or blood donor activities must meet all of the record requirements detailed in the current editions of the Standards for Blood Banks and Transfusion Services and the Inspection report Form of the AABB (see paragraph 1.09b and c).

B. Responsibilities

1. The VA Program Official, (i.e., the Director, Pathology and Laboratory Medicine Service, and VA Central Office), is responsible for assuring that appropriate software designed for use as part of the Laboratory package of the Decentralized Hospital Computer Program (DHCP) is developed which meets the requirements of the various regulatory and accrediting agencies, including the AABB, the CAP, and the FDA.

2. The developers of the software are responsible for identifying potential control functions, providing a listing of warning messages and informing the user of override capabilities. (See Appendix A)

3. The Development ISC, designated by the VA to develop and maintain the DHCP Laboratory package, is responsible for providing verified software and appropriate documentation (i.e., Technical Manuals, User Manuals, and Release Notes) for distribution and implementation in all VA facilities.

4. The (XXXX) Information System Center, designated by VA Central Office to provide support for this specific facility, is responsible for providing both hardware and software support to the Information Resource Management (IRM) staff at each facility in resolving problems identified by the Blood Bank staff.

5. The medical center is responsible for using the verified, released version of the software unless there are documented testing agreements to use unverified software in a structured setting. Local modifications are the responsibility of the medical center.

6. The Information Resource Management (IRM) Service is responsible for:

a. installing the software,

b. maintaining the hardware used to support the Blood Bank computer software,

c. developing and maintaining an appropriate ADP Security Plan for the facility in accordance with Circular 30-88 developed by the Office of the Inspector General and Circular 20-86-30 developed by the Department of Veterans Benefits,

d. performing backups and, where necessary, restoration of data,

e. providing software support in resolving problems identified, and

f. providing archiving and data extracts as necessary.

7. The Blood Bank Medical Director is responsible for evaluating whether the software provided by the VA meets the needs of this medical center, i.e., for approval of the overall functionality and review of the validation testing results.

8. The Laboratory Information Manager (LIM) is responsible for providing both hardware and software support for the Blood Bank computer software during implementation of a specific version and for providing software support in resolving problems identified by the Blood Bank staff either during or subsequent to implementation.

9. The Blood Bank Supervisor is responsible for:

a. evaluating whether the software provided by the VA meets the needs of the XXXX VA Blood Bank.

b. assuring that all of the necessary steps are taken to validate the software prior to full implementation, as detailed in paragraph 1.05.

c. maintaining the required documentation of the validation testing, as detailed in paragraph 1.05 f.

d. maintaining a listing of the access for each of the individuals who have access to the Blood Bank menu options such that it can be retrieved by user or by option.

e. assuring that all personnel who will be using the software are adequately trained in all of the options that they might be using, as detailed in paragraph 1.07.

f. assuring that the standard operating procedure manual reflects the integration of the computer into the policies and procedures., as detailed in paragraph 1.04.

g. assuring that all problems identified are handled and documented appropriately and that corrective action is taken in a timely manner, as detailed in paragraph 1.06.

10. The Blood Bank staff is responsible for:

a. referring to and following established procedures in the procedure manual(s) and

b. maintaining appropriate security in accordance with Hospital Policy 00-135.

1.03. SECURITY

A. General principles

1. Access to the DHCP computer system is under the control of IRM. Software file access is controlled through Kernel via security keys, menu management, and device handling. Appropriate documentation is available in IRM Service.

2. Each user of the computer system has an access code and a second totally encrypted verify code which must be changed on a scheduled basis, usually every 90 days.

3. Regardless of the mechanism for accessing the computer, i.e., CRT, modem, or personal computer security is handled in the same manner.

B. Access to view data/enter data and edit data

1. Each user has a specific menu of options assigned by the LIM at the written request of the Blood Bank Supervisor and approved by the Blood Bank Medical Director.

2. Access to each option can be, and is in some cases, further restricted by additional security keys as appropriate, based on the sensitivity of the data being entered or accessed.

C. Access to edit files/modify software

1. Access to alter files is restricted both by the level of FileMan access assigned to the specific user and by whether the user has access to a specific file.

2. In the case of the primary files utilized by the Blood Bank software, i.e., Files 61.3, 62.5, 62.55, 65, 65.4, 65.5, 65.9, and 66 access is available via Blood Bank menu options as well as through FileManager options. These menu options require additional security keys as described above.

D. Access to edit file structures/routines

1. Access to alter the file structure, i.e. data dictionaries, is restricted either to the software developers associated with the Development ISC or to designated individuals in the IRM Service.

2. Access to alter the routines and edit templates is restricted either to the software developers associated with the Development ISC or to designated individuals in the IRM Service.

1.04 MINIMUM STANDARD OPERATING PROCEDURES

A. The standard operating procedure manual must contain information on how the computer functions are integrated into the daily operations. The information must reflect the current version of the software.

B. Written procedures exist which detail the backup system to be used during computer downtimes.

1. The ability to immediately activate this procedure must be in place at all times.

2. During computer downtimes, the transfusion service must still be able to access the necessary data in order to review the patient history records, to determine the current location and status of units and to release units for transfusion.

3. Once the computer downtime is over, the necessary data shall be entered into the computer system in order to ensure that all of the records are complete. See paragraph 1.09, page 1-61, for specific details.

C. Information is included in the Blood Bank User Manual and in the Standard Operating Procedure Manual that describes the procedure for correction of data entry errors.

1. The system includes a mechanism to identify who edited (corrected) any significant data elements, and controlled access of who can correct data via the usual security mechanism. In addition, if it is a reportable result, the results must be identified as corrected.

2. The system for maintaining data integrity includes:

a. an audit trail for changes in verified data, (i.e. a report) generated using the Print data change audits [LRBLAD] option,

b. periodic checks on data integrity following both scheduled and unscheduled downtimes,

1) Either the Inventory Integrity Check [LRBLII] option OR the Check file for inconsistencies [LRCHKFILES] option (which also includes that routine) and Check patient and lab data cross pointers [LRCKPTR] options should be done following unscheduled downtimes.

2) A report should be generated periodically using the Inventory Integrity Check [LRBLII] option.

3) Sample testing of the BLOOD DONOR file (#65.5) should be done after unscheduled downtimes since no routine currently exists to check this file.

c. a mechanism for reconstructing lost data via retention of records of work done, routinely generated daily reports and other periodic hard copy reports.

3. The number of and type of changes for both reportable and non reportable data will be monitored as part of the ongoing quality assurance program. See Laboratory Policy # XXX, XXXX, for specific details.

4. There must be a written procedure which describes maintenance procedures for hardware and software. Maintenance must be regularly scheduled to have minimum impact on operations. These procedures may be located in the IRM Service; however, internally the Blood Bank should keep a log of hardware repair similar to that for other equipment to determine the impact on overall function of the Blood Bank.

1.05 SOFTWARE VALIDATION

Prior to the release of software, the DHCP developers are required to subject the software to intensive testing and review as part of the development and verification process; however, a great deal of the functionality of software is affected by the operating system, interaction with other software packages in the same database and files which accommodate local modification. This verification is not equivalent to validation testing, as detailed below, nor can it be substituted for the mandatory validation testing.

A. General Principles

1. In order to confirm that the computer software logic functions as desired, using the local database, operating system and hardware configuration, validation testing must be performed in accordance with the current requirements of the various accrediting and regulatory agencies. See paragraphs 1.09 a through k for specific details.

2. Validation testing may be performed by the Blood Bank Supervisor, or may be delegated to other appropriate personnel; however, all of the testing (including definition of the test cases and review of the actual results) must be overseen by the Blood Bank Supervisor.

NOTE: The person performing the testing MUST initial the actual test case printouts.

B. Environment

Validation testing must be performed in an environment which is a duplicate of the operating system file structure, programs, site specific options, etc. of those found in production. Although performance of this testing in a test account is preferable, this may not be possible if the test account is not complete or well maintained. If the final testing must be done in production, there must be strict controls to ensure that it does not adversely affect daily operations and that testing data is not confused with actual patient, donor, or inventory data.

C. Time Requirements

Validation testing must be performed according to specified time frames.

1. Retrospective validation is required for current systems/software in operation before the FDA memorandum of September 1989. This validation testing MUST include the full scope of testing detailed in paragraph 1.05 c, i.e. any control functions not already adequately tested during the validation of the previous version must be tested before the next version is installed.

2. Prospective validation testing must be performed before new software is put into use for daily operations. This testing must be completed before any parallel, manual systems are discontinued and the computer is no longer redundant. This validation testing must include the full scope of testing.

3. Patches or local modifications, i.e., change control must undergo prospective validation testing before revisions or modifications in software are put into use for daily operations. This validation testing may encompass a more limited scope depending on the nature of the change and the

interaction of that specific routine on other functions. This is particularly crucial for any local modifications made since these modifications do not go through the usual regimented verification process.

D. Methodology

Validation testing must include ALL control functions as well as routine operations. Since different levels of security access are required for various options, testing MUST be done with each of the various levels.

1. A control function is a system function that causes an activity to occur or that influences the behavior of the user of the system. Control functions may exist even when human intervention occurs.

Such functions include options in which labels are created, records are created, modified, retrieved, deleted and/or archived and data is compared to a standard or a warning message.

Examples: Calculation of component expiration data:
a) interpretation of results acceptability
b) comparison of current results to historical results
c) prevent issue of units if not compatible, indate, etc.
d) display of warning messages such as:
e) testing not complete
f) current results do not match
g) unit expires or is expired

a. For each control function, the spectrum of control must be indicated, i.e., process control or decision support. Process control involves functions in which the system software actually makes a decision using available information and algorithms. Decision support functions are those in which an individual bases a decision on information obtained from the system

2. Routine operations are those used in the daily operations of the blood bank in that medical center. Options, routines, or functions which are not utilized in that medical center need not be tested. These operations should include:

a. data entry methods,
b. security procedures, i.e., access beyond the LRLAB, LRVERIFY, and LRBLOODBANK security keys,
c. program overrides, including those requiring additional security access,
d. data storage and retrieval of results/data, and
e. traceability of results, including changes in significant data elements and test results.

3. Although the Blood Bank User Manual for the appropriate version of the software should be consulted for examples which can be used as test cases, the test cases must reflect the actual procedures and workflow of this VA medical center. See Appendices A and C for some additional specific cases. Although all of these conditions may not be applicable for many of the options, a variety of test conditions must be addressed, including:

a. normal data,
b. exceptional data which provides an unusual twist for the program to force the program to react to data or a situation that might be unexpected, e.g., data entered out-of-order from the usual workflow, or not completely entered,

c. boundary situations to force the evaluation of conditions that are of borderline validity, e.g., crossmatches which are IG or donors in which testing is not completed,
d. invalid data to force a program to prove that it can detect invalid input , e.g. absurd dates, or invalid ABO types, and
e. stress conditions to determine whether the system has acceptable performance limits, e.g., large volumes of data to determine whether the storage capacity and response time are appropriate;

4. Testing must be done with each of the various levels of access.

a. Testing of menu options and LRLAB and LRVERIFY keys, with no LRBLOODBANK key must be included to ensure that individuals with the full lab menu can not access Blood Bank data inappropriately, particularly in the area of blood donors.
b. Testing of menu options and the LRLAB, LRVERIFY, and LRBLOODBANK keys, but with no LRBLSUPER key, must be included to ensure that individuals with specific menu options can not perform restricted data entry/editing functions.

E. Acceptance Criteria

All test cases must be performed as detailed in the documentation provided, i.e., the appropriate version of the Blood Bank User Manual, the appropriate version of the Release Notes, or the documentation provided with the patch.

F. Evaluation of testing

1. Once the testing is performed, the Blood Bank Supervisor must determine whether the testing is acceptable. This determination must be documented. Appendix B provides the mechanism for detailing this information on an option-by-option basis.

a. If the option is not used, a notation should be made to that effect on the form.

b. If a specific test condition is not appropriate for that specific option, e.g. boundary or stress, an NA notation should be made on the form.

c. If additional access is required beyond the LRLAB, LRVERIFY and LRBLOODBANK keys, this should be recorded on the form.

2. In the event that the software does not perform as expected OR does not meet the requirements of the Blood Bank, an evaluation must be done to determine whether the failure is critical or non critical.

a. If an error (bug) occurs, this must be recorded in a log designated for this purpose. See paragraph 1.06 b for details.

b. If the software does not function as described in the appropriate documentation or results in an error, the Blood Bank Supervisor must evaluate the ramifications of the failure, i.e., is it critical to the function of the software or does it merely represent an opportunity for improvement?

1) If the nature of the problem indicates that there is a system deficiency that can be handled by an alteration in the workflow processes until the situation is corrected, the Blood Bank Supervisor may decide to continue with the implementation, provided the alternative procedures are implemented.

2) If the nature of the problem indicates that there is a system deficiency which cannot be handled by an alteration in the workflow processes, the Blood Bank Supervisor should not continue with the implementation until the problem is corrected.

3) Deficiencies in the system must be handled in accordance with paragraph 1.06 b.

G. Documentation

Validation testing must be documented in a comprehensive manner.

1. Testing documentation must include observations from testing. This should be in the form of printouts generated by the pass through printer utilized during testing.

2. Testing documentation must include proof of review of the test cases, whether testing met the acceptance criteria or required any correction action, the signature and date of approval by the Blood Bank medical director and the implementation date. This should be done by a combination of notes on the actual testing printouts and the use of the forms included in Appendices A and B.

NOTE: The signature of the person performing the testing must be included on the actual printouts of the testing.

1.06 PROCEDURES FOR RESOLVING PROBLEMS

A. Error Messages

1. Errors can be created which may or may not have anything to do with the Blood Bank software. When an error occurs, an error message is generated. If the error occurs while the CRT display is on, the error message will appear on the screen. In any case, the error is recorded in the official Error Trap accessible to the IRM staff.

2. If the error involves the Laboratory package software, the portion of the message immediately following the ^ will be LR. If it involves a Blood Bank routine, that portion will probably be LRBL or may be LRU.

B. Reporting and Tracking of Errors

1. A record or log must exist to detail unusual occurrences and errors (bugs), the clinical significance of errors, the corrective action taken to resolve the problem, and the final resolution.

2. Unusual occurrences and errors should be evaluated by the (LIM) and/or the VA Medical Center Information Resource Management Service (IRM) to determine whether the problem is local or whether it involves the released version of the software.

a. All errors related to the released version of the software shall be immediately reported to the laboratory DHCP software developers using the Electronic Error and Enhancement Reporting, E3R system.

b. Procedures for requesting software modifications should include the details of the request submission, including the rationale for changes /modifications, the local approval

process, i.e., authorizations of changes, and the mechanism for submitted requests for change to the verified software (fix based on description of E3R process see old FDA document).

c. Errors related to local database problems or local modifications should be resolved by the (LIM) and (IRM) or the supporting Development ISC staff/developers.

3. In the event that an error exists, or the software does not perform a necessary control function, immediate action must be taken to provide backup procedures until the problem is resolved. This includes any error which allows the inappropriate release and distribution of unsuitable blood and blood components.

4. Those errors which actually occur and can be attributed to the computer system which allow the release and distribution of unsuitable blood and blood components must be reported to the FDA - (refer to specific FDA memo regarding directions for ERRORS/ACCIDENTS, REPORTABLE INCIDENTS).

C. Enhancements

1. Requests for software changes are handled by a system of Electronic Error and Enhancement Re ports or E3Rs. A standard template is used by all VA facilities to submit requests for change via electronic mail (FORUM).

2. The E3R for requesting software modifications should include the details of the request submission, including the rationale for changes/modifications, the local approval process, i.e., authorizations of changes.

3. The E3Rs are entered into a tracking system which provides accountability and status reports. They are discussed by a subcommittee of the Laboratory Service Expert Panel which controls the functional development of the software. They are then prioritized as deficiencies, improvements or enhancements and submitted to the developers.

4. Deficiencies may be corrected via one of two mechanisms, depending on the significance of the problem. If the E3R represents a significant deficiency, a patch will be developed, verified and issued for installation. If the priority does not require a patch, the change will be incorporated into the next version of the software.

1.07. PERSONNEL TRAINING

A. All persons utilizing the computer shall undergo appropriate training prior to performance of duties involving the DHCP or comparable computer software.

B. Ongoing assessment of personnel competency, as detailed in M-2, Part VI, Chapter 2, paragraph 2.07, shall include the use of the computer software.

C. Prior to the implementation of software changes and/or modifications, all users of the Blood Bank software shall be trained as part of the validation testing.

1.08. DOCUMENTATION

A. There must be a written record of unscheduled downtimes, including the reason for failure and any corrective action taken. This need not necessarily be maintained in the Blood Bank.

B. In accordance with the provisions of paragraphs 1.05 e and f, there must be documentation of validation testing and of errors which occur.

C. Documentation of training must be maintained.

1.09 REFERENCES

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B. Standards for Blood Banks and Transfusion Services, American Association of Blood Banks. 14th edition, 1991.

C. Inspection Report Form, American Association of Blood Banks, November, 1991.

D. Control Function Guidelines (DRAFT), American Association of Blood Banks. Letter to all institutional members, November 25, 1991.

E. User Validation Guidelines (DRAFT), American Association of Blood Banks. Letter to all institutional members, November 25, 1991.

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G. CAP Inspection Report Form, 1991.

H. Blood Bank Inspection Checklist and Report Form 2609, part K, Food and Drug Administration, US Department of Health and Human Services, Public Health Service, May 1991.

I. Instruction Booklet for Blood Bank Inspection Checklist and Report Form 2609, Food and Drug Administration, US Department of Health and Human Services, Public Health Service, May 1991.

J. Food and Drug Administration, Requirements for computerization of blood establishments. Letter to all registered blood establishments, September 8, 1989.

K. Code of Federal Regulations, 21 CFR, parts 211.68, 606.20, 606.60, 606.100, and 606.160, US Department of Health and Human Services, Public Health Service, 1991.

L. Hospital Policy Memorandum XXXX.

M. Blood Bank User Manual, Version XXX, XXX.

N. Laboratory Policy # XXX, "XXX"

1.10 RECESSION: none

1.11 APPROVAL

_____	_____
XXXX XXX, M.D. Blood Bank Supervisor	Blood Bank Medical Director
_____	_____
XXXX XXX Laboratory Information Manager	Administrative Technologist, Lab. Service

1.12 CONCURRENCES

_____	_____
XXX Laboratory Manager	XXX Chief, IRM Service

Bar code Readers

Bar Code Readers for the Blood Bank Module

The Blood Bank Module uses bar code technology for the input of data relating to the units of blood/blood components - i.e., the blood component (a five digit code), the donor unit ID number (an 8-11 character number) and the donor ABO/Rh. While the data can be entered manually, it requires at least 50% more time and obviously introduces the possibility of clerical errors. In facilities where the number of units in inventory is relatively large, repetitive entry of groups of numbers or letters of 8-11 characters can result in a significant error rate. In facilities where donors are drawn, the savings in time are even more dramatic, in that labeling of the units after processing is decreased from two technologists to one technologist with a bar code reader.

There are two types of bar code readers available, the pen/wand type and the laser gun mode. The only requirements for the bar code reader to be used in the Blood Bank Module are as follows:

1) Ability to read Codabar, since this is used for all donor labels in accordance with the Uniform Blood Labeling Act.

2) Ability to be connected in-line between the CRT and the CPU via cables.

3) Ability to set the unit to read stop codes.

To determine which type of reader is appropriate for your facility, and to evaluate the various readers on the market, you should consider the following:

- Overall numbers of blood/blood components being handled in a given period of time, equating to the likelihood of typographical errors.
- Number of rejections, i.e., the ease with which the reading is attempted before the data is accepted, since this will have a major effect on time savings.
- The condition of the units being scanned; i.e., are most of the units red blood cells whose labels are in good shape, even though not a flat surface? ....OR are many of the units of Fresh Frozen Plasma and/or Cryoprecipitate, since this requires reading through cellophane covering on the box, around curves, through moisture, etc.?
- The ease of handling the reader. Wand/pens are much easier to handle because you can still use your hands for something else, whereas with the laser gun model, you must keep setting the laser down to enter the expiration dates, etc. unless it is also bar coded.

Example of Bar Code Reader set up

Symbol Technologies Laser scan 7000II Hand-Held Laser Scanner with the Symbollink LL340 Controller box. (Tampa, Florida is using this technology)

All settings are set-up by scanning the proper bar code in the instruction booklet. Use the following settings:

```
CODABAR ONLY
NOTIS EDITING                    ENABLED
DECODE UPC/EAN SUPPLEMENTAL      ENABLED
UPC-E PREAMBLE                   NONE
UPC-A PREAMBLE                   NONE
BAUD                             9600
CHECK PARITY OF RECEIVED CHARACTERS      DISABLED
TRANSMISSION DIRECTION           TALK & H SHAKE SEC ONLY
STOP BIT SELECT                  1 STOP BIT
```

NOTE: This example is to show you what sort of settings you will see. The Laboratory package does not advocate using this particular brand.

Training Information

Training Implementation Checklist

This checklist is intended for use in setting up a Test account to be used for review of and training on the Blood Bank Module of the Laboratory package. As in production, certain tasks will need to be performed before the options will be operational as described in the Blood Bank User's Guide. The following checklist includes some, but certainly not all, of the same tasks which will need to be accomplished before fully implementing the module in production. (Consult pages 1-4 of the Blood Bank User's Guide for an overview of all of the issues that need to be addressed.)

1. Review the following files and edit, if necessary, BEFORE attempting to perform the Training Exercises. Specific entries applicable to the Training Exercises are included when they are: **COMPLETED**

1) different from the notes included in the reference or

2) not included in the reference.

	COMPLETED
a. File #61.3 - FUNCTION FIELD (of SNOMED file)	_____
b. File #44 - HOSPITAL LOCATION	_____
c. File #19.1 - SECURITY KEY	_____
d. File #19 - OPTION	_____
e. File #69.2 - LAB SECTION PRINT	_____
f. File #60 - LABORATORY TEST NAME	_____
g. File #62.07 - EXECUTE CODE	_____
h. File #62.6 - ACCESSION TEST GROUP	_____
i. File #68 - ACCESSION	_____
j. File #62 - COLLECTION SAMPLE	_____
k. File #69.6 - LABORATORY SITE	_____

l. File #62.5 - LAB DESCRIPTIONS _____

```
BLOOD BANK DESCRIPTIONS NAME:  BLD
LAB DESCRIPTIONS EXPANSION:  Patient actively bleeding
LAB DESCRIPTIONS SCREEN:  BB AUDIT
BLOOD BANK DESCRIPTIONS NAME:  HEART
LAB DESCRIPTIONS EXPANSION:  EXTENSIVE CARDIAC BYPASS SURGERY
LAB DESCRIPTIONS SCREEN:  BB AUDIT
```

m. File #65.4 - BLOOD BANK UTILITY FILE (optional) _____

```
BLOOD DONOR UTILITY NAME:  VAH
BLOOD DONOR UTILITY SCREEN:  GROUP AFFILIATION & COLLECTION SITE
BLOOD DONOR UTILITY FULL NAME:  VA HOSPITAL BLOOD CENTER
```

n. File #66 - BLOOD PRODUCT FILE _____

Add this new supplier for CPDA-1 Red Blood Cells (04060), Fresh Frozen Plasma (18201) and Platelets.

```
SUPPLIER:  THE BEST BLOOD CENTER
COST:  45.00 (RBC); 24.00 (FFP); 27.00 (PLTS)
PREFERENCE NUMBER:  2
SUPPLIER PREFIX ID:  <RET>
REGISTRATION NUMBER:  <RET>
UNIT LABEL NON STANDARD:  <RET>
```

Add the following for CPDA-1 Red Blood Cells (04060):

```
TESTS TO CHECK:  HGB  (HEMOGLOBIN)
SPECIMEN:  BLOOD
> OR <TEST VALUE:  >10
TESTS TO CHECK:  HCT  (HEMATOCRIT)
SPECIMEN:  BLOOD
> OR <  VALUE:  >30
```

Add the following for 5-day Platelets.

```
PRE-OP TESTS TO CHECK:  PLT (PLATELET COUNT)
SPECIMEN:  BLOOD
> OR < TEST VALUE:  >100
TESTS TO CHECK:   BT  (BLEEDING TIME)
SPECIMEN:  BLOOD
> OR < VALUE:  <9
```

2. Enter the patients to be used into the PATIENT file. _____

Make sure that the necessary entries are present in the appropriate related files for physician, hospital location, and treating specialty.

The following patients are used in the training exercises. Either these patients may be added to the Test account OR other patients may be substituted.

```
WASHINGTON, GEORGE   592-88-8888
DOE, JOHN   333-22-4444
```

3. Enter the appropriate tests to be displayed during Specimen Log in. _____

```
TESTS TO DISPLAY:  HGB  (HEMOGLOBIN)
SPECIMEN:  BLOOD
TESTS TO DISPLAY:  HCT  (HEMATOCRIT)
SPECIMEN:  BLOOD
TESTS TO DISPLAY:   PLT  (PLATELET COUNT)
SPECIMEN:  BLOOD
```

4. Using the regular laboratory options, accession tests and enter test results for the hemoglobin, hematocrit and platelet count for the two patients to be used. _____

```
WASHINGTON, GEORGE   592-88-8888
   Hemoglobin:  11.5 gm/dl
   Hematocrit:  34%
   Platelet count:  75,000/mm3

DOE,JOHN    333-22-4444
   Hemoglobin:  14.5 gm/dl
   Hematocrit: 43%
   Platelet count:  200,000/mm3
```

5. Enter the tests to appear in the Patient transfusions and hematology results report. _____

```
TESTS TO PRINT:  HGB  (HEMOGLOBIN)
TESTS TO PRINT NUMBER:  1
TESTS TO PRINT:  HCT  (HEMATOCRIT)
TESTS TO PRINT:  2
TESTS TO PRINT:  PLT (PLATELET COUNT)
TESTS TO PRINT NUMBER:  3
TESTS TO PRINT:  BT  (BLEEDING TIME)
TESTS TO PRINT NUMBER:  4
```

6. Enter previous antibody identification information on the patients identified as having problems. _____

```
Patient Name:  DOE, JOHN 3332244444
ANTIBODIES IDENTIFIED:  K
RBC ANTIGENS PRESENT:  <RET>
RBC ANTIGENS ABSENT:  K
HLA ANTIGENS PRESENT:  <RET>
HLA ANTIGENS ABSENT:  <RET>
BLOOD BANK COMMENTS:
1> TRANSFUSE K negative rbcs only 11/13/87
2> <RET>
TRANSFUSION DATE/TIME:  <RET>
```

Training Exercises

These exercises could be performed either by using "real" data from your own facility or by using the data given in the examples included in the Blood Bank User Manual on the pages referenced. They are designed primarily as a demonstration and training tool for the user to quickly view those options used routinely in the performance of his/her duties. They will NOT include all of the various options in each menu.

Before beginning the exercises, make sure that the items on the Implementation Checklist on the preceding pages have been completed.

Inventory/Patient Modules

A. Entry of units into inventory

1. Enter at least 6 units of Red Blood Cells, 4 A+ and 2 O+, and 2 units of A+ Fresh Frozen Plasma into inventory.

   Option: Log in regular (invoices) (I-LR)

   Invoice: 01 SUPPLIER: THE BEST BLOOD CENTER

   RED BLOOD CELLS, CPDA-1

UNIT ID	ABO/RH	EXPIRATION
V11111	A POS	*
V11112	A POS	*
V11114	A POS	*
V11116	A POS	*
V11117	O POS	*
V11118	O POS	*

   FRESH FROZEN PLASMA, CPDA-1

UNIT ID	ABO/RH	EXPIRATION
V11111	A POS	*
V11113	A POS	*

   * Select an appropriate expiration date, based on the component.

2. Enter the additional antigen typings (C and K negative) for the 2 units of O+ Red Blood Cells received, i.e. V11117 & V11118.

   Option: Unit phenotyping (I-UP)

3. Print the worksheet for recording the results of the ABO/Rh rechecks on the units received.

   Option: Inventory ABO/Rh testing worksheet (I-UW)

4. Enter the results of the ABO recheck information for the units of red blood cells as follows:

```
Option: Unit ABO/Rh confirmation (I-UC)
```

Example:

```
V11111   A  V11117   O
V11112   A  V11118   O
V11114   A  V11116   A
```

B. Entry of patient specimens and pre-transfusion testing

1. Log in 2 different patient specimens, i.e., Patient #1 and Patient #2, including test request for Transfusion Requests for the components as shown.

```
Option: Specimen log in (P-SL)
```

Example:

```
Patient #1:<RET>
Name:  WASHINGTON,GEORGE     SSN:  592-88-8888
TEST:  TRANSFUSION REQUEST
Pre-Op:  NO
BLOOD COMPONENT REQUEST:  04060  CPDA-1 RED BLOOD CELLS
Request still OK?  Yes
Requesting Person:  Jones
Request date/time:  N
Number of units:  4
Date/Time Wanted:  N
Component request reason:  BLD  Patient actively bleeding
Approved by:  KILDARE
BLOOD COMPONENT REQUEST:  18201  Fresh Frozen Plasma
Requesting Person:  Jones
Request date/time:  N
Number of units:  2
Date/Time Wanted:  N
Patient #2:<RET>
Name:  DOE,JOHN               SSN:  333-22-4444
TEST:  TRANSFUSION REQUEST
Location: <RET>
Pre-Op:  Y
BLOOD COMPONENT REQUEST:  04060  CPDA-1 RED BLOOD CELLS
Requesting Person:  SMITH
Request date/time:  N
Number of units:  10
Date/Time Wanted:  T+1@8A
BLOOD COMPONENT REQUEST:  P1/5  PLATELET CONCENTRATE, 5 DAY EXP
Request still OK?  Yes
Requesting Person:  SMITH
Request date/time:  N
Number of units:  10
Date/Time Wanted:  T+1@8A
Component request reason:  HEART EXTENSIVE CARDIAC BYPASS SURGERY
Approved by:  KILDARE
```

2. Enter the pre-transfusion compatibility testing (ABO/Rh & Antibody screening) as follows:

   Option: Enter test date (P-ET)

   ```
   LABORATORY TEST NAME:  TRANSFUSION REQUEST

   Accession Number:  as assigned to WASHINGTON,GEORGE
   ABO/Rh:  A POS
   DIRECT AHG:  NEGATIVE
   ANTIBODY SCREEN:  NEGATIVE  (technique & method as appropriate)

   Accession Number:  as assigned to DOE,JOHN
   ABO/Rh:  O POS
   DIRECT AHG:  NEGATIVE
   ANTIBODY SCREEN:  POSITIVE  (technique & method as appropriate)
   SERUM ANTIBODY:  K
   ANTIBODIES IDENTIFIED:  K
   ```

3. Select two units of A+ Red Blood Cells and two units of A+ Fresh Frozen Plasma for Washington, George 524-88-8888

```
Option: Select units for patient (P-RS-US)
```

4. Enter the crossmatch results for the 2 units of Red Blood Cells for Washington, George (524-88-8888).

```
Option: Enter crossmatch results (P-RS-XM)
```

5. Request a listing of the units already phenotyped for use in selecting units for Doe, John 333-22-4444 (anti-K), specifying 04060 as the component, and O POS as the ABO/Rh.

```
Option: Phenotyped units available (R-UP)
```

Example: Use Default as the device so you can quickly see the listing of units which are either antigen negative or have not been typed.

6. Select the two units of Red Blood Cells for Doe, John (333-22-4444) by requesting the system to provide a listing of the units already phenotyped which are either K negative or have not been tested, i.e., enter two "??" at the "Select Unit" prompt.

```
Option: Select units for patient (P-RS-US)
```

7. Enter the crossmatch results for Doe, John (333-22-4444).

```
Option: Enter crossmatch results (P-RS-XM)
```

8. Print labels for the Caution tags for those units crossmatched for both patients.

```
Option: Unit CAUTION tag labels (R-CT)
```

Example: Indicate that you want to save the labels for reprinting in order to later queue them to the printer, then accept Default as the DEVICE to allow a quick review of what they look like.

Optional

9. Attempt to select units of Fresh Frozen Plasma for Patient #2 by 1) entering a "??" to see the list of available units if only unassigned units are selected, and 2) entering two "??" to see the list of available units if you indicate that you want to double up assignments by entering "NO" to that prompt.

C. Issue/Relocation and transfusion units

1. Issue the first unit of Red Blood Cells for Washington, George (524-88-8888).

```
Option: Disposition-relocation (I-DR)
Issued to: S.Smith,RN
Location: as appropriate
Inspection: S
Date/time relocation: N
```

2. Enter the initial transfusion data for the unit issued on Washington, George (524-88-8888), including the fact that the patient had a suspected transfusion reaction.

```
Option: Blood transfusion results (P-DT)
```

Enter a Y in response to the prompt "TRANSFUSION REACTION" with no subsequent entry for the prompt "Select TRANSFUSION COMMENT" since the workup is not yet complete.

3. Enter (update) the results of the completed transfusion reaction workup for Washington, George (524-88-8888) for the unit transfused.

```
Option: Edit unit disposition fields (S-EI-DI)

TRANSFUSION REACTION: YES
TRANSFUSION COMMENT: FNH FEBRILE NONHEMOLYTIC
```

4. Enter a comment on George Washington record to indicate that the patient should receive WASHED Red Cells in the future as a result.

> **NOTE:** This is not a suggested policy, merely an example.

```
Option: Special instructions (P-SI)

BLOOD BANK COMMENT:
1> Febrile nonhemolytic reaction 9-21-87
2> Transfuse ONLY washed red blood cells (your initials)
```

5. Review the patient s record to see what all has transpired.

```
Option: Display blood bank record (Q-PR)

Select Patient Name:  W8888  WASHINGTON,GEORGE  03-01-00   592888888
WASHINGTON,GEORGE  ID: 592-88-8888
ABO group:  A  Rh type:  POS
AGE:  87  DATE OF BIRTH:  MAR 1, 1900
PATIENT LOCATION:  ORTHOPEDICS//  <RET>
```

```
   Febrile nonhemolytic reaction 9-21-87.  Transfuse ONLY washed red blood cells.

Is this the patient ?  YES //  <RET>  (YES)

WASHINGTON,GEORGE  8888                        A POS
  Febrile nonhemolytic reaction 9-21-87.  Transfuse ONLY washed red blood cells.

            TRANSFUSIONS      Transfusion
   Unit        Component         Date/time completed
1) V11111   CPDA-1 RED BLOOD CELLS  A POS        as entered
    FEBRILE NONHEMOLYTIC
```

D. Modify units in inventory

1. Modify the other unit crossmatched for Washington, George from Red Blood Cells to Washed Cells for subsequent issue/transfusion.

```
Option: Disposition-not transfused (I-DN)

DISPOSITION:  MO  MODIFY
Modify to:  RED BLOOD CELLS, WASHED (04800)
DATE/TIME RECEIVED:  <RET>
VOLUME:  <RET>
EXPIRATION DATE/TIME:  <RET>
```

2. Review what has happened to the unit that was modified.

```
Option: Single unit information-display (Q-SD)

Select BLOOD INVENTORY UNIT ID:  as appropriate (see D1 above)
   1  as appropriate O POS  CPDA-1 RED BLOOD CELLS
   2  as appropriate O POS  RED BLOOD CELLS, WASHED
CHOOSE 1-2:  1
UNIT ID:  as appropriate
SOURCE:  SELF
INVOICE#: 01
COMPONENT: CPDA-1 RED BLOOD CELLS
DATE/TIME RECEIVED: as appropriate
EXPIRATION DATE/TIME: as appropriate
ABO GROUP:  A
RH TYPE:  POSITIVE
LOG IN PERSON:  as appropriate
COST:  0.00
ABO INTERPRETATION:  A
TECH INITIALS:  as appropriate
PATIENT XMATCHED/ASSIGNED:  WASHINGTON  8888
BLOOD SAMPLE DATE/TIME:  as appropriate
SERVICE:  MEDICINE
ACC#:  as appropriate
DISPOSITION:  MODIFY
DISPOSITION DATE:  as appropriate
DISPOSITION ENTERING PERSON:  as appropriate
NUMBER:  1
MODIFIED TO/FROM: RED BLOOD CELLS,WASHED
UNIT ID: as appropriate

Select BLOOD INVENTORY UNIT ID:  as appropriate (see D1 above)
   1  as appropriate O POS  CPDA-1 RED BLOOD CELLS
   2  as appropriate O POS  RED BLOOD CELLS, WASHED
CHOOSE 1-2:  2
UNIT ID:  as appropriate
```

```
SOURCE: SELF
INVOICE#:  01
COMPONENT: RED BLOOD CELLS, WASHED
DATE/TIME RECEIVED:  as appropriate
EXPIRATION DATE/TIME:  as appropriate
ABO GROUP:  A
RH TYPE:  POSITIVE
LOG IN PERSON:  as appropriate
COST:  0.00
PATIENT XMATCHED/ASSIGNED:  WASHINGTON  8888
BLOOD SAMPLE DATE/TIME:  as appropriate
SERVICE: MEDICINE
ACC#:  as appropriate
NUMBER:  1
MODIFIED TO/FROM:  CPDA-1 RED BLOOD CELLS
UNIT ID:  as appropriate
```

3. Review what is currently available for WASHINGTON, GEORGE (524-88-8888).

```
Option: Units assigned/components requested (Q-UA)
```

The unit that was transfused should no longer appear and the 2nd unit of red blood cells that was modified should now be shown as washed red cells.

```
Select Patient Name:  W8888   WASHINGTON, GEORGE   03-01-00  592888888
WASHINGTON,GEORGE   ID:  592-88-8888
ABO GROUP:  A   RH TYPE:  POS
AGE:  94  DATE OF BIRTH:  MAR 1, 1900
PATIENT LOCATION:  ORTHOPEDICS// <RET>
  Febrile nonhemolytic reaction 9-21-93.  Transfuse ONLY washed red blood cells.
Is this the patient?  YES//  <RET>  (YES)

WASHINGTON, GEORGE  8888                  A POS
  Febrile nonhemolytic reaction 9-21-93.  Transfuse ONLY washed red blood cells.

Unit assigned/xmatched:                          Exp date            Loc
1) as appropriate RED BLOOD CELLS,WASHED A POS  AUG 31,1993 as appropriate

Component Requests   Units Request date  Date wanted  Requester  By
CPDA-1 RED BLOOD CELLS  2  as appropriate....
FRESH FROZEN PLASMA,CPDA-1 2  as appropriate....
```

Optional

4. Attempt to relocate the washed cells on WASHINGTON,GEORGE (524-88-8888)

```
Option: Disposition-relocation (I-DR)
```

The system will not allow relocation of the Washed Red Cells because no unit recheck has been entered for the modified unit.

5. Print a Blood Bank Cumulative Report for WASHINGTON,GEORGE.

```
Option: Print single BB patient report (R-BR-3)
```

Accept the Default as the Device in order to quickly review the format of the information entered thus far. This will be queued to a printer at a later time.

E. Reports

NOTE: Specific examples of the printouts have not been included because the data will be totally dependent on the information entered during the exercises. The reference pages will allow review of the type of information to be expected.

1. Print the accession list to review whether the testing requested so far has been completed.

```
Option: Patient accession list (R-PL)
```

2. Print a listing of units that are currently assigned/xmatched which have no final dispositions.

```
Option: Units on Xmatch by date/time xmatched (R-IS-UX)
```

3. Print a report of the result entries from the day for the supervisor to review.

```
Option: Patient antibody report (short list) (R-AR)
```

4. Print a listing of supplier transactions to verify billing.

```
Option: Supplier transactions (inventory)(R-IT-IT)
```

5. Print the hard copy reference for the issues/relocations.

```
Option: Unit relocation record book entries (R-UR-IS)
```

6. Print the hard copy reference for the transfusion data.

```
Option: Transfusion data report (R-UR-TR)
```

7. Print the hard copy reference for the transfusion reactions.

```
Option: Transfusion reaction report (R-UR-RR)
```

III. DONOR MODULE (OPTIONAL)

A. Donor registration

1. Register two new donors not previously donating at your institution.

```
Option: Donor registration (D-DR)

Name:  SMITH,JOHN
SEX:  M                    DOB:  061953
GROUP AFFILIATION:  VAH

Collection Site:  VAH
Donation Group:  VAH
Arrival/Appt time:  T@8A
Donation:  Whole Blood
Donation type:  Homologous
NOTE:  Enter donor in list?  YES
```

```
Name:  CON,JIM
SEX:  M                              DOB:  071858
GROUP AFFILIATION:  VAH

Collection Site:  VAH
Donation Group:  VAH
Arrival/Appt time:  T@9A
Donation:  Whole Blood
Donation type:  Homologous
```

2. Print the form to be used to record the history, physical, etc., for the donation for each donor.

```
Option: Donor history, physical and consent form (D-DH)

Collection Site:  VAH      Date:  T

Enter (printer name) as the DEVICE and 80 as the margin to allow printing on the
printer.
```

B. Donor collection/component preparation

1. Enter the collection data for Smith, John showing that he successfully donated a unit of Whole Blood (in a double bag).

```
Option: Donor collection/processing (D-DC)

Name:  S0617
Phlebotomist:  as appropriate
Donor reaction code:  NONE
Unit #:  V22222
Bag:  Double   Anticoagulant:  CPDA-1
Bag Lot #:  12345
Date/time Collection Started:  T @820
Date/time Collection Completed:  T @830
Collect Wt:  575  Empty Bag:  98
```

2. Enter the deferral data for Con,Jimmy.

```
Option:  Donor collection/processing (D-DC)Page #2-11

Name:  C0718
Donation/deferral code:  No donation
Deferral reason:  Blood pressure & medication
```

3. Prepare a unit of Red Blood Cells (04060) and a unit of Fresh Frozen Plasma (18201) from the donor unit successfully collected, i.e. V22222.

```
Option:  Collection disposition/component preparation (D-CP)
```

C. Donor processing/labeling

1. Enter the ABO/Rh testing interpretation for the donor unit V22222.

```
Option:  ABO/Rh testing of donor units (D-DU-DT)
Unit ID: V22222   ABO/Rh:  O POS
```

2. Enter the results of any additional red cell antigen typings performed on the donor unit V22222.

```
Option:  Donor phenotyping (D-DP)
Unit ID: V22222   RBC Antigen Present: c.E
RBC Antigen Absent:  C.e
```

3. Request a worklist in order to see what testing is not completed for the donor units.

```
Option:  Donor unit testing worklist (D-DU-DL)
Enter Printer name as the DEVICE with a margin of 132.
```

NOTE: Usually you would wait until all of the current testing is entered to use this as an incomplete.

4. Enter the results of the HBsAg, RPR, HIV Antibody, HBcAb and ALT testing for the donor unit V22222.

```
Option:  Lab tests (not ABO/Rh) on donor units

Donor ID:  V22222 SYPHILIS SEROLOGY:   N  HBsAg:   N
HIV ANTIBODY:  N  HBcAb:   N
ANTIBODY SCREEN:  N  ALT:  N
```

5. Label and release ONLY the unit of Red Blood Cells for V22222 (requires two techs unless using a bar code reader).

```
Option:  Test review/component labeling/release (D-DU-LR)
```

6. Order a prooflist to review the units labeled, etc., including all relevant data.

NOTE: This may be discarded after review, as it will be printed at the end of the month, for the entire month, to be saved as a hard copy reference.

```
Option:  Donor unit testing prooflist (D-DU-DR)
         Donor unit supplemental testing   (D-DU-DS)

Enter Printer name as the DEVICE on which the report should be printed.
```

Optional

7. Change the test result on V22222 for the HBsAg test from negative to positive, repeat pending.

```
Option:  Lab tests (not ABO/Rh) on donor units (D-DU-LA)
```

8. Attempt to label and release the unit of Fresh Frozen Plasma for V22222 (requires two techs unless using a bar code reader).

NOTE: The system will allow the unit to be labeled but not released.

```
Option: Test review/component labeling/release D-DU-LR)
```

Respond with a <RET> in response to the prompt "OK to label component?" to see what happens if you erroneously attempt to label a unit.

Blood Bank Workload Implementation

Overview

In order to standardize workload recording throughout the various sections of the laboratory, the workload associated with the performance of testing and other functions is captured in a manner consistent with the remainder of the laboratory. Since Blood Bank (BB) subscript tests are not handled in the same manner as Chemistry (CH) subscript tests, this required some programming of background functionality which would allow workload recording to be recorded appropriately. For data entry and functionality which does fit the traditional order a test and enter a result model, the programming in the various routines actually generate a test/procedure which is recorded in the appropriate file. These tests/procedures are based on entries in the LABORATORY TEST file (#60) with a Workload (WK) subscript. In the case of patient related workload, these tests are associated with the accession in ACCESSION file (#68). In the case of inventory related workload, the tests/procedures are recorded in BLOOD INVENTORY file (#65) in a new multiple field developed for this purpose. In the case of donor related workload, the test/procedures are recorded in BLOOD DONOR file (#65.5).

Although initial implementation efforts for the other clinical laboratory sections is being focused on the data needed for the Laboratory Management Index Program (LMIP), this differentiation is not possible within the Blood Bank. It is necessary to do all of the necessary file setup before workload is turned on for this section.

For purposes of LMIP, it is necessary to differentiate between patient, inventory and donor workload. This is handled automatically by the programming. However, it is necessary to assign the appropriate WKLD code to the test in LABORATORY TEST file (#60). For example, there are three separate codes for ABO Cell, Serum, and Rh typing performed in tubes. For patients, 86082 would be assigned for inventory 86084 and for donor processing 86085.

The determination as to whether a workload code is designated as billable or not was made on a national level and is included in the exported version of WKLD CODE file (#64). This cannot be edited at the local level for the five digit prefix. On reports which are generated locally and include all of the workload data, these are designated with a + sign in front of the name.

On the LMIP reports which tally and categorize the workload, the non patient workload coming from BLOOD INVENTORY file (#65), and BLOOD DONOR file (#65.5) are categorized as follows.

(1) For those codes that are designated as billable, the codes coming from BLOOD INVENTORY file (#65) go into Non patient and the codes coming from BLOOD DONOR file (#65.5) go into Outpatient. For BLOOD DONOR file (#65.5), the only codes which are designated as billable are related to Therapeutic Phlebotomy, Autologous Donation, or Therapeutic Apheresis. Since for the most part, these are performed on an outpatient basis, the determination was made to include them in this category. For the BLOOD DONOR file (#65.5) this includes:

86138	86385	86840
86141	86401	86845

For BLOOD INVENTORY file (#65) the codes associated with unit modification and unit phenotyping are included. This includes:

86120	86275	86670
86125	86276	86805
86183	86277	86810
86272	86393	

(2) For those workload codes that are designated as nonbilliable, they are included in the Total On Site Tests. In BLOOD DONOR file (#65.5), this will include all of the homologous donor workload, including drawing, the ABO/Rh testing of the donor, component preparation and labeling. For BLOOD DONOR file (#65.5), this includes:

86129	86390	86801
86133	86391	86819
86269	86392	86825
86271	86394	86084
86383	86795	86085
86387	86796	
86389	86800	

In BLOOD INVENTORY file (#65), this includes retyping units, receipt and issuing of blood products, clerical functions associated with log in, and release of blood products. For BLOOD INVENTORY file (#65), this includes:

86084	86412	86849
86131	86790	86850
86134	86820	
86382	86848	

(3) For those workload codes that are designated as billable and which are entered manually are included in the Total Billable Tests, but are not broken down by Inpatient, Outpatient, or Non Patient. These will also not be included in the Billable Referred Tests even if the suffix code indicates that it is a send out test. Depending on the method for data entry, i.e., real time or retrospective, this may also include antibody associated workload.

86135	86154	86398
86137	86158	86402
86150	86160	86847
86152	86161	

(4) For those workload codes that are designated as nonbillable and which are entered manually, they are included in the Total On Site Tests. This includes any donor processing, i.e., donor disease testing which is entered. This includes:

86083	86155	86175
86143	86169	86176
86145	86170	86193
86153	86171	86220

(5) For those codes for which there are not associated laboratory tests/procedures, such as reagent preparation and quality control, there is not a mechanism to capture the information in Version 5.2.

Workload capture in V. 5.2 was intended not to include non workload and support activities. This includes:

86086	86198	86204
86184	86200	86211
86186	86201	86216
86196	86202	86384
86197	86203	86399

(6) The following is a complete list of Blood Bank workload codes that should be marked billable.

WKLD CODE	BILLABLE PROCEDURE
86000.0000	YES
86080.0000	YES
86081.0000	YES
86082.0000	YES
86100.0000	YES
86120.0000	YES
86125.0000	YES
86135.0000	YES
86136.0000	YES
86137.0000	YES
86138.0000	YES
86139.0000	YES
86140.0000	YES
86141.0000	YES
86142.0000	YES
86144.0000	YES
86148.0000	YES
86150.0000	YES
86152.0000	YES
86154.0000	YES
86156.0000	YES
86158.0000	YES
86160.0000	YES
86161.0000	YES
86164.0000	YES
86166.0000	YES
86167.0000	YES
86168.0000	YES
86177.0000	YES
86178.0000	YES
86179.0000	YES
86180.0000	YES
86181.0000	YES
86182.0000	YES
86183.0000	YES
86188.0000	YES
86206.0000	YES
86250.0000	YES
86252.0000	YES
86254.0000	YES
86272.0000	YES
86275.0000	YES
86276.0000	YES
86277.0000	YES
86385.0000	YES
86388.0000	YES

```
86393.0000     YES
86398.0000     YES
86400.0000     YES
86401.0000     YES
86402.0000     YES
86404.0000     YES
86406.0000     YES
86670.0000     YES
86805.0000     YES
86810.0000     YES
86840.0000     YES
86845.0000     YES
86847.0000     YES
```

File Setup

File #60 (LABORATORY TEST)

For Blood Bank, all WKLD codes in LABORATORY TEST file (#60) go in the Verify WKLD Code field (#500). The mechanism for ordering the tests used for workload purposes is based on hard coded changes in the affected routines. Therefore, it is necessary to ensure that the name in LABORATORY TEST file (#60) is exact. These tests were included in the INITs in an effort to eliminate this difficulty. However, they were included with a WK- in front of them so as not to overwrite any existing tests. Any existing tests with the same name need to be renamed. For example, UNIT PHENOTYPING was exported as WK-UNIT PHENOTYPING. Thus, the names will need to be edited to allow the routine to find the tests.

WKLD CODE file (#64) and WKLD SUFFIX CODES file (#64.2) are exported with data. No changes can be made by the site. However, the programming will create the additional entries in WKLD CODE file (#64) needed to reflect the methodology /instrumentation of the institution.

Add the necessary tests as specified below to deal with Blood Bank workload.

Assign TRANSFUSION REQUEST, a panel of verify WKLD codes:

```
86080 ABO/Rh (or 86082)
86167 Antibody Screen (or 86168)
86250 Direct Coombs (if performed by site)
```

If the site has multiple tests set up in LABORATORY TEST file (#60), such as Preoperative Transfusion Request, etc., this will need to be done for each one.

The Verify WKLD codes that should be assigned to the tests are indicated below:

```
SUBSCRIPT: WORKLOAD                    TYPE: NEITHER
ACCESSION AREA: BLOOD BANK

Test Name                              Verify WKLD code
WKLD CROSSMATCH                        86166 (or 86164)
PATIENT PHENOTYPING                    No WKLD codes   EDIT CODE: LRBLPAG
UNIT LOG-IN/SEND-OUT                   86132
UNIT PHENOTYPING                       No WKLD codes
UNIT MODIFICATION                      No WKLD codes
UNIT ABO RECHECK                       86084 (or 86848 )
UNIT RH RECHECK                        86100 (or 86848 )
UNIT RELOCATION                        86134
UNIT RELEASE                           86850
COMPONENT PREPARATION                  No WKLD codes
```

NOTE: You will also need to fill out the Highest Urgency and Print name fields. The names must be an exact match.

NOTE: If the site is not using the donor module, these tests will not need to be added; however, if ANY portion of the module is being used, ALL of the tests must be entered. Thus, if the site is not drawing homologous donors, but is entering therapeutic phlebotomies or autologous donors, this sections does apply.

```
SUBSCRIPT: WORKLOAD                    TYPE: NEITHER
ACCESSION AREA: BLOOD BANK

Test Name                              WKLD Verify code

DONOR ABO/RH TESTING                   86085
DONOR ABO/RH RECHECK                   86084 (or 86848)
DONOR ANTIBODY SCREEN                  86143 (or 86849)
DONOR COMPONENT PREPARATION            No WKLD codes
DONOR PHENOTYPING                      No WKLD codes
DONOR UNIT RELEASE                     86129
DONOR UNIT LABELING                    86129
DONOR DEFERRAL                                   86825
DIRECTED WB DONATION                             86820 + 86133 + 86819
HOMOLOGOUS WB DONATION                           86820 + 86133 + 86819
AUTOLOGOUS WHOLE BLOOD 1ST                       86820 + 86136 + 86138
AUTOLOGOUS WHOLE BLOOD NOT 1ST                   86820 + 86141 + 86138
THERAPEUTIC PHLEBOTOMY                           86820 + (86840 or 86845)
HOMOLOGOUS PLASMAPHERESIS                        86820 + 86819
HOMOLOGOUS CYTAPHERESIS                          86820 + 86819
DIRECTED PLASMAPHERESIS                          86820 + 86819
DIRECTED CYTAPHERESIS                            86820 + 86819
AUTOLOGOUS PLASMAPHERESIS 1ST                    86820 + 86136
AUTOLOGOUS PLASMAPH NOT 1ST                      86820 + 86141
AUTOLOGOUS CYTAPHERESIS 1ST                      86820 + 86136
AUTOLOGOUS CYTAPH NOT 1ST                        86820 + 86141
THERAPEUTIC PLASMAPHERESIS                       86820 + 86819
THERAPEUTIC CYTAPHERESIS                         86820 + 86819
```

For those sites doing apheresis, entry of the following required comments will display the choices of instrumentation/methodology during data entry:

For the tests involving plasmapheresis ONLY:
REQUIRED COMMENT: PLASMAPHERESIS

For the tests involving cytapheresis ONLY:
REQUIRED COMMENT: CYTAPHERESIS

File #61.3 (FUNCTION FIELD)

Enter either 86120 or 86125 for all blood group antigens which might be tested at that facility.

Example:

```
FUNCTION WKLD CODES   ^LAB(61.3
NAME           WKLD CODE                                  WKLD #
-----------------------------------------------------------------------

A-1            Antigen Blood Type                         86120.0000
Au(a)          Antigen Blood Type w/Antihuman             86125.0000
C              Antigen Blood Type                         86120.0000
Ce             Antigen Blood Type                         86120.0000
Cx             Antigen Blood Type                         86120.0000
```

NOTE: Not a complete list, just a sample.

File #66 (BLOOD PRODUCT)

Enter the appropriate WKLD code for all blood components that are used at that facility.

Example:

```
BLOOD PRODUCT LIST                              JUN  9,1994  10:36    PAGE 1
PRODUCT                                                ABBREV            WKLD
CODES                                      ASK LOT
-----------------------------------------------------------------------------
AUTOLOGOUS LIQUID PLASMA                   yes         ALP               86810
AUTOLOGOUS RED BLOOD CELLS                             ARC               86795
AUTOLOGOUS WHOLE BLOOD                                 AWB               86810
CPDA-1 RED BLOOD CELLS                                 RA1               86796
CPDA-1 WHOLE BLOOD                                     WA1               86810
FRESH FROZEN PLASMA, CPDA-1                            FA1               86801
FRESH FROZEN PLASMA,DIVIDED                yes         FP/D              86810
FRESH FROZEN PLASMA,THAWED                             TFFP              86805
FRESH FROZEN PLASMA,THAWED, DIVIDED       yes          TF/D              86810
IRRADIATED POOLED PLTS,PLASMA REMOVED                  IPPP              86183
                                                                         86810
PLATELETS PHERESIS                                     PPH               86810
PLATELETS, POOLED, IRRADIATED                          PP/I              86183
                                          yes                            86393
PLATELETS, RANDOM, IRRADIATED              no          PR/I              86183
PLATELETS,20-24 C, 5 DAY EXP.                          P1/5              86390
PLATELETS-PHERESIS, IRRADIATED                         PH/I              86183
POOLED PLATELETS                           yes         PP                86393

CONT D ON NEXT PAGE

BLOOD PRODUCT LIST                              JUN  9,1993  10:36    PAGE 2
PRODUCT                                                ABBREV            WKLD
CODES                                     ASK LOT
-----------------------------------------------------------------------------
-----------------------------------------------------------------------------
POOLED PLATELETS, PLASMA REMOVED                       PP/P              86810
RED BLOOD CELLS, DEGLYCEROLIZED                        DEGL              86276
RED BLOOD CELLS, FROZEN                    yes         RBCF              86275
RED BLOOD CELLS, FROZEN, REJUVINATED                   RRF               86275
                                                       86277
```

```
RED BLOOD CELLS, REJUVINATED,DEGLY       yes          RDG                86276
RED BLOOD CELLS, WASHED                  yes          WC                 86670
RED BLOOD CELLS, WASHED, IRRADIATED                   WC/I               86183
                                                                         86670
REJUVENATED WASHED RED CELLS             yes          RJWC               86810
SPUN/FILTERED RED BLOOD CELLS                         R/SF               86382
```

NOTE: This is not a complete list, just a sample.

File 62.07 (EXECUTE CODE)

During data entry through Enter Test Data (P-ET) [LRBLPET] depending on whether data is entered for SERUM ANTIBODY and ELUATE ANTIBODY, it is possible to record the workload associated with antibody identification at the time of data entry. Each site can select whichever WKLD codes they wish to have displayed. These should be entered in the EXECUTE CODE file (#62.07) in the WKLD Code field for LRBLSCREEN and COOMBS.

Example:

```
86150    Antibody Elution (heat, ether, alcohol or chloroform)

86152    Antibody Identification with Antihuman Globulin Test (saline,
         albumin, 1 stage enzyme and/or LISS)

86154    Antibody Identification without Antihuman Globulin Test (saline,
         albumin, 1 stage enzyme and/or LISS)
```

For accumulation of workload and for appropriate data entry prompts for both patient and unit phenotyping, you must enter LRBLPAG in the EXECUTE CODE file (#62.07).

Example: Type = Edit Execute Code = S DR = [LRBLPAG].

The sites doing apheresis can select which ever codes they wish to have displayed for the plasmapheresis and cytapheresis donation types and enter them in the EXECUTE CODE file (#62.07) for PLASMAPHERESIS and CYTAPHERESIS. These will then be added to the other codes from LABORATORY TEST file (#60).

Enter PLASMAPHERESIS and CYTAPHERESIS in the EXECUTE CODE file (#62.07). TYPE=COMMENT.

```
WKLD CODE:
  86385.6050      Plasmapheresis-Haemonetics Model 30
  86385.6060      Plasmapheresis-Cobe 2997
  86387.6000      Plasmapheresis 1st unit (manual)
  86389.6000      Plasmapheresis Add units (manual)
  86400.6050      Plateletpheresis-Haemonetics Model 30
  86400.6060      Plateletpheresis-Cobe 2997
  86383.6050      Leukapheresis-Haemonetics Model 30
  86383.6060      Leukapheresis-Cobe 2997
  86394.6050      Thromboleukapheresis-Haemonetics Model 30
  86394.6060      Thromboleukapheresis-Cobe 2997
  86394.6030      Thromboleukapheresis-Cobe 2997
 etc.
```

Selection of WKLD codes for File #60 and #66

For those tests which have more than one choice of WKLD codes, such as crossmatch, the primary method should be selected. If this method is changed for specific specimens or days, the code can either be edited for a given accession or the WKLD code can be changed temporarily in LABORATORY TEST file (#60).

Example 1: If the facility routinely does AHG crossmatches (86166), but uses immediate spin (86148) for a patient who has been massively transfused, the facility has two alternatives. Either no change can be made because the overall impact will be negligible OR the individual codes can be changed using the FileMan edit option to change the code in the LABORATORY TEST file (#60) until that particular crossmatch is entered and then change it back so any other crossmatches use the correct code.

Example 2: If units are rechecked routinely by microplate (86848) and that centrifuge becomes nonoperational, the method would be changed for an extended period to tube testing (86085). This would be better handled by changing LABORATORY TEST file (#60) and entering a comment through the Edit Workload Comments [LR WKLD COMMENT] option (in the Lab Statistics Menu [LR WKLD]) to track the change and the reason for the change.

Example 3: If the donor room routinely prepares RBCs in batches but occasionally an autologous whole blood is modified, the impact of the difference will be negligible and probably not worth the trouble of editing the WKLD code to make it absolutely accurate.

Overview of Data Capture

1. **Patient workload**

Transfusion Request (orderable test)
When accessioned, the WKLD codes are entered in ACCESSION file (#68). When results are entered through the Enter Test Data (P-ET) [LRBLPET] option, input template (either [LRBLSCREEN] or [LRBLCMBS]) the date/time verified would be captured.

Direct Coombs testing
If no data is put in the field, WKLD code (86250) is not counted even though it is in LABORATORY TEST file (#60) for that test. If data is entered for the monospecific DAT results in Fields #2.4 and #2.6, additional codes (86250) are added.

NOTE: Whether the prompts for data entry are included in the input template is controlled by the entry in the SITE PARAMETERS file. Use the Edit Blood Bank Site Parameter file (S-EF-SP) [LRBLSSP] option to designate whether they should be included.

Crossmatch (nonorderable test)
Although the data is stored in BLOOD INVENTORY file (#65), when results are entered through the Enter Crossmatch results (P-RS-XM) [LRBLPX] option, the date/time crossmatched and the WKLD code (i.e., 86166 or 86164), will be entered in ACCESSION file (#68) for the specimen selected.

Antibody Identification
In the Enter Test Data (P-ET) [LRBLPET] option, input template (either [LRBLSCREENl or [LRBLCMBS]) if Serum Antibody field (#7) or Eluate Antibody field (#3) have data entered, prompts will be included to allow entry of workload for antibody identification. Approximately 15 codes can be selected (based on preset choices only). These WKLD codes would then be entered in ACCESSION file (#68) for the specific specimen selected.

Patient Phenotyping (orderable test with NO WKLD code):
In the P-PR input template, when an entry is made in the RBC Antigen Present or the RBC Antigen Absent field, no workload will be captured. When results are entered through the Enter Test Data (P-ET) [LRBLPET] option, edit template [LRBLPAG], when entries are made in the RBC Antigen Present or RBC Antigen Absent fields, the WKLD code is pulled from FUNCTION FIELD file (#61.3) (e.g., 86120 or 86125) and entered into ACCESSION file (#68) for that specimen date/time verified would be captured.

NOTE: A new test will need to be added to allow entry of results on a current specimen through the Enter Test Data (P-ET) [LRBLPET] option. The name of the test does not matter as long as it is linked to the input template by entering LRBLPAG in the edit code field.

2. **Inventory workload (for units received from outside & from File #65.5)**

NOTE: This workload is captured at the same time that LRNIGHT runs through ACCESSION file (#68).

Unit Log in (non orderable test with WKLD code):
When units are logged in through Log in Regular (Invoices) (I-LR), a test is entered in BLOOD INVENTORY file (#65) Field #500 with associated WKLD code and the date/time received. When units are released from BLOOD DONOR file (#65.5), through Test Review/Component Labeling/Release (D-DU-LR) [LRBLDRR] option, a test is also entered in BLOOD INVENTORY file (#65) Field #500 with associated WKLD code and the date/time received.

Unit Phenotyping (non orderable test with NO WKLD code):
In the Unit Phenotyping (I-UP) [LRBLIUP] option, when an entry is made in the RBC Antigen Present or RBC Antigen Absent field, the WKLD code is pulled from FUNCTION FIELD file (#61.3) (86120 or 86125) and entered into BLOOD INVENTORY file (#65) for unit if the user indicated that workload was to be recorded. The date/time is based on a new prompt which is asked when the work was done.

NOTE: A prompt has been added to the beginning of the option to determine whether workload should be captured or not. If the testing was performed at the local blood center and is not repeated at the hospital, it may only be appropriate to enter the results.

Unit Modification (non orderable test with No WKLD code):
In the Disposition not transfused (I-DN) [LRBLIDN] option, when a unit is modified, the WKLD code is pulled from BLOOD PRODUCT file (#66) for the new product and entered into BLOOD INVENTORY file (#65) for the unit. The date/time is based on the date/time received for the new unit.

Unit ABO Recheck (non orderable test with WKLD code):
When units in BLOOD INVENTORY file (#65) are rechecked in the Unit ABO/Rh Confirmation (I-UC) [LRBLIUC] option, a test is also entered in BLOOD INVENTORY file (#65) Field #500 with associated WKLD code and the date/time based on an additional prompt.

Unit Rh Recheck (non orderable test with WKLD code):
When units in BLOOD INVENTORY file (#65) are rechecked in the Unit ABO/Rh Confirmation (I-UC) [LRBLIUC] option, a test is also entered in BLOOD INVENTORY file (#65) Field #500 with associated WKLD code and the date/time based on an additional prompt.

Unit Relocation (non orderable test with WKLD code):
When units in BLOOD INVENTORY file (#65) are relocated in the Disposition Relocation (I-DR) [LRBLIDR] option, a test is also entered in BLOOD INVENTORY file (#65) Field #500 with associated WKLD code and the date/time based on the date/time relocated.

Unit Release (non orderable test with WKLD code):
In the Units Release to Stock (Cancel) by Patient (I-UR) [LRBLIUR] option, when units are released to stock is done, the WKLD code is pulled from LABORATORY TEST file (#60) for Unit Release test. The date/time is based on the response to the additional date/time prompt. This will record the workload for evaluating the expiration date, checking for hemolysis, etc. done at the time of release.

NOTE: Workload is not automatically captured for this process as part of a routine daily inventory check and would need to be entered through the manual edit option if it is appropriate.

3. **Donor Workload**

This workload is captured at the same time that LRNIGHT runs through ACCESSION file (#68) and excludes disease testing which is captured in the section in which it is done, rather than in the Blood Bank module, (D-DU-LA) Lab Tests (not ABO/Rh) on Donor Units [LRBLDT] option.

Donor screening/phlebotomy (non orderable tests):
In the Donor Registration (D-DR) [LRBLDLG] option, when a donor is registered, the workload will automatically be captured based on hard coded WKLD codes for specific activities, (i.e., homologous donation, therapeutic phlebotomy, autologous donation, deferral, etc.,). The date/time captured will be designated as the arrival/appointment time. This workload data will be stored in BLOOD DONOR file (#65.5) in the new Field #500. Each of the workload components will need to be present as a nonorderable test in BLOOD INVENTORY file (#65). Entries for the test names in the BLOOD INVENTORY file (#65) must be exact since the test is automatically ordered as part of the data entry process and is transparent to the user, except in the case of apheresis. The specific test ordered is based on a combination of the Donation/Deferral Code and Donation Type field entries.

Component Preparation (non orderable test with No WKLD code):
In the Collection Disposition/Component Preparation (D-CP) [LRBLDCP] option, when a component is prepared, the WKLD code is pulled from BLOOD PRODUCT file (#66) for the component and entered into BLOOD DONOR file (#65.5) for the donor unit. The date/time is based on the date/time stored for the unit.

Donor ABO/Rh (non orderable test with WKLD code):
In the ABO/Rh testing of Donor Units (D-DU-DT) [LRBLDDAT] option, when donor processing is done, the WKLD code is pulled from LABORATORY TEST file (#60) for the donor and entered into BLOOD DONOR file (#65.5) for the donor unit. The date/time is based on an additional prompt.

Donor ABO/Rh Recheck (non orderable test with WKLD code):
In the Donor Unit ABO/Rh Recheck (D-DU-DC) [LRBLDUC] option, when donor rechecks are done before the unit is released to BLOOD DONOR file (#65.5), the WKLD code is pulled from LABORATORY TEST file (#60) for the donor and entered into BLOOD DONOR file (#65.5) for the donor unit. The date/time is based on an additional prompt.

Donor Antibody Screen (non orderable test with WKLD code):
In the Lab Tests (not ABO/Rh) on Donor Units option (D-DU-LA) [LRBLDT] option, when donor processing is done, the WKLD code is pulled from LABORATORY TEST file (#60) for the donor and entered into BLOOD DONOR file (#65.5) for the donor unit. The date/time is based on an additional prompt.

Donor Phenotyping (non orderable test with NO WKLD code):
In the Donor Phenotyping (D-DP) [LRBLDPH] (not ABO/Rh) on Donor Units (D-DP) option, when an entry is made in the RBC Antigen Present or the RBC Antigen Absent field, the WKLD code is pulled from FUNCTION FIELD file (#61.3) (86120 or 86125) and entered into BLOOD DONOR file (#65.5) for unit. The date/time is based on a new prompt which is asked when the work was done.

Donor Unit Release (non orderable test with WKLD code):
In the Test Review/Component Labeling Release (D-DU-LR) [LRBLDRR] option, when donor labeling/release is done, the WKLD code is pulled from LABORATORY TEST file (#60) for the donor and entered into BLOOD DONOR file (#65.5) for the red cell components of the donor unit. The date/time is based on the component disposition date/time.

NOTE: Workload related to labeling of non red cell components is included in component preparation.

Verification Of Data Capture

During those times when verification of data capture is necessary such as during testing, software implementation or software changes, this can be accomplished as follows:

1. **Patient workload**

Use the Display/Edit Workload for an Accession [SW-DW] option.

```
Select Supervisor Option: SW  Blood bank workload
Select Blood bank workload Option: dw  Display workload for an accession
Select ACCESSION AREA: blood BANK
Select BLOOD BANK Date: 11-18-1992//  <RET> 11-18-1992
Select BLOOD BANK Accession Number for NOV 18, 1992: 1

 TEST: TRANSFUSION REQUEST              URGENCY OF TEST: ROUTINE
  TECHNOLOGIST: skd                     COMPLETE DATE: NOV 18, 1992
WKLD CODE: ABO Cell, Serum and Rh(D)    TEST MULTIPLY FACTOR: 1
  WKLD CODE COUNTED: NO                 COMPLETION TIME: NOV 18, 1992@12:03
  USER: DART,STEVE                    INSTITUTION: REGION 5
  MAJOR SECTION: BLOOD BANK             LAB SUBSECTION: BLOOD BANK
  WORK AREA: BLOOD BANK
WKLD CODE: Antihuman Globulin Test      TEST MULTIPLY FACTOR: 1
  WKLD CODE COUNTED: NO                 COMPLETION TIME: NOV 18, 1992@12:03
  USER: DART,STEVE                    INSTITUTION: REGION 5
  MAJOR SECTION: BLOOD BANK             LAB SUBSECTION: BLOOD BANK
  WORK AREA: BLOOD BANK
```

```
WKLD CODE: Antibody Detection, Type & Scr
  TEST MULTIPLY FACTOR: 1                WKLD CODE COUNTED: NO
  COMPLETION TIME: NOV 18, 1992@12:03    USER: DART,STEVE
  INSTITUTION: REGION 5                  MAJOR SECTION: BLOOD BANK
  LAB SUBSECTION: BLOOD BANK             WORK AREA: BLOOD BANK
 TEST: WKLD CROSSMATCH                   TECHNOLOGIST: DART,STEVE
  COMPLETE DATE: NOV 18, 1992@12:15
WKLD CODE: Compatibility Test: Crossmatch
  TEST MULTIPLY FACTOR: 2                WKLD CODE COUNTED: NO
  WKLD CODE TALLY: 0                     COMPLETION TIME: NOV 18, 1992@12:15
  USER: DART,STEVE                     INSTITUTION: REGION 5
  MAJOR SECTION: BLOOD BANK              LAB SUBSECTION: BLOOD BANK
  WORK AREA: BLOOD BANK
```

2. **Inventory workload**

Use the Single unit information [LRBLIPSD] option. The WKLD codes will display at the end of the other data.

3. **Donor workload**

Use the Single donor information [LRBLQSD] option. The WKLD codes will display at the end of the other data for the appropriate donation/deferral date.

Meeting American Association of Blood Bank (AABB) Accreditation Requirements - VA Decentralized Hospital Computer Program

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While each facility participating in the Inspection and Accreditation Program of the AABB will be ultimately responsible for ensuring that the appropriate records are maintained in accordance with the 15th edition of **Standards for Blood Banks and Transfusion Services** and the 5th edition of the **Accreditation Requirements Manual**, the following information is intended to provide some guidance in devising a system to generate the necessary hard copy information on a regular basis.

Specific references will be made to the following documents and will be coded as noted:

1. AABB Inspection Report Form Rev. May 1993. ***IRF***

2. AABB Standards for Blood Banks and Transfusion Services, 15th edition, 1993. ***STD***

3. AABB Accreditation Requirements Manual, 5th edition, 1994. ***ARM***

NOTE: Specific computer requirements are included in this Appendix in spreadsheet format entitled "Proposed DHCP Standardized Responses to AABB Computer Requirements". In addition, Appendix A provides a generic facility policy/procedure entitled "Blood Bank Computer Software Requirements" and detailed information for validation testing.

1. Facility Records

REFERENCE (*STD*, page 39**)**

M1.000 Each blood bank and transfusion shall have a system of record keeping, manual or computerized.

M1.100 Records must be complete, retrievable in a reasonable period of time, preserved and protected from accidental or unauthorized destruction or modification.

M1.200 A system to ensure confidentiality of donor and patient records must be established and followed.

EXPLANATION (***ARM*,** p. 166)

Each blood bank and transfusion service must have a procedure that describes the system of record keeping. The contents of this procedure should include, but need not be limited to, the following:

1. Location of records, including completed records and new forms.

2. Method of error correction, including the prohibition of the use of any system that obscures the original entry.

3. System for protection from accidental destruction or modification.

4. Method for generation or revision, approval, distribution and retention of records and forms used in the blood bank or transfusion service.

5. Length of storage of records.

6. System of ensuring confidentiality of donor and patient records.

Records may be generated manually or with the use of a computer system. Manually generated records may eventually be transferred to microfilm or microfiche as described in the procedure for record keeping. In the case of information maintained in a computer system, there must be a procedure relative to the maintenance of this information. This may include procedures for backup, maintenance, retention of data, storage of tapes, air conditioning requirements and procedures to be used in the event of power loss, fire and flood. See also Section 14. The backup procedure in most cases will rely on the availability of hard copy records.

Records must be retrievable within a reasonable period of time. Some records must be immediately available in order to maintain patient care. See below this section. Other records must be retrievable in a time frame which will not compromise the service of the facility and the patients which it serves. Certainly most records should be retrievable in a matter of a few hours.

COMMENTS

Although the majority of blood bank manual records can be eliminated if the Blood Bank package is fully used, it is necessary to maintain some specific work documents since data entry into DHCP includes only the interpretations of testing and not the actual recorded results.

For transfusion service activities, this means that, at a minimum, the actual pretransfusion worksheet and the inventory worksheet used to record retypes must be retained.

Most edits are restricted to a higher level of security access and are incorporated into the Supervisor's Menu. In order to prevent electronic white out all edits and changes are recorded, including the initial information, the new information, the data changed, and the identity of the persons entering both pieces of information. In order to meet the requirement regarding corrections in data entry, it is necessary to retain the report generated by Print data audit changes if that report contains data changes of specific data described above.

For donor center activities, this means that, at a minimum, the actual donor history form must be retained.

NOTE: Changes in donor demographic information are not captured as part of the data change audit process.

In order to accommodate the other record requirements, the periodic printing of reports needs to be evaluated. Prior to purging of data from the computer for either the BLOOD INVENTORY file (#65) or the BLOOD DONOR file (#65.5), hard copy reports need to be generated or data needs to be archived to microfiche, computer disk or some other format from which data can be retrieved in a timely manner. See the Reports Menu Data Flow sheet for suggestions regarding periodic printing of various reports. Additional suggestions are offered under Item 6, Records Required for Review.

2. Record Retention

REFERENCE (IRF)

NOTE: Only a portion has been included.

12.110 **Indefinite Retention of Records**

12.117 Blood and components received from outside sources, including numeric or alphanumeric identification of the blood unit.

12.120 Information to identify facilities that carry out any part of the preparation of components and the function performed.

12.122 Final disposition of all blood and components, including the appropriate final disposition of all blood or components with abnormal test results.

REFERENCE (STD)

M2.100 **Indefinite Retention**

Records that must be retained indefinitely, although not all must be immediately available, include:

M2.111 Donors' medical history, physical examination, consent, and interpretations of tests for disease markers, for each donation including hemapheresis.

M2.112 Blood and component received from outside sources, including numeric or alphanumeric identification of blood unit, and identification of the collection facility.

M2.113 Information to identify facilities that carry out any part of the preparation of blood components and the function performed.

M2.114 Final disposition of each unit of blood or component.

EXPLANATION (ARM, p. 169)

NOTE: Only a portion has been extracted.

"A numbering system to identify all blood and blood components is necessary in order to trace a unit from its source (donor and collecting facility) to final disposition (transfused, shipped, or destroyed). This unit number (donor number being a misnomer) will be used by the inspector to determine if blood and components can be traced from the source to final disposition. During the inspection, a unit number will be randomly selected from one or more readily retrievable donation records and/or from records of units of blood or components received from another facility. All of the records pertaining to those units must be available either at the institution being inspected or at the collecting facility if blood and components are obtained from a central blood center. This is done to ascertain that blood and components can be traced from the source to final disposition.

Intermediate facilities or transfusion services are not required to assign a local number to blood or components received. The number already present may be used for recording purposes if the provider is easily identified and cannot be confused with other providers because of numbering system similarities. If a local unique number is assigned, the label for the number must include identification of the facility assigning the number. The facility name may be abbreviated.

A record of the final disposition of each unit of blood or component must be made and kept indefinitely. This will make it possible to trace a unit from its origin to final disposition. The reason for the discard and the date of disposition must be noted. The procedure manual must contain a description of the method of discard and destruction. This is particularly important for those units that test positively for a viral marker. Whether or not the record is computerized, it must be retained indefinitely and must be retrievable within a reasonable period of time."

EXPLANATION (ARM, p. 170)

"Each accredited facility must have a list of names of each of the personnel and each physician authorized to sign or to initial or review reports and records. With each name there must be an example of the signature and initials written adjacent to the person's name. It is permissible for the examples of signatures and initials to be kept in the personnel files of the employees. If some or all blood bank or transfusion service records are computerized, there must be a list of codes by which personnel or physicians identify themselves when entering information in the computer."

COMMENTS

Blood Bank patient data (stored in File #63) is not archived. It remains on line until such time as the entire patient is removed from the system as specified in MAS protocols following the patient's death. It is not done on a routine basis.

Inventory data (stored in File #65) is not currently archived; however capabilities will exist in versions subsequent to Version 5.2. At the present time, records may be printed using the Print units with final disposition [LBLPUF] option and then removed using the Remove units with final disposition [LRBLRUF] option. In order to minimize the volume of paper records generated, the cost benefit ratio of this activity, in terms of storage space in the LRD global, is not significant. The space required for storage in the LRD global is minimal and current recommendations are to leave the date on line until archiving utilities are available which will make 'look backs' simple and still accommodate the need for indefinite retention.

Donor data (stored in File #65.5) is not currently achieved. It remains on line unless a decision is made to print the information and remove donors who have not donated within a specified time. Like File #65, this date is stored in the LRD global and takes minimum space. Current recommendations are to leave data on line until archiving utilities are available which will make 'look-backs' simple and accommodate the need for indefinite retention.

3. Identification of Personnel

REFERENCE (STD, page 39)

M1.600 There must be a means to identify persons performing each significant step in collection, processing, compatibility testing and distribution of blood or blood components.

EXPLANATION (ARM, p. 167)

"It must be possible to relate the person responsible for recording the information to the actual information. If only one person performed testing and recorded information, a single signature or set of initials is all that is required. If multiple individuals recorded on a single form, it is necessary to have a column where each signature or set of initials can be recorded."

"If all tests recorded on one form are performed on the same day, single date may be recorded, but if results and interpretations from several days are recorded on the same form, each date must be recorded."

EXPLANATION (ARM, p. 168)

"All blood bank and transfusion service records must be readable and, if prepared manually, made with indelible ink. In the event that an error is made on a manually prepared record, it is necessary to make a correction. It is recommended that this be done by drawing a line through the incorrect result and then writing the correct result as near as possible to the indicated space. The initials of the person making the correction and the date must be written alongside the corrected item. Erasure, overwriting and the use of liquids that "white out" or obscure the original entry are not acceptable. The original notations must not be obliterated. The procedures manual must include policies on how to correct recording errors."

"For computers used in blood banks and transfusion services, there must be a means to record corrections of previously transmitted information. The records of corrections must be kept for the period required by local or state laws. They should be kept at least five years."

COMMENTS

The entire security system, including those aspects which are governed by KERNEL and those governed by appropriate Menu Management, provides an adequate security system to prevent access by unauthorized individuals. In addition, the security procedures for each facility using the DHCP packages will provide detailed information on assignment of access and verify codes, specific menus, dates of employment, etc.

The Blood Bank Module, unlike the other areas of the laboratory package, does not require a conscious effort to enter the tech ID. Whenever the tech enters his/her access code, the computer automatically assigns all subsequent actions to that user. Since entry of data is usually done in informational groupings, the entire grouping will be attributed to the individual entering the information, rather than having the information recorded for each individual piece of data. Conversely, if the information can be entered for only one piece of data at a time, such as the entry of a specific antigen on a specific unit of blood in inventory, the tech is recorded for each entry.

For example, when recheck information is entered, the tech is recorded for each field; however, when issue/relocation information is entered, the tech is recorded only once for the entire grouping of information.

Since the actual recorded results of the pretransfusion testing are not entered into the computer, but are recorded manually, the data entry need not be done by the person performing the testing. While this is desirable, certain circumstances, such as extended downtimes, may preclude this. No requirements currently exists to indicate that this is unacceptable since the primary document still indicates the identity of the person performing the testing.

For required data, an electronic audit trail exists to track any editing done to data previously entered/verified. This audit trail is stored with the unit; however, it does not appear in the majority of display/print options. The Print data audit changes option in the supervisor menu allows printing of the information on demand. This report should be printed and reviewed regularly. Comments can be annotated as appropriate to detail the circumstances which required the change. These records must then be stored in accordance with stated requirements as they represent a primary record.

4. Records Requiring Immediate Access

REFERENCE (IRF)

12.300 **Records Immediately Available**

12.301 The following records must be immediately available.

12.302 Patient's ABO group and Rh type determined during the past 12 months.

12.303 Records of patient known to have significant unexpected antibodies, severe adverse reaction to transfusion and/or difficulty in blood typing during the past five years.

REFERENCE

H1.101 ABO grouping and Rh typing done during the past 12 months.

H1.102 Difficulty in typing, clinically unexpected antibodies and severe adverse reaction to transfusion and/or difficulty in blood typing during the past five years.

EXPLANATION (ARM, p. 174)

"Records containing information of clinical significance in relation to ongoing transfusion therapy must be immediately available. Records of ABO group and Rh type determined in the past 12 months must be immediately available in order to compare the interpretations of current tests so as to detect possible error. Records for the previous five years of difficulty in typing, clinically significant unexpected antibodies, as well as severe adverse reactions to transfusion must also be immediately available, in the interest of prompt and effective patient care. These records may be maintained as manual records, or they may be maintained in the blood bank computer. There must be documentation that these records have been examined prior to the issue of the units of blood or component."

EXPLANATION (ARM, p. 172)

"Patient records must be retained a minimum of five years and longer if prescribed by local legal requirements. Storage on microfilm, computer hard disk, or magnetic medium is acceptable."

COMMENT

Depending on the amount of unscheduled downtime, the extent of the backup system may vary. In some facilities which have shadow capabilities, routine backups and system maintenance can be done with a bare minimum of interruption. In such cases, the backup system may be minimal. In other cases, the computer may be inaccessible for a few hours on a routine basis or may experience repeated scheduled and/or unscheduled downtime. In such cases, a viable backup system is crucial.

In smaller facilities, the Patient antibody report (long list) [LRBLPRA] option can be used to print a listing of patients with antibodies or previous transfusion reactions; however, this routine is fairly system intensive. In larger facilities, this is not a practical solution. Utilities to download information to a PC are currently being investigated. This would allow relevant information to be downloaded to create a database which could be updated on a regular basis to be accessed during downtimes. It would not be used for input of any new information.

5. Quality Assurance of Transfusion Practices

REFERENCE (IRF)

2.012 Is there a peer review program that documents monitoring of transfusion practices, including ordering, use and waste of blood components?
2.013 Frequency of review _____
2.015 Are there written criteria for evaluating transfusion practice?
2.016 Does this program include evaluation of all blood and blood components transfused?
2.018 Is the crossmatch/transfusion (C/T) ratio monitored?
2.020 Is the number of type and screen orders reviewed periodically?

EXPLANATION (ARM, p. 8-9)

"The purpose of peer review is to enhance the quality of patient care by evaluating practice against established criteria for indications and efficacy of the use of blood and blood components. Intradepartmental review alone may be insufficient to ensure proper review and intervention. The committee should establish and review at least annually the screening criteria for all components transfused and all services performed."

"Other committee functions must include reviewing and evaluating all transfusion reactions. The committee shall also monitor resource conservation as evidenced by review and intervention regarding use of type and screen orders and the crossmatch/transfusion ratio."

COMMENTS

In order to facilitate the performance of active blood usage review, the system automatically audits each transfusion request as the request is entered into the system, either through the Blood Component Requests (P-RS-CR) [LRBLPCS] option or the Specimen Log-In (P-SL) [LRBLPLOGIN] option in the Patient Menu. The criteria used to audit the various component requests are both site specific and specific for the type of request, (i.e., PreOp or non PreOp). If none of the audit criteria are determined to be satisfied, the system will display the prompt "OK to continue? NO//" At this point, the system initiates a record for this particular request which has been deemed to be potentially inappropriate. A hard copy report of these requests can then be generated, using the Inappropriate Transfusion Requests Report (R-UR-IT) [LRBLPRIT] option in the Reports Menu.

A report can also be generated using the Transfusion Data Report (R-UR-TR) [LRBLITR] option in the Reports Menu, which includes all of the units transfused within the time period specified. It is sorted in alphabetical order by patient and includes all relevant issue and transfusion data. This report can then be used to identify patients for further review. For example, by using the information printed via the Patient Transfusions & Hematology results (R-UR-TH) [LRBLPCH] option, it is possible to evaluate specific laboratory parameters in conjunction with the transfusion episodes for a specific blood component.

In order to assist in attempts to improve resource management, using the Transfusions by Treating Specialty/Physician (R-UR-TS) [LRBLITS] option in the Reports Menu, the system will

generate a report which is sorted by treating specialty. It includes all of the patients transfused within the time period specified. However, it is sorted by component within each treating specialty. Since the report also includes the name of the physician, it can be used for identifying specific areas or physicians for further review.

Ordering practices can be evaluated by treating specialty and physician using the Crossmatch/Transfusions by Specialty/Physician (R-UR-AA) [LRBLAA] option in the Reports menu. This option uses the data which is captured for the crossmatch in the specimen multiple, (i.e., Field #65.02,.03). This data is captured during specimen accessing in the Specimen Log-In P-SL [LRBLPLOGIN] option and put in the LAB ORDER ENTRY file (#69), Field #7, and Practitioner field (#68.02,6.5). It is NOT based on the "Requesting Person" entered with the component request since at that present time, the individual component request information is NOT stored. This component request information was intended for short term use only.

6. Records Required For Review

The following listing is taken from the envelope which accompanies the Inspection Report Form. In each case, there is an indication as to whether the information is available on the computer and/or can be generated in hard copy, including the appropriate option abbreviation.

Name of record	On computer?	Hard copy?
I. DONOR RECORD		
1. Donor (Donation) Record	NO, although a blank history form with donor demographics is generated and can be retained as the hard copy.	
2. Donor Blood/Components received from other Blood Banks	Q-SU (single)	R-IS-SU (single) S-SR-PU (by unit)
3. Donor Blood Testing, Records-initial (by facility drawing blood) *Interpretations only	Q-SD (single) D-DU-DS (batch)	D-DU-DR (batch)
4. Donor Blood Test Records -Repeat (by facility importing blood) *Interpretations only	Q-SU (single) I-UW generates a worksheet which can be used to record actual testing results.	S-SR-PU (by unit)
5. Component Preparation (single or multiple units per record)	Q-SD (single)	D-DU-DR (batch)
6. Donor Blood/Components shipped to other facilities	Q-SD or Q-SU (single only) I-SH	site configurable using FileMan or
7. Donor Blood and Component inspections (Periodic and Preissue) *Preissue only	Q-SU (single)	R-UR-IS (batch) S-SR-PU (by unit)
Name of record	**On computer?**	**Hard copy?**
8. Disposition of Unused Donor	Q-SD or Q-SU	R-DR-CD (donor)

Blood/Components	(single only)	R-DR-PR (comp) R-IS-DU (discards)
9. Microbiology-Sterility Testing, Donor Blood and Components		NO NO

II. PATIENT (RECIPIENT) RECORDS

1. Emergency Blood/Component	P-CR or P-SL Request for Transfusion	NO
2. Emergency Blood Component Issue	NO, only as recorded later using the regular options	
3. Routine Blood/Component Request	P-CR or P-SL for Transfusion	NO
4. Patient Blood Test Record(s), Routine *Interpretations only	R-BR-3	R-BR-3
5. Patient (and Donor) Blood Testing Testing Records, Special Immuno hem. *Interpretations only	I-UP (units) D-DP (donors) P-PR (patient)	R-UP (units) P-PR(patient)
6. Donor-Patient Compatibility Testing *Interpretations only	P-ET and P-RS-XM	NO
7. Routine Blood/Component Issue (batch) (single)	Q-SU (single)	R-UR-IS R-IS-SU
8. Pretransfusion Confirmation of Patient and Donor Identity Record	NO	NO
9. Patient Transfusion Record		
(a) Clinical Chart	NO	NO
(b) Blood Bank	Q-PR	Q-PR

Name of record	**On computer?**	**Hard copy?**
10. Recipient Adverse Reaction to Transfusion Records:		
(a) Report of Blood Bank	NO	NO
(b) Laboratory Investigation	NO (not in BB module)	NO
(c) Report to Recipient's Physician *Transfusion outcomes, not specific to reactions	Q-PR (by patient	R-UR-RR (batch)
(d) Microbiology-Sterility Testing	NO	NO
11. Compatibility Label (if separate)	NO	R-CT
12. Label for Patient Blood Sample	Q-PA (record of all accessions by patient)	P-SL (label is generated during log in)

III. THERAPEUTIC PHLEBOTOMY

1. Donor's Physician Request for Bleeding	NO	NO
2. Blood Bank Medical Director's Authorization	NO	NO
3. Label for Blood Unit-Therapeutic Bleeding with Diagnosis	NO	NO

IV. AUTOLOGOUS PHLEBOTOMY AND TRANSFUSION

1. Patient's Physician Consent for Bleeding	NO	NO
2. Donor-Patient's Informed Consent for Bleeding & Transfusion	NO	NO
3. Blood Bank Physician's Permission to Bleed	NO	NO
4. Donor (Donation) Record	(If *same as for not the same as for homologous)homologous, including additional restrictions for patient	
5. Records of Exchange Transfusion	NO	NO
6. Donor-Patient Blood Testing	*same as for homologous, including additional restrictions for patient	

Name of record	**On computer?**	**Hard copy?**
7. Component Preparation if stored as RBCs or Frozen RBCs	*same as for homologous, including additional restrictions for patient	
8. Request for Autologous Blood for Transfusion	*same as for homologous	
9. Patient Blood Testing Record (if the same as for homologous)	*same as for homologous, including additional restrictions for patient	
10. Blood/Component Unit Label-For Autologous Use Only	NO	NO

Microbiology

There are several obvious differences between tests in the Microbiology section (which belong to the Microbiology (MI) subscript, although this can be changed for some tests and will be discussed later), and tests in the rest of the Laboratory package (most of which belongs to the Chemistry (CH) subscript).

By its very nature, Microbiology data are usually not generated in large batches, as are such tests as Glucose or BUN. The types of data to be reported are in the form of names of organisms isolated, amount of growth obtained, and often results of antimicrobial susceptibility testing, which in itself can be either in the form of a numeric MIC value or an interpretive letter ("S" for susceptible, "R" for resistant, etc.). A culture may grow no organisms, in which case another type of result is generated (free text phrases), or it may grow three or more different isolates, in which case three or more sets of the previously mentioned results must be entered. In all, a Micro package must provide great flexibility in its data acceptance capability.

Likewise, the types of specimens submitted to the Micro lab can run the gamut from the familiar "clean catch midstream urine" to "synovial fluid from the sternoclavicular joint". Accessioning the specimen in the lab also requires a great deal more flexibility than that required by other lab subsections. Therefore, ordering and accessioning Micro is more complex!

To that end, the Micro portion of the Lab package is presented as a separate section. Some of the information is purposely brief (particularly those files discussed in depth in the "Files" section). Other topics which are strictly associated with Micro (e.g., antibiotics) are covered in greater depth here.

Setting Up Your Files

File #60 (LABORATORY TEST)

To avoid redundancy, we will not go into great depth describing setting up LABORATORY TEST file (#60) for Microbiology. However, keep in mind that these tests all fall into the MI subscript and therefore do not require/accept locations (data names) in LAB DATA file (#63). Otherwise the file and the tests within are set up pretty much the same way as for the rest of the lab package. Many of the Microbiology tests can be set up for either the MI or CH subscript. Such tests as Antibiotic Levels, Complement Fixation, or other Immunoserology or Toxicology-type tests can easily be set up in the CH subscript and will, therefore, appear as part of the general laboratory cumulative report, with major and minor headers, vertical or horizontal format, etc.

The exported version should include practically every test your lab offers (and then some!), and, of course, the names can be changed to those your techs and physicians are accustomed to. It is helpful to get a captioned list from LABORATORY TEST file (#60) of the approximately 50 MI subscripted tests available. Synonyms are invaluable as time and keystroke savers: CS is so much quicker than Culture & Susceptibility and CSR for "Culture & Sensitivity Routine". Often a physician will only be familiar with the test by the name he/she learned as a student (e.g., Guiac Test), and not with the currently accepted designation (Occult Blood). Also keep in mind that some test names are chronically misspelled, and these misspellings should be included as synonyms. Therefore, multiple synonyms may be needed!

If you need to create a new test in LABORATORY TEST file (#60), choose an Edit Code [Edit type code] from the EXECUTE CODE file (#62.07). The Edit Code field (#98) is a pointer to an entry in the EXECUTE CODE file (#62.07). This determines the prompts you will get when entering results (study some of the exported tests to familiarize yourself with the different types of editing). You will notice that some of the codes are marked nolabel. Choosing the nolabel will prevent the printing of Implementation and Maintenance

```
**** (TEST NAME)****
```

every time you enter that accession number to enter results (this applies particularly to the so-called SMEAR/PREP type tests). This will be discussed again with the LAB DESCRIPTIONS file (#62.5).

The Word-Processing field (#110) General Processing Instructions can provide a handy reference for the techs who are accessioning/handling/setting up specimens, particularly those which are not done routinely or that must be prepared for sendout. For example, an appropriate message for a Neisseria (GC) culture might be:

```
Culture must be placed immediately in CO2. See page 78 in Setup Bench Manual.
```

If your lab is using Ward Order Entry, you may want to include an entry in Field (#310) General Ward Instructions. Again, for a Neisseria culture you might enter:

```
Culture must be placed immediately in CO2. See page 78 in Setup Bench Manual.
```

Or it could include information about a particular type of test or media, such as the use of a red label hypertonic blood culture bottle:

```
A Red label bottle is recommended for recovery of organisms from patients treated
with cell wall active agents (penicillins, cephalosporins, or vancomycin) or in
the case of suspected Streptococcus pneumoniae septicemia call X1234 to obtain
special culture media from lab prior to specimen collection. An Infectious
Disease consult is required for release of the bottle from the Laboratory.
```

File #62.07 (EXECUTE CODE)

As mentioned in the previous discussion, an edit type execute code is required of every Microbiology test in LABORATORY TEST file (#60). A list of all available codes can be obtained with FileMan's Print File Entries, but remember that some of the listed codes are experiments which may yield errors. As always, test any changes in a test account before moving them to production.

If the exported edit codes do not fit your lab needs as well as you would like, new ones can be created (it is best not to alter an existing one) by someone with programmer access, to add or remove subfields or change the sequence of the prompts. The Edit Code field #98 in LABORATORY TEST file (#60) determines where Microbiology results are stored in the LAB DATA file (#63) and what prompts from the Microbiology subfile, of LAB DATA file (#63), are asked when the user enters results in Microbiology. The programmer should understand the existing execute code for the Microbiology test the laboratory wishes to change before creating a new entry in the EXECUTE CODE file (#62.07).

Please notice the two execute codes listed in the example below. The first, Bacteriology, prompts the Preliminary Bact Comment (subfield #1) between the Collection Sample (.055) and Site/Specimen (.05). It also includes Gram Stain (11.6) after the Comment on Specimen (.99). In the second (customized) code, Preliminary Bact Comment was moved after the Bact Rpt Status (11.5) and Gram Stain is not prompted unless the specimen is a sputum (...LRSPEC=360:11.6,...).Do not be afraid to try to create new execute codes, as long as you remember to test them first!

Example:

```
BACTERIOLOGY
S DR="11.55////"_DUZ_";.055;1;.05;.99;11.6;11.5;S LRSPEC=$P(Y(0),U,5),
Y=$S(LRSPEC=71:11.57,LRSPEC=360:11.58,1:0);11.57;S Y=0;11.58",LREND=0  D ^DIE
S:$D(Y) LREND=1 Q:$D(Y) D ^LRMIBUG Q:LREND S DR="13;11" D ^DIE Q

ZZBACTERIOLOGY
S DR="11.55////"_DUZ_";.055;.05;.99;11.5;1;S LRSPEC=$P(Y(0),U,5),
Y=$S(LRSPEC=71:11.57,LRSPEC=360:11.6,1:0);11.57;S Y=0;11.58",LREND=0  D ^DIE
S:$D(Y) LREND=1 Q:$D(Y) D ^LRMIBUG Q:LREND S DR="13;11" D ^DIE Q
```

File #62.6 (ACCESSION TEST GROUP)

The Accessioning, Standard [LRMICROLOGIN] option allows for only one Accession Test Group, "MICROBIOLOGY". A list of tests are seen on the screen when using the option. The exported version provides nine tests, which may or may not be your "top 9" tests in frequency of ordering. The list is easily changed, and can accommodate up to and including 24 tests to fit the screen. However, if you use more than 24 tests, the first ones will scroll off the screen.

Other tests **can** still be ordered, but must be typed in by name (or synonym!) at the appropriate prompt. Other Accession Test Groups **may** be created, but can then be used only in Multipurpose Accessioning (Accessioning Menu). The disadvantage to this is the loss of the ability to enter comments at the time of accessioning. Micro tests can also be mixed into an Accession Test Group with **CH** subscripted tests, if desired.

File #68 (ACCESSION)

Currently, your exported package has all Microbiology tests assigned to one accession area. However, this, too, can be changed to fit your needs. Some sites prefer splitting Bacteriology, Mycology and Mycobacteriology into separate accession areas. An advantage to that system is a lower range of accession numbers, particularly if you are a high volume lab, as well as creating separate lists with all fungal or AFB accession numbers listed consecutively. The disadvantage is that a specimen could have three different accession numbers and three different reports, making it difficult for the physician to determine whether one specimen or three were received by the lab. By combining three types of testing, the physician can see in one glance exactly what grew out of that specimen. It may be a little more confusing for the techs if they are used to separate accession areas, but try it both ways on your test account and see what works best for your situation. We do not recommend splitting urine cultures, respiratory cultures and wound cultures into their own accession areas, especially if you use an automated identification system.
If you plan to interface an Automated Instrument resign yourself to only one accession area. For instance, the Microscan and VITEK only allows one accession area to be used. Otherwise the computer will not know if the data stream identified as "1234" is from urine 1234, respiratory 1234, etc. However, if you will never interface, go ahead!

There are other types of tests that may lend themselves to separate accession areas.

Examples you may want to consider are:

"Special Microbiology" (Antibiotic Levels, Fungal Immunodiffusion, Meningitis Antigen Screen, etc.)

"Stools" (Parasite exam, Occult Blood, Fecal Leukocytes, Enteric cultures [beware if interfacing], etc.)

"Blood cultures" (beware if interfacing)

"QC/Sanitation" (Autoclave Sterility Testing, Environmental Cultures, Research Cultures)

Remember, if you set up new accession areas with an MI subscript, you must use a yearly transform.

File #62 (COLLECTION SAMPLE)

The COLLECTION SAMPLE file, as it was exported, is not very useful to the Microbiology lab. You will need to enter such microbiological samples as discharge, drainage, blood culture bottle, swab, etc. Do not forget “other” and “unknown”, as much as you dislike using such vague, nondescript terms. Inevitably, and usually on an off shift or holiday when you are not available for assistance, a specimen will come in which will not be in the file, and accessioning will grind to a standstill. If you are not sure what to add, look through a month’s worth of old test requisitions or worksheets to get a good idea of what you will need to add.

If you are tempted to enter a container such as sterile cup for some collection samples (body fluids, etc.) to emphasize that you need a sterile specimen, do not! The container name will suppress printing of the collection sample and topography on the labels and lists, making it difficult when looking up results to know what the specimen really was.

File #61 (TOPOGRAPHY FIELD)

The TOPOGRAPHY FIELD file (#61) is used very extensively by both Microbiology and Anatomic Pathology. It must be compatible with the COLLECTION SAMPLE file, so if you enter, for example, “other” and “unknown” as collection samples, be sure to enter “other” and “unknown” as topographies. The required fields to enter a new topography are:

(#.01-Name) The name of the specimen or source. The name can be two to eighty characters long.

(#2 - SNOMED code) Can be two to seven characters, not beginning with a T. The name itself, or a shortened version can be used as a convenient code. You should not make up your own SNOMED codes unless you are absolutely certain that the codes does not exist in the official SNOMED directory. The TOPOGRAPHY FIELD file (#61) is used by other modules of the Lab software. Duplicate entries could cause problems .

(#3 - Synonym multiple) Like the test names, synonyms for topographies are invaluable. Maybe a physician thinks right away of a thorax, but we bench techs call it a chest.

(#6 - Abbreviation) If you are using synonyms, it is not really necessary to use both. An abbreviation can only be 1, 2, or 3 characters long.

When you look through the entire Topography field list, you may think it is all inclusive. Experience has shown, however, that the list may be too specific for your site. You may need to simplify some of the descriptors to match the less specific sites listed on your requisitions. As suggested for the COLLECTION SAMPLE file (#62), examination of some old requests will point out any topographies missing from the file. In fact, using old requisitions is a very effective way to practice accessioning when learning to use the system.

File #61.2 (ETIOLOGY FIELD)

Get a copy of the list of organisms identified by your lab. This can be in the form of a Difco biochemical reaction chart if you use manual biochemicals, API product inserts (20E, 20A, 20C, etc.,) database printout from your automated system or CAP survey lists. You will also need a list of fungi identifiable by your Mycology section, parasites from Parasitology, and viruses from your Virology section or Reference lab. Then ask your techs for a list of short-form abbreviations they commonly use when working up these organisms (EC for Escherichia coli - or Entamoeba coli (duplicates are okay as long as they are not both bacteria, both parasites, etc.) PSA for Pseudomonas aeruginosa, etc.) This also makes the techs much more receptive towards the system, when their familiar abbreviations can be used for entering results.

If you do not already have one, print out a hard copy (on 132 character paper) of the contents of the current ETIOLOGY FIELD file (#61.2), (printing out all fields within). Using your lists of "identifiable organisms," check to be sure they are all present in the printout. You may need to add some, correct spellings, or change obsolete names; however, it is recommended that you do not delete any you do not plan not to use. If you add new organisms, you will have to assign them SNOMED codes. You should station number them or add a letter suffix to an existing code for a similar organism. Be careful about using letters in SNOMED codes. The ETIOLOGY FIELD file (#61.2) is also used in Anatomic Pathology and you cannot start the new code with the letter E. Check the Gram stain field closely because there are a lot of Gram positive parasites on the list. The Identifiers are often mismarked and it is the Identifier which the Edit code looks at to see if an organism is an allowable entry when you are entering results.

Once you have made all your changes on your printout you are ready to make your changes with FileMan. The fields you will need to edit are:

(#.01 - Name) The name of the etiologic (causative) agent.

(#1.6 - Class/Group - Tribe/Family) This field is currently not in use, but can be used as a sorting group field to obtain an abbreviated printout of the Etiology field. You may want to mark your entries as B, F, V, P, etc., and then use FileMan's sort option (conditions: Identifier equals Bacteria and Class/Group Tribe/Family equals B, for instance to print the list of your identifiable organisms.)

(#2 - SNOMED code) The characters following "E" in the SNOMED reference book.

(#3 - Gram Stain) If applicable, enter gram positive, gram negative, or indeterminate organism.

(#4 - Identifier) Is it a Bacterium, Fungus, Parasite, Virus?

(#6 - Abbreviation) (one to five characters): A synonym will give you a more rapid cross-reference to your desired organism than the abbreviation. If you can think of a unique abbreviation, this field is useful for lookups.

Example: If you enter ENT as an abbreviation for Enterococcus when entering results, you will not get directly to that organism. Rather, you will get a list of all abbreviations and organisms that begin with ENT. However, if you plan to interface an auto instrument, this field may be used by the interface routine, and will have to be filled in.

(#7 - Synonym) (multiple, 2-200 characters) This is where the tech's input comes in. You may also want to include standardized synonyms such as genus abbreviation (with and/or without a period) and species name; (e.g., S aureus, S. aureus, Staph aureus, Staph. aureus).

(#8 - Susceptibility Edit template) (see Adding New Antimicrobials section)

(#10 - Health Department Report) A "YES/NO" question. The Health Department report will list those organisms isolated during a selected time period for which this field is marked "YES".

NOTE: If you flag/mark an organism "YES", it will not go back and retroactively mark patient isolates - organisms are only flagged from the time of flagging, forward!

(#11 Etiology WKLD code) (See Microbiology workload section)

File #62.5 (LAB DESCRIPTIONS)

The LAB DESCRIPTIONS file (#62.5) is an essential file in the Microbiology lab, where results are often expressed as descriptive terms or long free text entries. This file enables the user to enter shortened mnemonic or abbreviated codes for which the system will substitute the full expanded message. There are many advantages to the use of these codes. Not only do they save keystrokes, but they insure uniformity in reporting (especially where long messages are required) and prevent misspellings which can detract from the professional appearance of a report.

The following processes allow the use of Lab Description Codes:

(accessioning)	Order Comment Comment on Specimen
(Results entry & Results entry, batch)	All quantity and comment subfields of organism(s) All report remarks - (Bact, Parasite, etc.) All smear/preps Gram Stain

NOTE: Lab description codes will not expand during accessioning if used as a reason for deleting in the Delete Test from an Accession option.

Before you begin to customize your LAB DESCRIPTIONS file (#62.5), you may find it helpful to print FileMan sorts of the existing list, based on the Screens provided. Sort by Screen from @ to LAST (the @ will display the null/blanks fields or unscreened codes). This will give you a better idea of which codes are used in which fields. Some you will not need. Others you may need to change a bit. You may want to create a Sorting Group (field #6) for all the unused codes so you can keep them temporarily out of the way until you decide to delete them. This is a very safe file to delete from. Again, go to your techs for ideas. The more input you let them provide, the more it becomes "their" system and the easier it is for you to train them. This file can be a lot of fun to work with, especially as you learn to get creative.

Be aware that you may not be able to use all 68 characters allowed for your expansion, especially if a code is to be used in the COMMENTS subfield of an ORGANISM. On the printed report, this

comment is indented and will wrap around on 80 character paper if all 68 characters are used. Limiting these comments to 50 characters will eliminate this problem.

Messages longer than 68 characters can be split into two or more codes, numbered consecutively. Remember that such multiple codes can only be used in multiple fields.

```
SAL1 - Specimen consists mostly of saliva. Culture not set up.
SAL2 - Please submit proper specimen.
```

Codes can be strung together to make longer messages:

```
CMM expands to  CYTOMEGALOVIRUS
T256 expands to  IgM TITER = 1:256
```

combined

```
CMM T256 expands to  CYTOMEGALOVIRUS (IgM) TITER = 1:256
```

or combined with free text:

```
STR expands to  SUSPECTED TRANSFUSION REACTION - NOT PATIENT'S BLOOD -  DONOR
UNIT #
```

combined with free text "VA1234"

```
STR VA1234 expands to  SUSPECTED TRANSFUSION REACTION - NOT PATIENT'S BLOOD -
DONOR UNIT # VA1234
```

Codes should be obvious to the user, either mnemonics such as the "STR" above or a shortened form of a key word, such as the "SAL1" (saliva). However, the code should not be a word which could feasibly be used as a free text message. For example, if PM was also a mnemonic for POLYCLONAL IGM and the free text message DRAWN AT 1:00 PM is entered, it would expand into DRAWN AT 1:00 POLYCLONAL IgM. A synonym might be indicated when two words are used interchangeably:

Name: `REF-T` ("T" for "TB lab")
Synonym: `REF-A` ("A" for "AFB lab")
Expansion: ISOLATE REFERRED FROM TB LAB

The Screen field (#5) is provided so that a code expands only in the proper edit field, allowing for multiple expansions for the same code. If the previously mentioned SAL1 code was screened M, it will only expand in the Bacteriology Bact Rpt Remark and Comment fields. You could re-enter it (using FileMan's quotation mark convention) and screen it with a F (for fungus) for the expansion:

```
Specimen consists mostly of saliva. Fungal culture not set up.
```

The Screen becomes a useful sorting device when printing up lists of codes. Using both the Sorting Group (field #6) and Screen in your conditions for printing, a FileMan sort can provide you with very specialized lists, such as Order comments pertinent only to Microbiology (omitting those applicable to the rest of the lab) or combined lists such as Smear and Parasitology codes.

When printing lists of Lab Descriptions codes, sort by Expansion rather than by Name. It is usually easier for the techs, since they know what they are trying to say and need to find out how to say it.

Microbiology has the following screens:

M = Micro	V = Virus	F = Fungus	G = Gram Stains
T = TB	P = Parasite	W = Smear	

The screen "M" (Micro) refers to Bacteriology, not the collective area , Microbiology. The screen code "L" (Lab) is used for CH subscripted tests. A general screen, coded "K", can be used in **any** field accepting Laboratory Descriptions.

Using LAB DESCRIPTION file with edit codes

In File #60 we discussed the labeled and nolabel edit codes. The labeled codes were created to help prevent confusion in cases where an accession number contains more than one test which will have all results reported in the same field.

An example best illustrates this point. Suppose on a stool specimen you had accessioned an Occult Blood, Fecal Fat, and Fecal Leukocytes. All three of these utilize the PARASITE SMEAR/PREP Edit Code. Therefore, the results all utilize the same field. If you chose the nolabel edit code when you entered results (let us assume the Occult Blood was positive, the fat negative and the leukocytes "none found"), you would first choose the test Occult Blood:

```
Select PARASITE SMEAR/PREP: POS (POSITIVE)
```

Since you specified what test you wanted to enter results for, it seemed logical that merely entering the results was adequate. Yet after entering the other two tests, here is what your report is going to look like:

```
PARASITOLOGY SMEAR/PREP:
       POSITIVE
       NEGATIVE
       NONE FOUND
```

By using the labeled Edit codes, your report would look different:

```
PARASITOLOGY SMEAR/PREP:
       ***OCCULT BLOOD
       POSITIVE
       ***FECAL FAT
       NEGATIVE
       ***FECAL LEUKOCYTES
       NONE FOUND
```

This method also has its pitfalls, however. For example, if you had started to report the occult blood, but then realized you had not run the test yet, exited the system and again entered that accession later, you would see:

```
PARASITOLOGY SMEAR/PREP:
       ***OCCULT BLOOD
       ***OCCULT BLOOD
       POSITIVE
```

Every time you call up that number in Results Entry, that "***" message gets automatically stuffed into the field. The duplicate "***" message can be deleted or if you do not like the "***" messages at all, use the "nolabel" Edit codes, but be certain your Lab Descriptions codes are specific for each test:

```
Select PARASITE SMEAR/PREP: OB+ (POSITIVE FOR OCCULT BLOOD)
```

Always keep in mind what the physician will see when he/she reads the report. What makes perfect sense when you are reporting results may not make sense on the final printout.

Using Lab Descriptions codes to flag amended reports

Since no amended report message is automatically generated by the system at this time for corrected/changed Microbiology reports, it is suggested a Lab Descriptions code be used for this purpose, such as:

* * * AMENDED REPORT! * * *

which should be entered every time something is added or changed on a test previously designated as "complete" (or for other criteria as you deem necessary). It should be entered and screened for each of the Microbiology edit fields.

Likewise, some sort of system should be devised to handle the event where the wrong organism and/or susceptibilities were reported. **This information should NOT be deleted, since serious legal problems could occur if the physician begins treatment based on these results.** If the patient suffers an adverse effect from the prescribed drug and the physician then tries to go back to check the report, he/she may not be able to justify why he prescribed it since it had been deleted as erroneous.

File #62.06 (ANTIMICROBIAL SUSCEPTIBILITIES)

In the ANTIMICROBIAL SUSCEPTIBILITY file (#62.06), every antimicrobial has a multiple field for each result or concentration. Each result has a corresponding Default Interpretation.

NOTE: In the following examples and discussion, S = Susceptible, I = Intermediate, R = Resistant, and MIC = Minimum Inhibitory Concentration.

Example: Penicillin:

Result	Default Interpretation
S	S
I	I
R	R

(or where Results are MIC values)

<2	S
4	I
>8	R

If Results are always the same as the Default Interpretation (as with Kirby-Bauer reporting), then this file requires little editing. MIC results may have the Interpretation dependent on certain conditions (source of the specimen, organism, etc.,). It is possible to predefine alternate interpretations for each result in such a situation. These interpretations would be organism and/or specimen specific, and if appropriate, they would override the Default Interpretation of the Result. (See Adding New Antimicrobial section.) Interpretations may also be manually edited at the time of results entry.

Example 1: An antibiotic with a SUSCEPTIBILITY RESULT of 4 is usually R, except when the SPECIMEN is blood, in which case it is S.

SUSCEPTIBILITY RESULT = 4
DEFAULT INTERPRETATION: R
ALTERNATE INTERPRETATION: S
ALT. INTERP. ORGANISM (INTERP): UNKNOWN
ALT. INTERP. SPECIMEN (INTERP): BLOOD

Example 2: An antibiotic with a SUSCEPTIBILITY RESULT of 2 is usually S, except when the ORGANISM is STAPHYLOCOCCUS AUREUS, in which case it is I.

SUSCEPTIBILITY RESULT = 2
DEFAULT INTERPRETATION: S
ALTERNATE INTERPRETATION: I
ALT. INTERP. ORGANISM (INTERP): STAPH AUREUS
ALT. INTERP. SPECIMEN (INTERP): UNKNOWN

Example 3: An antibiotic with a SUSCEPTIBILITY RESULT of <2 is usually S, except for GRAM NEGATIVE organisms from urine, in which case it is I.

SUSCEPTIBILITY RESULT = <2
DEFAULT INTERPRETATION: S
ALTERNATE INTERPRETATION: I
ALT. INTERP. ORGANISM (INTERP): GRAM NEG ROD
ALT. INTERP. SPECIMEN (INTERP): URINE

NOTE: For Alternate Interpretation Organism (Interp), the entry UNKNOWN (SNOMED 00001 in the ETIOLOGY FIELD file (#61.2)) means any organism. An entry containing GRAM NEG means the organism's Gram stain (the Gram stain field in the ETIOLOGY FIELD file (#61.2)) must be Gram negative. An entry containing GRAM POS means the organism's Gram stain must have an field entry of Gram positive. An entry such as GRAM POS COCCI only refers to an organism that is Gram positive, regardless of whether the organism is a coccus, rod, etc. An entry of UNKNOWN in the Alternate Interpretation Organism (Interp) field means any organism. Similarly, if the field for Alternate Interpretation Specimen (Interp) is UNKNOWN, the specimen can be any type.

To decide whether or not a default interpretation is overridden by an alternate interpretation, the following algorithm is used:

If there is **no** Alternate Interpretation, then the Default Interpretation is used.

If there is an Alternate Interpretation, then the Alternate Interpretation Organism (Interp.) is checked.

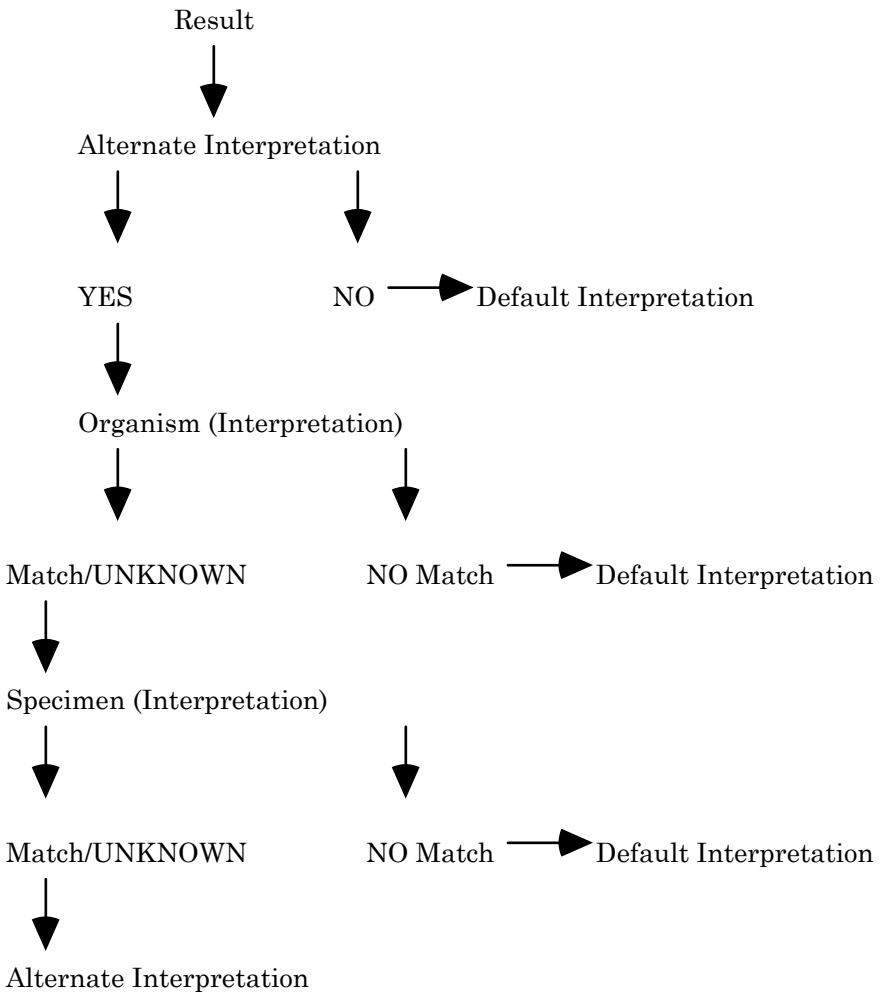
If the organism/Gram stain does **not** match, then the Default Interpretation is used.

If the organism/Gram stain matches or is UNKNOWN, then the Alternate Interpretation Specimen (Interp) field is checked.

If the specimen does **not** match, then the Default Interpretation is used.

If the specimen matches or is UNKNOWN, then the Alternate Interpretation is used.

Illustration



It is possible to set up complex predefined interpretations, but make sure to cover all possibilities.

File #69.9 (LABORATORY SITE)

Several fields in this file have an impact on Microbiology functionality.

Que Micro Verified Test(s) field (#11.5): This field must contain "YES" to allow Micro results to appear on interim and cumulative reports.

Select Micro Survey Report Defaults field (#200)
and Select Micro Trend Report Defaults field (#201):
The user has several choices as to which of these statistical reports can be printed. By preselecting default parameters for these fields, one need only answer "YES" to the question "Use default reports?" encountered when using the option itself.

Micro Report Format field (#202):
This determines whether susceptibility reports will display **B**oth results (MICs, etc.) and their appropriate interpretations (S, I, R, etc.), just the **R**esults, or just the **I**nterpretation (which is the default if no entry is made).

Micro Default Template field (#203) and
Micro Other Template field (#204):
These fields were created to help prevent store errors encountered when entering results of antimicrobials not included in the edit templates associated with each Etiology. The Default template, exported with the entry LRDEFAULT can be changed to any template in LAB DATA file (#63). It is used by the system if none was assigned to an Etiology (e.g., one of those unusual Gram negatives you never thought you would ever isolate, so you did not bother to assign a template!). Likewise, the other template can be changed from LROTHER to any template in LAB DATA file (#63). Ideally, you should create one which contains any antibiotic not included in your regular (= assigned) and Default templates, but could feasibly be tested in your lab. The system uses the other template when a user up-arrows out of the list of prompted antibiotics in RE. It asks, "Any other antibiotics?"; if the answer is "YES", the drugs in the other template will be prompted.

Two fields in this file have an impact on Microbiology instrument interface operation; "Download full data" and "Micro report format". Please refer to the MicroScan or Vitek interface section of the Laboratory Technical ,manual for further information.

Adding New Antimicrobials and Creating Templates

Adding New Antimicrobials

If your Micro lab needs to enter results for an antimicrobial that is not currently listed in your ANTIMICROBIAL SUSCEPTIBILITIES file (#62.06), you can add the antimicrobial by using the menu option; Add a New Internal Name for an Antibiotic[LRWU7]. This option allows you to add the appropriate fields in LAB DATA file (#63) and then you will link these fields to a new entry in ANTIMICROBIAL SUSCEPTIBILITIES file (#62.06).

Subfields in LAB DATA file (#63) called the "Interp" and "Screen" are used respectively, to assign the appropriate "category call" to the numeric MIC value entered by the user and to determine whether or not a recorded value will appear on the final ward report.

Step 1: Use the menu option: Add a New Internal Name for an Antibiotic to create the fields in LAB DATA file (#63). The system will assign a number in the format 2.00XXXNNN where XXX = Your site's station number and NNN = Unique consecutive numbers beginning with 001.

Step 2: Enter the new antimicrobial into ANTIMICROBIAL SUSCEPTIBILITIES file (#62.06).

Once the new fields are added to File #63, you must go back to the ANTIMICROBIAL SUSCEPTIBILITIES file (#62.06) to enter the drugs names, their appropriate MIC values and the interpretations for these values.

Using Enter or Edit File Entries option, enter the name of your new drug in response to "Select Antimicrobial Susceptibility Name" prompt, accept the default "Antimicrobial Susceptibility Number" prompt, but change the Antimicrobial Susceptibility Internal Name to the appropriate 2.00XXXNNN number previously assigned in File #63.

The Print Order enables you to rearrange the order in which the drugs appear on your reports. You can display the antimicrobials alphabetically, by type of antimicrobial (Cephalosporins, Aminoglycosides, etc.), by cost or by any other order. This is not a required field.

At "Select Susceptibility Result" prompt you have the choice of entering S-I-R (MS, etc.) or the numeric MIC value.

Hint

Omit the zero before decimals; every keystroke reduction helps, especially after the umpteenth time of typing "<=.02". However, if you are going to be interfacing an instrument, you may need to include the zero so the entry will match the result which is uploaded from the instrument. The next prompt asks "Default Interpretation," which is just that. For most drugs, this will be the only interpretation you will need to enter. Some, notably Penicillin and Ampicillin, will require entry of Alternate Interpretations, the next prompt. In the case of these drugs (bear with us, microbiologists), depending upon the organism, and in some cases, the site/specimen, an MIC value may take on a different interpretation.

Example: For Ampicillin at an MIC of .5 mcg/ml, Streptococci are moderately susceptible (MS), Staphylococci are resistant (R), but Gram negatives are susceptible (S). Entering Alternate Interpretations is not difficult, but it is time-consuming. Enlist the help of someone from Microbiology. Automated Instrument manufacturers often provide technical bulletins which contain helpful MIC conversion charts (the Lab probably already has them).

Determine the largest group of organisms to use an interpretation and assign it as the default to minimize the number of alternates you must enter. Each Alternate Interpretation (it is a multiple field) requires entry of the organism and specimen (use UNKNOWN unless a specific specimen such as urine is required), and remember, each subsequent entry after the first alternate **must be entered in quotation marks!**

After entering your Results, Default Interpretations, and Alternate Interpretation, you may enter a Display Comment, such as "MIC in mcg/ml" or the cost per dose. FileMan allows this comment to be 2-40 characters long, but we recommend that you not go much beyond 15-20 characters because when multiple organisms are isolated and reported, the comments get shifted to the right and will eventually wrap the lines. Even a 20 character Display Comment will wrap if four isolates are reported.

The abbreviation must be three characters long, and is required for the Infection Control Survey and Microbiology Trends Reports. If you do not report susceptibilities to a drug, delete its Abbreviation. This will prevent it from appearing on these two reports as column headers and will help simplify reading them. Conversely, if you do report a drug but do not see it reported on these reports, check to be sure an Abbreviation has been entered.

The Default Screen is chosen from a set of three codes. The purpose of an antimicrobial screen is to determine whether or not to display antimicrobial results on the patient's report. A screen does not apply to antimicrobial users who have the LRLAB key. These users will always have all results displayed, with a flag to indicate results which are suppressed to non lab users.

There are three choices of screens:

- **A** or "Always display" is self-explanatory. The results entered will always be visible to both ward and lab users. "Always display" is used for antimicrobials that are always reported from the lab. If no entry is made for this field, the system will default to "Always display".

- **N** or "Never display" prevents ward user from viewing results of a particular antimicrobial. This could be useful when conducting a new drug efficacy study, where the drug is not yet on the hospital formulary. Such results are still visible to laboratory users.

- **R** or "Restrict display" prevents wards from viewing entered results **unless** the isolate is resistant to all other reported drugs which are "Always display". Lab users can always view these results. Expensive or less appropriate drugs may, therefore, be suppressed from display unless all of the antimicrobials with the "Always Display" screen are all resistant. In that situation, those antimicrobials that are screened Restrict display will be displayed.

Example:

		#1			#2			#3		
Antimicrobial	Default Screen	Results/Display			Results/Display			Results/Display		
PENICILLIN	A	R	/	R	R	/	R	R	/	R
CEFALOTHIN	R	R	/		R	/	R	R	/	R
CEFOXITIN	R	R	/		I	/	I	R	/	R
GENTAMICIN	A	S	/	S	R	/	R	R	/	R
TOBRAMYCIN	A	I	/	I	R	/	R			
MXQ	N	I	/		S	/		S	/	
AMPICILLIN	A	S	/	S	R	/	R			

These examples assume the Result is the same as the Interpretation. If MIC results are being displayed, the display is dependent on the interpretations of those results, regardless of whether the interpretations are also displayed.

The Results column shows what would be displayed to a person with an LRLAB key. The Display column shows what appears on the patient report to a user without the LRLAB key.

Example #1 shows that when some antimicrobials that are Always displayed are not R (resistant), then the restricted drugs are suppressed from display.

Example #2 shows that when all antimicrobials that are Always displayed are all R, then the Restricted antimicrobials are displayed.

Example #3 shows that only those drugs with results are used in determining whether or not to display Restricted antimicrobials. Under no circumstances is the Never Display - screened antimicrobial displayed.

The Alternate Screen, another multiple field, allows certain organism/specimen combinations to be screened other than the default. For example, you may choose to report a drug only if the organism is **Pseudomonas aeruginosa**. Yet you want to record the results of testing it against other Gram negatives for statistical purposes. You could then select a Default Screen of Never display and an Alternate Screen of Always display with **Ps. aeruginosa** as the Organism (screen) and Unknown (where "Unknown" means "Any") as the Specimen (screen). Like the Alternate Interpretation field, the subsequent Alternate Screens should be entered in quotation marks.

Once you have added any additional antimicrobials you may need into the ANTIMICROBIAL SUSCEPTIBILITIES file (#62.06), you are ready to go back to the ETIOLOGY FIELD (#61.2) file to edit the field which was previously skipped: field 8, Susceptibilities Edit Template.

Susceptibilities Edit Templates

The Susceptibilities Edit Template provides a list customized to your site of antimicrobials which are to be recorded for each bacterial (Etiology Identifier = Bacteria) isolate reported. There are several templates provided with the exported package. You may want to edit these or create your own. It is

better to create your own templates so that they will not be overwritten when new versions of software are installed.

NOTE:	You must have access to the FileMan menu and proper access.

Before you do any work on the Susceptibilities Edit Templates in the ETIOLOGY FIELD file (#61.2), let us examine the structure of one of the exported Edit (Input templates). Please follow along in FileMan, using your **test account** to best understand the procedures described (it does get tricky at times).

Enter FileMan Option 1 (Enter or Edit File Entries), input to LAB DATA file (#63). At the "Edit which field: ALL//" prompt, enter the name of one of the existing templates. We will use LR GRAM NEG & URINARY for our example. Answer "YES" to "Want to edit LR GRAM NEG & URINARY input template?", and then just continue to press the RETURN key at each default entry, just to look at all the entries in that template.

Example: Susceptibilities Edit Template

```
          VA FileMan Version 20.0

          Enter or Edit File Entries
          Print File Entries
          Search File Entries
          Modify File Attributes
          Inquire to File Entries
          Utility Functions ...
          Data Dictionary Utilities ...
          Transfer Entries
          Other Options ...
Select VA FileMan Option: ENTER or Edit File Entries

INPUT TO WHAT FILE: WKLD SUFFIX CODES// 63  LAB DATA
                                         (86 entries)
EDIT WHICH FIELD: ALL// [LR GRAM
     1   LR GRAM NEG & URINARY      (MAR 28, 1985)          FILE #63
     2   LR GRAM POSITIVE      (MAY 23, 1989@12:49)         FILE #63   CHOOSE 1-
2: 1
WANT TO EDIT 'LR GRAM NEG & URINARY' INPUT TEMPLATE? NO// Y  (YES) NAME: LR GRAM
NEG & URINARY  Replace  <RET>
READ ACCESS:  <RET>
WRITE ACCESS:  <RET>
EDIT WHICH FIELD: 5// <RET>  MICROBIOLOGY    (multiple)
   EDIT WHICH MICROBIOLOGY SUB-FIELD: 12// <RET>  ORGANISM   (multiple)
      EDIT WHICH ORGANISM SUB-FIELD: .01// <RET>  ORGANISM
      THEN EDIT ORGANISM SUB-FIELD: 1// <RET>  QUANTITY
      THEN EDIT ORGANISM SUB-FIELD: 2// <RET>  COMMENT    (multiple)
         EDIT WHICH COMMENT SUB-FIELD: ALL// <RET>
      THEN EDIT ORGANISM SUB-FIELD: 155// <RET>  COLISTIN
      THEN EDIT ORGANISM SUB-FIELD: 35// <RET>  GENTAMICIN
      THEN EDIT ORGANISM SUB-FIELD: 40// <RET>  CHLORAMPHENICOL
      THEN EDIT ORGANISM SUB-FIELD: 55// <RET>  TETRACYCLINE
      THEN EDIT ORGANISM SUB-FIELD: 60// <RET>  AMPICILLIN
      THEN EDIT ORGANISM SUB-FIELD: 65// <RET>  CARBENICILLIN
```

```
      THEN EDIT ORGANISM SUB-FIELD: 70// <RET>  TOBRAMYCIN
      THEN EDIT ORGANISM SUB-FIELD: 75// <RET> TRIMETHAPRIM/SULFAMETHOXAZOLE
      THEN EDIT ORGANISM SUB-FIELD: 80// <RET>  AMIKACIN
      THEN EDIT ORGANISM SUB-FIELD: 85// <RET>  CEFAMANDOLE
      THEN EDIT ORGANISM SUB-FIELD: 90// <RET>  CEFOXITIN
      THEN EDIT ORGANISM SUB-FIELD: 100// <RET>  NITROFURANTOIN
      THEN EDIT ORGANISM SUB-FIELD: 154// <RET>  CEPHALOTHIN
      THEN EDIT ORGANISM SUB-FIELD: <RET>
   THEN EDIT MICROBIOLOGY SUB-FIELD: <RET>
THEN EDIT FIELD: <RET>
STORE THESE FIELDS IN TEMPLATE: <RET>

 Select LAB DATA LRDFN:
```

After you look over all of the exported templates (at the “Edit which field” prompt for LAB DATA file (#63) use ? to obtain a list of all available choices), decide if you want to use any of them as is, edited (order changed, etc.,), or not at all, in which case you will need to create new template(s).

Even if you decide to use the exported edit templates, you may find it advantageous to change the order in which the drugs will appear on the screen, to reflect the order they come off your automated instrument or the order you read your Kirby-Bauer or MIC plates.

NOTE: Each Etiology can be associated with only one Susceptibilities Edit Template, so you cannot create separate Gram Negative and Urinary templates. Usually it is a matter of only two - four drugs which are different, and the combined template is very easy to work with by just pressing Return when prompted with an unwanted drug. If you are familiar with MUMPS, you can incorporate coding into your templates and code to jump over unwanted drugs, based on specimen.

Use FileMan again to obtain a list of all antimicrobials available and their corresponding subfield numbers. Be sure any additional antimicrobials have been added before proceeding.

If you are going to create a new template, decide on the sequence in which you want the drugs to appear for editing, as well as what you are going to call the template. Our example is going to include a fictitious drug, “Newbiotic,” as well as Penicillin and Ampicillin, and will be named [LRZEXAMPLE]. We will later associate this template with an equally fictitious organism, Deachseephilia.

Setting Up a New Edit Template

Go back into FileMan and select Enter or Edit File Entries option. As before, we will be inputting into LAB DATA file (#63). Select Microbiology field (#5) (multiple) to edit. You will then see the "Edit Which Microbiology Subfield: ALL//" prompt. Your answer to this prompt must be 12 or ORGANISM. The subfields of ORGANISM become your template. Every template must begin with:

```
.01     ORGANISM
1           QUANTITY
2           COMMENT (multiple)
            (all subfields)
```

as the first three Organism subfields to edit.

After COMMENT you can begin to list the drugs you want to appear on your template. We will enter:

```
2.00123001 NEWBIOTIC
15             PENICILLIN
60             AMPICILLIN
```

and then work our way out back up to the prompt. Store these fields in the [LRZEXAMPLE] template (answer "YES" to the "we are adding a new template" prompt). Template names must be three to ten characters long. It is not necessary to rename old templates using the LRZ convention.

There are some etiologies which do not have susceptibilities performed, such as anaerobes; therefore, create a template without any — just request Subfields (#.01) (ORGANISM), 1 (QUANTITY), and 2 (COMMENT).

Now we must go back and check the new template, as well as render it usable to all lab users. Repeat the steps we followed when we looked at GRAM NEGATIVE & URINARY, but request the [LRZEXAMPLE] template instead. Answer "YES" to the "Want to edit LRZEXAMPLE input template?" prompt. When we get to the read and write access DELETE (@) default answer "Sure you want to delete? YES// " prompt will allow other lab users with lower FileMan privileges to use the template. Continue through the prompts to make sure all the subfields are listed properly.

Changing An Input Template

If you find something was entered improperly (say you want the drugs to appear in alphabetical order or if you just want to rearrange one of the exported templates), simply go through the checking procedure just described. When the "Then edit organism subfield: (number)//" prompt appears, just re-enter the subfield numbers in the order you want them to appear. Remember to save this changed template; you must reassign its name ("such and such template already exists... "OK to replace? YES//" prompt). It is a good idea to go through the checking procedure to be sure the changes were saved.

Etiology (Organism) Association

The last required step is to associate the edit templates with the appropriate organisms.

Using FileMan Option 1, enter the ETIOLOGY FIELD file (#61.2). You need only edit Field #8, the Edit Template.

To complete the example, select the etiology Deachseephilia. Enter LRZEXAMPLE as the edit template. Later, try entering results for a C&S using Deachseephilia sp. as the organism isolated. You should only be able to enter Susceptibilities for Penicillin, Ampicillin and Newbiotic.

Fancy Templates

By incorporating MUMPS code into your Edit Templates, a very high degree of customization can be achieved. Please remember, as in any situation where MUMPS coding is involved, programmer access is required, and your Site Manager should be consulted about such file manipulations. Incorporating MUMPS code into your templates will almost always mean that an IRM person will be needed to make any future edits to the templates if new drugs are added or the drugs rearranged. If no MUMPS codes is used, most LIMs will have sufficient FileMan access to make their own changes.

Adding New TB Drugs

Now that you have entered all your antibacterial antibiotics and created or modified all the templates you are going to need, it is time to start on the antimycobacterial drugs. You cannot not use the Add a New Internal Name for an Antibiotic [LRWU7] option, because that option modifies the subfield, Organism (#12) and not the subfield Mycobacterium (#26).

Step 1 - Create a new subfield in File #63.

NOTE: Established conventions are maintained in assigning subfield numbers:

2.00XXXNNN = NAME of the drug

where XXX represents your Station number, and NNN represents unique, consecutive numbers for each drug (drop trailing zeroes; i.e., 2.00XXX01 (not 010), 2.00XXX0101, 2.00XXX0102).

NOTE: You must have access to the FileMan Modify File Attributes option. If you follow the sequence shown, but do not see the prompts allowing you to change the mycobacterium subfield number, you do not have the correct access and are not correctly entering the new subfields.

Example of how to add a new antimycobacterial drug to your system with VA FileManager:

```
   Select OPTION: MODIFY FILE ATTRIBUTES

   MODIFY WHAT FILE: LAB DATA
   Select FIELD: MICROBIOLOGY
   LABEL: MICROBIOLOGY// <RET>
   READ ACCESS (OPTIONAL): <RET>
   WRITE ACCESS (OPTIONAL): <RET>
   SOURCE: <RET>
   Select DESTINATION: <RET>
   Select GROUP: <RET>
   DESCRIPTION:
   1> <RET>
   Select MICROBIOLOGY SUBFIELD: <RET>
   LABEL: mycobACTERIUM// <RET>
   READ ACCESS (OPTIONAL): <RET>
   WRITE ACCESS (OPTIONAL): <RET>
   SOURCE: <RET>

Select DESTINATION: <RET>
   Select GROUP: <RET>
   DESCRIPTION:
   1> <RET>
   Select MYCOBACTERIUM SUBFIELD: 2.00XXXNNN
   ARE YOU ADDING  2.00XXXNNN  AS A NEW MYCOBACTERIUM SUBFIELD (THE NTH)? Y (YES)
   MYCOBACTERIUM SUBFIELD LABEL: NEWTBDRUG

   DATA TYPE OF NEWTBDRUG: FREE TEXT
   MINIMUM LENGTH: 1
   MAXIMUM LENGTH: 7
   (OPTIONAL) PATTERN MATCH (IN  X ): <RET>
   WILL NEWTBDRUG FIELD BE MULTIPLE? NO// <RET>
   SUBSCRIPT: 2// 2.00XXXNNN
   ^-PIECE POSITION: 1// <RET>
   IS NEWTBDRUG ENTRY MANDATORY (Y/N): NO// <RET>
    HELP  -PROMPT: ANSWER MUST BE 1-7 CHARACTERS IN LENGTH
     Replace <RET>
   EXECUTABLE  HELP : D ZQ^LRMISR
```

Step 2 - Once the new field has been added for the new antibiotic the input transform must be changed.

```
   Select OPTION: UTILITY FUNCTIONS
   MODIFY WHAT FILE: LAB DATA
   Select UTILITY OPTION: INPUT TRANSFORM
   Select FIELD: MICROBIOLOGY
   Select MICROBIOLOGY SUBFIELD: MYCOBACTERIUM (multiple)
   Select MYCOBACTREIUM SUBFIELD: NEWTBDRUG
   NEWTBDRUG INPUT TRANSFORM: K:$L(X)>7!($L(X)<1) X

  Replace ... With D COM^LRMISR Replace <RET>
       D COM^LRMISR
```

```
 HELP _PROMPT: ANSWER MUST BE 1-7 CHARACTERS IN LENGTH
  Replace <RET>  With <RET>
XECUTABLE  HELP : D COM^LRMISR//  <RET>
```

NOTES

- NEWTBDRUG is the name of the TB drug.
- Interpretation and Screen subfields will not be created.
- DHCP printed results are placed very close to the last character of the drug name and are sometimes difficult to distinguish from the drug concentrations. If you wish to force a larger space in this area, include several spaces as you enter each new name.

```
ETHAMBUTOL   5:<SPACE><SPACE><SPACE><RET>
```

that will look like `ETHAMBUTOL  5:  Result` when the report is printed. Planning this using 1/4 inch graph paper will make the design much easier to understand.

The input transform must be changed to D COM^LRMISR. Remember, no templates have been created and no Etiology association has been done. TB drugs are handled differently from other antimicrobials.

If your lab sends your Mycobacterial isolates to the VA Reference Lab in West Haven, you will find it advantageous to enter the drugs in the order and concentrations tested there. By using the 2.00XXX001, -002, -003 progression of subfield numbers to follow West Haven reports, you can create a pseudo template which makes for very simple results reporting (just up-arrow when you get to the Exported drugs listed).

The package comes with the following antimycobacterial drug entries

```
Select VA FileMan Option: Enter or Edit File Entries
INPUT TO WHAT FILE: LAB DATA// <RET>
EDIT WHICH FIELD: ALL// 5  MICROBIOLOGY    (multiple)
   EDIT WHICH MICROBIOLOGY SUBFIELD: ALL// mycobACTERIUM      (multiple)
      EDIT WHICH MYCOBACTERIUM SUBFIELD: ALL// ?
 ANSWER WITH MYCOBACTERIUM SUBFIELD NUMBER, OR LABEL
 DO YOU WANT THE ENTIRE MYCOBACTERIUM SUBFIELD LIST? y  (YES)
CHOOSE FROM:
   .01         MYCOBACTERIUM
   1           QUANTITY
   2           COMMENT  (multiple)
   5           STR
   10          PAS
   15          INH
   20          ETH
   25          RIF
   30          KANAMYCIN
   35          CAPREOMYCIN
   40          CYCLOSERINE
   45          ETHIONAMIDE
   50          PYRAZINAMIDE
   55          MIOMYCIN
```

Two other files must be considered when working with the TB Microbiology portion of this software. These files will control how the report looks and how the results are entered. The EXECUTE CODE file (#62.07) needs programmer access to change it.

LABORATORY TEST file (#60):

```
INPUT TO WHAT FILE: LAB DATA// 60  LABORATORY TEST    (1254 entries)
EDIT WHICH FIELD: ALL// EDIT CODE
THEN EDIT FIELD: <RET>

Select LABORATORY TEST NAME: TB
     1   TB CULTURE & SMEAR  AFB CULTURE & SMEAR
     2   TB SMEAR  AFB SMEAR
     3   TBG  T-4 BINDING GLOBULIN
CHOOSE 1-3: 1  AFB CULTURE & SMEAR
EDIT CODE: TB BACTERIOLOGY// <RET>
```

EXECUTE CODE file (#62.07):

```
INPUT TO WHAT FILE: EXECUTE CODE     (80 entries)
EDIT WHICH FIELD: ALL// <RET>

Select EXECUTE CODE NAME: TB BACTERIOLOGY      E
NAME: TB BACTERIOLOGY// <RET>
EXECUTE CODE: S DR="25.5////"_DUZ_";.05;.99;23;24;25;26;27;22",DR(2,63.39)=".01:
99" D ^DIE Q
           Replace <RET>
PURGE CONTROL: <RET>
TYPE: EDIT// <RET>
HELP PROMPT: <RET>
SUBSCRIPT NAME: <RET>
DESCRIPTION:
  1>Stuff TB ENTERING PERSON with current user; SITE/SPECIMEN; COMMENT ON
  2>SPECIMEN; TB RPT STATUS; ACID FAST STAIN; QUANTITY; multiple MYCOBACTERIUM
  3>including QUANTITY, COMMENTS and DRUGS; TB RPT REMARK; TB RPT DATE
APPROVED.<RET>
```

NOTE: The last part of the DR string .01:99 D ^DIE Q is where the Execute Code will display the order of the drugs and other fields from the LAB DATA file (#63).

References

The References menu consists of three options:

The first option, "Inquire to Micro journal references," lists all articles entered into the system for a particular etiology (basically, it performs a FileMan search).

```
I - Inquire to Micro journal references
J - Enter/edit medical journal references
M - Enter/edit Micro journal references
```

"Enter/edit medical journal references" actually allows editing of the LAB JOURNAL file (#95) without requiring the user to hold FileMan access. It requires entry of the standardized abbreviation of the journal as it appears, in the INDEX MEDICUS. This is the .01 field and what is printed on the patient's reports. Other fields which may be edited include:

```
.02 - Full name (of the journal)
.03 - City of publication
.04 - NLM call number
.05 - NLM title control number
 1 - Comment (word processing)
```

A journal must exist in this file before you can reference any particular articles contained within it by use of "Enter/edit Micro journal references." Like the previous option, it bypasses the need for FileMan access to enable the user to edit the Journal Reference field (#5) the in ETIOLOGY FIELD file (#61.2). The subfields of this field include:

```
.01 - Title of article
 1 - Author
 2 - Medical journal (pointer to Journal file #95)
 3 - Volume
 4 - Starting page
 5 - Date
 6 - List on patient record
 7 - Topography restriction
```

Subfield #7, Topography restriction, is a multiple field that allows restriction of references to be printed only for certain specified site/specimens. For instance, a restriction of URINE would be used for an article about E. COLI isolated from urinary tract infections. A null entry would allow the article to appear on any culture report showing E. COLI, assuming subfield 6, "LIST on patient record", was marked "YES".

Storage Of Antimicrobial Results

Patients antimicrobial results are stored in the ^LR global in the following format:

^LR (PATIENT, "MI", INVERSE COLLECTION TIME, 3, ORGANISM SEQUENCE #, DRUG NODE) = RESULT^INTERPRETATION^SCREEN

The Interpretation of the antimicrobial is stored only if an Interpretation is different from the Result. If only Kirby-Bauer type reporting is done, (with the result of R having the Interpretation R, etc.), then no Interpretation is stored. An Interpretation with no entry assumes the Interpretation is the Result.

Screen is stored only if it is not A (Always display).

Screen with no entry is assumed to be A.

Storing these results with the patient data helps to speed reporting and does not change previous patient reports by changing the files. Both the Interpretation and Screen are assigned at the time of enter/editing.

Comments on Reports

Free text comments can be entered in at least four areas within Microbiology. The ward can make comments about an order when placing an order so that these comments will be displayed when the order is accessioned in the Lab. The Lab can then add to or modify these comments during accessioning; these comments will be displayed when results are entered. The comment is prompted by Order comments when a test is accessioned. During data entry (Results entry) or report printing, the comment appears after Comment on specimen; these should relate only to the specimen used for a test.

If you need to enter comments about a specific microorganism which has been isolated, enter them after input of the microorganism. If you need to enter comments that pertain to the entire report, enter them during data entry at the prompt, Report remarks.

All of the comment/remark fields point to the LAB DESCRIPTIONS file (#62.5) so that you may enter predefined descriptions as well as free text.

Since preliminary report dates are not stored, you may use the comment fields to chronologically track report dates. (e.g., Preliminary Report on 1/25/93 or Preliminary Phoned to Dr. Jones 1/25/93).

Reports

A. DHCP offers several options for printing Microbiology data on the cumulative. The LAB REPORTS file (#64.5) has two fields that determine if Micro results print on the cumulative:

1. Micro Approval Method field (#11) is a parameter which determines whether or not any Micro results print on the cumulative and if so, which verification process will release the results for printing. Results will only be released for the cumulative when approved using the selected option ("RE"=Results entry, "VT"=verification by tech, or "VS"=verification by supervisor). If you do not want to print Micro results on the cumulative, leave the Micro Approval Method field (#11) blank.

2. The Micro Reports field (#3) allows you to narrow down even more which Micro results will print on the cumulative. Of the results released for printing (determined by the Micro Approval Method field (#11)), if you want only the final reports printed, enter "F." If you want both preliminary and final results printed on the cumulative, enter "P" in the Micro Reports field (#3).

B. Que Micro Verified Tests field (#11.5), in LABORATORY SITE file (#69.9), controls the automatic queuing of Microbiology results when an approval report date is entered. If you want microbiology test results to be automatically queued, as are reports from other Lab areas, enter "YES" in this field. This allows any locations with immediate interim reporting to have Microbiology reports also printed generated automatically.

Both the VT and VS options have a prompt "QUEUE TO PRINT?" You may choose to turn off the automatic queue in File #69.9 and use this manual control of printing instead.

Microbiology Trend Report

The Microbiology Trend Report [LRMITS] option is used to compare counts of organisms and patterns of antibiotic susceptibility. Different types of reports can be generated. Reports can be sorted by organism, patient, location, physician, specimen, and collection sample. Defaults for these report types can be defined in the LABORATORY SITE file (#69.9). Reports can be restricted to specific types of values (i.e., specific patients, specific specimens, etc.). The reports can be restricted to criteria that effect all types of reports.

The comprehensive criteria and types of reports are selected by the user. The time range is forced to months. The report is forced to be queued - preferably to be run during off hours. The report extracts data from the LAB DATA file (#63) and temporarily stores the data in the ^TMP global. The format of the ^TMP global is indexed similar to the outputs of the requested reports. Once collected the data are reprocessed so that the data are counted and merged using the criteria selected. Merges can be done so that isolates from the same patient and same organism, and non conflicting antibiotic patterns will only be counted once depending on being isolated from the same specimen, collection sample or any sample. A detailed report showing each isolate's values can be used to confirm the counts reported. The data is reported by simply displaying the values of the ^TMP global.

NOTE: When interpreting this report, it is important to remember only "Susceptible" interpretations are included in the calculation of percent susceptible. "MS" and "I" interpretations are included as "R". The detailed report data may differ from the actual patient report data!

Special Reports

Two other reports besides the Microbiology Trend Report have been designed to provide specialized information for the users of the Micro package.

The Infection Control Survey Report [LRMISEZ] is used by the Laboratory and the Infection Control Unit to look for increases in the number of a particular organism or the emergence and spread of a resistant organism. The report gives a listing of wards and all organisms isolated from the ward location. The report contains patient information, specimen, and antimicrobial susceptibilities of the isolates. The report also gives a survey by organism and where the organism was isolated. In addition to generating this report for all organisms, the user can choose to specify only one organism. This report can sort by ward/location, organism, provider, and patient. These reports can be generated over any time interval. You can select the number of days between a patient's admission and collection of a sample (to help track iatrogenic infection) or specific susceptibility patterns. The Micro Survey Report field default in LABORATORY SITE file (#69.9) can be used to preselect a set of default parameters to be used to quickly request a printout. Because of the large amount of data manipulation required, it is usually queued to print at off-hours.

A Health Department Report option is available which lists all isolates that have been identified as reportable in Health Department Report field (#10) of the ETIOLOGY FIELD file (#61.2). The report shows additional patient demographic information, such as race, marital status, and occupation in addition to the address and phone number. Actual culture results (other than the organism name) are not included, since this information can be retrieved by lookup of the accession number printed.

Although not a report option, the Infection Warning Edit [LR INF WARN] option (on the Supervisor's Menu) may be useful to the Micro Lab. This 1 - 10 characters message appears on the Accession labels, Collection lists, and the Show list, but does not appear when accessioning or on any of the results report printouts. It could be used to indicate a specimen from a patient in isolation or for other purposes, as deemed necessary by your lab and/or Infection Control Unit.

Microbiology Workload Implementation

Overview

Microbiology procedures are significantly different from Chemistry (CH) subscripted procedures. Usually in the case of a CH test (i.e., Sodium) there is a request for a specific analytical determination resulting in a given value. In other words, the Sodium equals 140 Meg/L. Testing is completed. There is only one result and a single workload credit.

However in the case of Microbiology, the provider requests an examination for microbiological findings. These findings can become very complex and lengthy. In the process of examining the specimen several steps may be repeated. These repeated steps are justified even if the results are negative. Also during the examination, several organisms may be isolated. Each isolate has workload associated with it. The final workload units are the sum of all procedures performed on a given specimen.

In the CH subscripted procedure, the assay procedure is counted only one time. If the verified result is later corrected or changed, only one credit is given. In the case of MI subscripted procedures, each organism isolated is counted.

This difference between CH and MI subscripted tests forms the basic foundation for work load accounting in microbiology. The software has been designed to allow this type of work flow to be captured each time a workload definable entry is done by the technologist. In order to provide for various possible combination of procedures done in microbiology, certain editing of workload functions had to be provided. This is in contrast to CH subscripted which does not allow editing. Additional CH procedures can be added but the work load data can not be edited.

The basic collection of microbiology workload uses the same tools as all the rest of the various departments of the laboratory, only it goes further in flexibility. There are no set patterns for all specimen examinations. There are certain steps which are always performed on Blood Cultures for example, but not all Blood Cultures have the same procedures performed on them (i.e., negative versus a multi organism positive).

Microbiology makes use of the Accession and Specimen WKLD codes found in the LABORATORY TEST file (#60). Microbiology also uses the LOAD/WORK LIST file (#68.2). The difference between examination and assay is the use of WKLD code which can be selected via Edit Templates and ETIOLOGY FIELD file (#61.2). After each specimen verification session, the technologist is allowed to enter additional WKLD data. If requested by the technologist, the system will provide a list of appropriate WKLD codes to select, from the Execute WKLD code field (#500) in the EXECUTE CODE file (#62.07). The technologist can then indicate any additional work which can not be predicted in every case.

The task of the LIM is to predetermine what WKLD codes are always performed on certain specimen and examinations. The LIM would enter these in the appropriate fields and the technologist is relieved of 80-90% routine type workload coding just as the CH departments enjoy. But in addition, the LAC must consult with the microbiology supervisor to determine what other workload should be captured for the complex positive specimens. After evaluating potential procedures, compile a list from which the technologist can make a selection from when attempting to record additional workload.

This process of determining what WKLD codes should be associated with a particular ordered test is a difficult one and may need to be adjusted several times. If a certain WKLD code is not on the list of selectables, the technologist will have to perform an extra step to record the workload. It must be understood that not all cultures and specimens will fit some predefined pattern and some manual entry will be required. If these additional steps are not LMIP reportable procedures, the site may elect not to record them at all. But each site must at least collect and report LMIP billable procedures. Gathering data other than LMIP is solely for the benefit of the local site.

The primary objective of the Workload functions is to assist in reporting LMIP billable procedures to the national data base. The software is capable of collecting much more. The additional information over and above LMIP can be very useful to local management and supervisors. It is advisable to address workload implementation in stages. Concentrate on LMIP related issues first, analyze the reports produced and determine what additional information might be useful at the local level. Some sites will choose to only implement LMIP functionality: this is acceptable but unwise. Workload collection can be a very useful tool when applied properly. This is only true if accurate data is being collected all of the time. The system is designed to assist in this repetitive procedure without the technologist becoming distracted from patient care duties.

Microbiology LMIP/Workload

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LMIP requires data including (1) the number of billable tests and (2) whether these tests are performed in-house or are sent out. The CAP LMIP document (1992 - October-November-December, page 3) defines billable (ordered) tests to be those "which are billed to the patient or third party payer" and states that "...quality control, epidemiology/infection control, proficiency, repeat, calibration, and standard tests, while essential for quality laboratory performance, are not counted in the billable (ordered) tests figure."

Collection of these data from the Microbiology area differs from that in other Lab areas in at least two key ways. First, Microbiology results are often modified several times before final release - and may be reported both as "preliminary" and as "final" results. Second, reporting a result (an organism isolated) may be done with a minimal amount of testing with one specimen, but an extensive amount with another.

Laboratory V. 5.2 software allows the sites to create a set of numeric codes, called WKLD (workload codes), that will permit transmission of Microbiology LMIP data to Austin, as well as collect other workload data. The three applications of Version 5.2 data capture are:

1. Basic LMIP
   a) Billable tests
   b) Inhouse versus Sendout testing
2. Comprehensive LMIP - focus studies based on collection sample data
3. Workload recording - (optional at this time) formerly AMIS/CAP

There are four categories of codes:

1. Accession WKLD field (#500.1) in the LABORATORY TEST file (#60)
2. Etiology WKLD field (#11) in the ETIOLOGY FIELD file (#61.2)
3. Execute WKLD code field (#500) in the EXECUTE CODE file (#62.07)
4. Collection WKLD field (#500) in the COLLECTION SAMPLE file (#62)

The Accession WKLD codes will:

1. Flag billable/orderable tests
2. Classify instrumentation used, if any, and
3. Identify smears, serologies, and cultures as inhouse or referral (sendout). Such codes are captured at the time of accessioning.

Etiology WKLD codes capture the general methodology used in each of the microbiology, miscellaneous and nonbillable subsections, and they are generated when an organism (etiology) is reported. The etiology WKLD field will also identify identification and susceptibilities as inhouse or send out.

The Execute WKLD code will allow the technologist the opportunity of adding or editing when using the individual verify options in Microbiology.

The Collection WKLD code will flag designated specimen sources and the data will be used for focused QA studies.

Accession WKLD code field (#500.1)

Two types of codes will be assigned to each LABORATORY TEST file (#60) test with a "MI" subscript: a billable/instrumentation code and inhouse/sendout code(s), in the format prefix suffix (nnnnn.nnnn). There will be only **one** billable/instrumentation code while there can be multiple inhouse/sendout codes. (See Table A for listing of prefixes and suffixes.)

NOTE: WKLD CODE file (#64) will be exported with the prefixes and SUFFIX CODES file (#64.2) will be exported with the suffixes. No new prefix codes or suffix codes can be added to these files by the sites. However, there will be limited editing capabilities of the WKLD CODE file (#64). The LIM will use the Add a new workload code [LRCAP CODE ADD] option to create the prefix/suffix combinations which are then stored in the WKLD CODE file (#64). This routine is also where the billable designation flag is set.

Billable/instrumentation code

An Accession WKLD prefix will flag the test as being billable or not billable and specify subsections of Microbiology (i.e., Mycology or Bacteriology), or miscellaneous tests (i.e., occult blood, fecal WBC).

LMIP requires data for the number of billable tests AND the number of nonbillable tests. To be considered billable, an accession must fulfill two conditions:

1. the test must have a billable code and
2. the patient must be found in either the PATIENT file (#2) or REFERRAL PATIENT file (#67).

The first condition will be the method for counting each MI subscripted test. The second requirement allows nonbillable accessions such as a proficiency survey to use the same LABORATORY TEST file (#60) tests as a patient without being included in the billable data. Non patient samples are ordered in the RESEARCH, ENVIRONMENTAL, or STERILIZER files.

NOTES:
1. Previously, several CAP code fields in LABORATORY TEST file (#60) were used to capture and weigh workload. These fields (now to be called Sample WKLD and Verify WKLD) have been retained and can be edited locally by stations wishing to continue to count the number of culture plates, tubes, spot tests, etc. However, this additional capability is not needed for LMIP.

2. There may be several billable tests under one accession number, but each test will have only ONE billable code.

An Accession WKLD suffix will identify instrumentation used for primary testing such as a Bactec. If the test is performed manually, then the suffix code is .7000. These codes are not for designating instruments used to perform identification and susceptibilities, for example, Vitek or Microscan. (That data is associated with Etiology WKLD codes.)

Example 1: Blood cultures are tested on the Bactec NR-730. The Bacteriology culture prefix is 87993 and the suffix for the NR-730 is .7110. Therefore, the accession WKLD code in File #60 for blood culture is 87993.7110.

Table A
Billable/Instrumentation Codes

Prefix: ONLY these prefixes will flag the test as billable. No other codes will be considered (this includes 87101, 87102, 87103, or CAP prefixes).

PROCEDURE	WKLD PREFIX CODE (from file #64)
Micro Smear Prep	87991.0000
Micro Serology	87992.0000
Micro Bacteriology Culture	87993.0000
Micro Mycology Culture	87994.0000
Micro Mycobacterium Culture	87995.0000
Micro Virology Culture	87996.0000
Micro Misc. Culture	87999.0000

NOTES:

- Microbiology smear/prep and Microbiology serology codes can be used for ANY Microbiology subsection, for example, Parasitology smears.

- Tests such as Gram stain, KOH, and India Ink are considered support tests and will NOT be considered billable, even if no culture was ordered. They must be coded 87997. Identification tests which are confirmatory are also considered nonbillable. (See example 4)

Suffix: List modified from '92 CAP Workload manual. Not all the suffix codes are applicable to all the prefixes.

```
   WKLD SUFFIX
NAME  CODE (from file #64.2)
-------------------------------------------------------------------------------
MANUAL MICRO   .7000
AVANTAGE .7083
AUTOBAC SERIES II    .7084
AUTOBAC I   .7085
BACT/ALERT     .7086
VITEK AMS   .7087
VIDAS       .7088
BACTEC 460     .7089
BACTEC 460/461    .7090
BACTEC 460 w CONV TB MEDIA    .7091
AUTOMATED NOS     .7092
MICRO CODER I  .7093
ABBOTT MS-2    .7094
TOUCH SCAN     .7095
AUTO SCAN-4    .7096
SCEPTOR        .7097
AUTOSCAN WALK/AWAY      .7098
PRIMA          .7099
BACTEC NR-660     .7107
BACTEC NR-730     .7110
COMMANDER      .7115
```

The Add a New WKLD Code [LRCAP CODE ADD] option joins the prefix and suffix. The resulting codes are used in the Accession WKLD code field (#500.1) of the LABORATORY TEST file (#60).

Inhouse/sendout Code

An accessioned MI subscripted test should be thought of as consisting of a number of steps or components. For example, a culture may consist of:

1. a microscopic preparation,
2. the culture itself,
3. an identification(s), and
4. a susceptibility(s).

The inhouse/send out code will capture the inhouse or referral/sendout status for the component tests (i.e., culture, identification). Each MI subscripted test can contain multiple codes to reflect the various steps. The suffix will reflect the type of test procedure (i.e., microscopic, culture, identification) while the prefix (87101 for ALL Microbiology subsections) has no LMIP significance at this time other than being a flag for the programming. The codes for the microscopic, culture (bacteriology, mycology, mycobacteriology, or tissue), or serologic testing will be entered in the LABORATORY TEST file (#60) using the Accession WKLD code field 500.1). The codes for identification and susceptibility use the Etiology WKLD field (#11) in the ETIOLOGY FIELD file (#61.2). (See Table B for inhouse/send out codes)

Each billable test in LABORATORY TEST file (#60) must have one or more inhouse/sendout (IH/S0) codes, suffixed appropriately for the type of testing. Some multifunction tests may require several codes to designate all of the composite parts of the full test, such as a culture which can consist of a microscopic, culture, identification, and susceptibility.

87101 will be the inhouse/sendout prefix code for ALL subsections of Microbiology. Suffix codes are assigned to the different test components and IH/S0 combinations as follows:

.7100 = microscopic (smear)/inhouse
.7200 = culture/in-house
.7300 = identification/inhouse *
.7400 = susceptibility/inhouse *
.7700 = tissue culture/inhouse
.7800 = serologic testing/inhouse

.8100 = microscopic/send out
.8200 = culture/send out
.8300 = identification/send out *
.8400 = susceptibility/send out *
.8700 = tissue culture/send out
.8800 = serologic testing/send out

NOTE: *Identification and susceptibility codes are entered in the Etiology WKLD field, and as such, are captured ONLY when an organism is reported (an ID and susceptibility performed). All other inhouse/sendout codes are entered in the accession WKLD field.

Example 2: (Test - AFB C&S)

Site A performs an AFB smear inhouse but sends the specimen out for culture, identification and susceptibility. The testing is not automated. Therefore, the .7000 suffix code is attached to the billable test code. A single accession number will contain the following Accession WKLD codes:

87995.7000	(billable) Mycobacterial culture - manual
87101.7100	smear inhouse
87101.8200*	culture sent out

NOTE: * If the culture is positive and the organism is sent out for identification and susceptibility, then the send out codes for those two procedures (87101.8300 and 87101.8400) will be captured in the Etiology WKLD field.

Example 3: (Test - AFB C&S)

Site B performs an AFB smear and culture inhouse. More than 80% of their cultures include a 12B or 13A bottle which is tested on the Bactec 460. The final identification and susceptibility are sent out. Their Accession WKLD codes would be as follows:

87995.7089*	(billable) Mycobacterial culture - Bactec 460
87101.7100	smear inhouse
87101.7200	culture inhouse

NOTE: * If 20% or less of the cultures include a 12B or 13A vial, then enter .7000 (manual suffix code) in place of an instrument suffix code. As in the previous example, Etiology WKLD field for the Mycobacterium species would be coded 87101.8300 and .8400.

Example 4: Nonbillable and billable counts on a single Accession number

A gram stain, routine culture, and Legionella culture are ordered on sputum and all procedures are done inhouse. A single accession number will contain the following Accession WKLD codes:

Gram stain (a support test, not billable)
87997.7000 nonbillable - manual

Routine Culture
87993.7000 (billable) Bacteriology culture - manual
87101.7200 culture inhouse

Legionella Culture
87993.7000 (billable) Bacteriology culture - manual
87101.7200 culture inhouse

Legionella Serotyping (support test)
87997.7000 nonbillable serology - manual

Inhouse/Sendout data does not have to be coded for nonbillable tests.

Inhouse/sendout calculations: Some billable tests have a portion done inhouse and a portion sent out. The calculation needed to determine the number of billable inhouse tests and sendout tests is as follows:

1. Count total number of billable codes for Microbiology.

   `For example, Total # billables = 80`

2. Calculate percent sent out:

   a. Count total number of codes with 87101 prefix.

      `For example, There are 242 codes with the 87101 prefix`

   b. If prefix is 87101, count total number of .8### codes. (This designates procedures which were sent-out)

      `For example, Only 45 of the codes have the .8### suffix`

   c. Calculate percentage sent out. (number of .8### codes divided by the total number of codes with 87101 prefix)
      `For example, 45 divided by 242 = .186 X 100 = 18.6% sent out`

3. Calculate number of send outs. (# of billables X % sent out =# of sendouts)
   `For example, 80 X 18.6% =14 sendouts and thus, 65 inhouse tests`

TABLE B
Inhouse/sendout codes

Prefix: for all Microbiology accession areas

```
   WKLD PREFIX
PROCEDURE   CODE (from file #64)
-------------------------------------------------------------------------------
InHouse or Send Out Test   87101.0000
```

Suffixes:

```
   WKLD SUFFIX
NAME  CODE (from file #64.2)
-------------------------------------------------------------------------------
MICROSCOPIC/IN HOUSE .7100
CULTURE/IN HOUSE  .7200
IN HOUSE .7300
SUSC/IN HOUSE  .7400
TISSUE CULTURE/IN HOUSE .7700
SEROLOGY/IN HOUSE .7800

MICROSCOPIC/SEND OUT .8100
CULT/SEND OUT  .8200
ID/SEND OUT    .8300
SUSC/SEND OUT     .8400
TISSUE CULT/SEND OUT .8700
SEROLOGY/SEND OUT .8800
```

The Add a New WKLD Code to File [LRCAP CODE ADD] option joins the prefix and suffix. The resulting codes are used in the Accession WKLD code field (#500.1) of the LABORATORY TEST file (#60), except for the inhouse/sendout identification and susceptibility codes. Those are used in the Etiology WKLD code field (#11) of the ETIOLOGY FIELD file (#61.2).

Etiology WKLD code field (#11)

The Etiology WKLD code field is in the ETIOLOGY FIELD file (#61.2). It is a multiple field and will be edited by the LIM to contain the most common (80%) workup method as the default code. A "stuff" routine (Etiology WKLD Codes (Force) [LRCAPF]) has been created to facilitate entry of the codes. Should an alternate identification method actually be used, another WKLD code can be selected during result entry by answering prompts driven by an execute code routine. The Execute WKLD code field (#500) are located in the EXECUTE CODE file (#62.07).

The Etiology WKLD field will also contain the inhouse/send out codes which pertain to identification and susceptibility (87101.7300, 87101.7400, 87101.8300, and 87101.8400). (Refer to Table B)

For both the method code and the inhouse/send out codes, the objective is to select the code which reflects 80% of the situations.

Codes captured from this field can also provide information about methodology used to identify organisms reported. (LMIP does not require accounting for every subculture or separate biochemical tests, although general method monitoring may be desired for management purposes in the future, including LMIP Microbiology focus studies.) The prefix (87102) has no significance other than to provide a means to attach the suffix codes. The prefix code 87102 is used for all etiologies. The suffix codes indicate procedure (manual or automated) and/or instrument types. The suffix codes will allow a rudimentary designation of the methods used to identify and perform susceptibilities. (See Table C for suffixes)

Should more detailed workload information be desired by your laboratory's management, codes based on CAPs 1992 Workload Recording Method also exist in the files and can be utilized. (See Table D)

Example 5: Site C performs bacterial identification and susceptibilities inhouse on the Vitek. File entries for Escherichia coli would be:

87102.7394	Bacterial ID/Susc Mated, Vitek
87101.7300	Inhouse ID
87101.7400	Inhouse Susceptibility

Example 6: Site C sends positive mycobacterial cultures to a reference lab for identification and susceptibilities. File entries for Mycobacterium tuberculosis would be:

87101.8300	Sendout ID
87101.8400	Sendout Susceptibilities

Because the organism is referred to another lab, it is not necessary to identify the methodology used. However if the ID is done in your lab and the susceptibilities are referred, then indicate the method used for identification.

TABLE C
ETIOLOGY codes

Prefix: for all Microbiology accession areas

```
   WKLD PREFIX
PROCEDURE   CODE (from file #64)
-------------------------------------------------------------------------------
Etiology 87102.0000
```

Suffixes:

```
   WKLD SUFFIX
NAME  CODE (from file #64.2)
-------------------------------------------------------------------------------
FUNGAL IDENTIFICATION, MANUAL, CONVENTIONAL  .7301
FUNGAL IDENTIFICATION, MANUAL, ID SYSTEM  .7302
FUNGAL IDENTIFICATION, MANUAL, EXOANTIGEN    .7303
FUNGAL IDENTIFICATION, MANUAL, NOS        .7304
FUNGAL IDENTIFICATION, AUTOMATED, VITEK   .7305
FUNGAL IDENTIFICATION, AUTOMATED, MICROSCAN     .7306
FUNGAL IDENTIFICATION, AUTOMATED, ACCUPROBE  .7307
FUNGAL IDENTIFICATION, AUTOMATED, NOS     .7308
FUNGAL SUSCEPTIBILITY, MANUAL, CONVENTIONAL  .7312

MYCOBACTERIAL IDENTIFICATION, MANUAL, CONVENTIONAL .7316
MYCOBACTERIAL IDENTIFICATION, AUTOMATED, BACTEC    .7317
MYCOBACTERIAL IDENTIFICATION, AUTOMATED, ACCUPROBE .7318
MYCOBACTERIAL SUSCEPTIBILITY, AUTOMATED, BACTEC .7325
MYCOBACTERIAL SUSCEPTIBILITY, MANUAL, CONVENTIONAL .7326

VIRAL IDENTIFICATION, MANUAL, CPE         .7331
VIRAL IDENTIFICATION, MANUAL, AG/AB DETECTION   .7332
VIRAL IDENTIFICATION, MANUAL, NOS         .7333
VIRAL IDENTIFICATION, AUTOMATED, VIDAS    .7334
VIRAL IDENTIFICATION, AUTOMATED, PRIMA    .7335
VIRAL IDENTIFICATION, AUTOMATED, NOS      .7336

PARASITE IDENTIFICATION, DIRECT EXAM      .7346
PARASITE IDENTIFICATION, CONCENTRATION TECHNIQUE   .7347
PARASITE IDENTIFICATION, STAINED PREPARATION    .7348
PARASITE IDENTIFICATION, IMMUNOFLUORESCENCE     .7349
PARASITE IDENTIFICATION, NOS              .7350

BACTERIAL IDENTIFICATION, RAPID/PRESUMPTIVE     .7361
BACTERIAL IDENTIFICATION, MANUAL, CONVENTIONAL     .7362
BACTERIAL IDENTIFICATION, MANUAL, ID SYSTEM     .7363
BACTERIAL IDENTIFICATION, MANUAL, SEROTYPING    .7364
BACTERIAL IDENTIFICATION, MANUAL, NOS     .7365
BACTERIAL IDENTIFICATION, AUTOMATED, GLC, NOS   .7366
BACTERIAL IDENTIFICATION, AUTOMATED, ACCUPROBE     .7367
BACTERIAL IDENTIFICATION, AUTOMATED, SCEPTOR    .7368
BACTERIAL IDENTIFICATION, AUTOMATED, VITEK   .7369
```

```
BACTERIAL IDENTIFICATION, AUTOMATED, MICROSCAN  .7370
BACTERIAL IDENTIFICATION, AUTOMATED, NOS  .7371
BACTERIAL SUSCEPTIBILITY, RAPID           .7380
BACTERIAL SUSCEPTIBILITY, AGAR DILUTION   .7381
BACTERIAL SUSCEPTIBILITY, KIRBY-BAUER     .7382
BACTERIAL SUSCEPTIBILITY, MANUAL MIC, NOS    .7383
BACTERIAL SUSCEPTIBILITY, AUTOMATED, VITEK   .7384
BACTERIAL SUSCEPTIBILITY, AUTOMATED, MICROSCAN     .7385
BACTERIAL SUSCEPTIBILITY, AUTOMATED, MICRO CODER I    .7386
BACTERIAL SUSCEPTIBILITY, AUTOMATED, AUTOBAC I  .7387
BACTERIAL ID/SUSC COMBO, MANUAL READ      .7391
BACTERIAL ID/SUSC COMBO, AUTOMATED, SCEPTOR  .7392
BACTERIAL ID/SUSC COMBO, AUTOMATED, MICROSCAN   .7393
BACTERIAL ID/SUSC MATED, AUTOMATED, VITEK .7394
BACTERIAL ID/SUSC COMBO, AUTOMATED, NOS   .7395
```

NOTE: NOS means Not Otherwise Specified.

The Add a New WKLD Code option [LRCAP CODE ADD] joins the prefix and suffix. The resulting codes are used in the Eitology WKLD Code field (#11) of the ETIOLOGY FIELD file (#61.2).

TABLE D
Methodology codes
(Traditional CAP/AMIS coding)

Prefix: CAP prefix as listed in the '92 CAP manual. These CAP based codes can be used along with or instead of the VA etiology coding system. Since methodology coding is not required by LMIP at this time, this entire step may be disregarded and neither system used. They are entered in the Etiology WKLD code field in the ETIOLOGY FIELD file (#61.2)

Suffixes: With a few modifications, most are similar to '92 CAP suffixes except they have been changed to a four digit format. Predefined '92 CAP prefix suffix codes have been stripped apart in the software and will need to be recombined if used.

NAME	WKLD SUFFIX CODE (from file #64.2)
LATEX AGGLUTINATION NOS	.7014
ENZYME IMMUNOASSAY NOS	.7016
COAGGLUTINATION NOS	.7019
API NFT	.7022
API 10S	.7024
API 20A	.7025
API 20C	.7026
API 20E	.7027
API 20S	.7028
ENTEROTUBE II	.7033
MICRO ID	.7036
MICROBIOLOGY SYSTEMS	.7037
MICROSCAN	.7038
MINITEK ANAEROBES	.7039
MINITEK NONFERMENTER	.7043
OXI/FERM	.7044
RAPID E	.7045
STAPH IDENT	.7048
UNI-N/F-TEK	.7050
UNI-YEAST-TEK	.7051
RAPID ANA SYSTEM	.7052
RAPID NH SYSTEM	.7053
RAPID STREP	.7054
CONVENTIONAL	.7055
SEPTI-CHEK	.7057
ISOSTAT ISOLATOR	.7058
RAPID SST	.7061
MIC - IN-HOUSE PREP OF TRAYS	.7063
IRON HEMATOXYLIN STAIN	.7067
TRICHROME STAIN	.7068
ZEPHIRAN-TRISODIUM PHOSPHATE PROCEDURE	.7069
NALC PROCEDURE	.7070
FORMALIN ETHYL ACETATE METHOD	.7071
MERTHIOLATE IODINE FORMALIN METHOD	.7072
SODIUM HYDROXIDE PROCEDURE	.7073
ZINC SULFATE FLOTAION METHOD	.7074

FECES MACROSCOPIC EXAM	.7075
FECES MICROSCOPIC EXAM	.7076
FECES PINWORM EXAM	.7077
WET PREP FOR TRICHOMONAS	.7078
KINYOUN'S ACID FAST STAIN	.7079
FLUOROCHROME TYPE STAINS	.7080
ZIEHL-NEELSEN STAIN	.7082
AVANTAGE	.7083
AUTOBAC SERIES II	.7084
AUTOBAC I	.7085
BACT/ALERT	.7086
VITEK AMS	.7087
VIDAS	.7088
BACTEC 460	.7089
BACTEC 460/461	.7090
BACTEC 460 w CONV TB MEDIA	.7091
AUTOMATED NOS	.7092
MICRO CODER I	.7093
ABBOTT MS-2	.7094
TOUCH SCAN	.7095
AUTO SCAN-4	.7096
SCEPTOR	.7097
AUTOSCAN WALK/AWAY	.7098
PRIMA	.7099
ACCUPROBE	.7101
RAPID DIAGNOSTIC SYSTEM	.7102
BACTEC NR-660	.7107
BACTEC NR-730	.7110
COMMANDER	.7115
MYCOBACTERIAL DETECTION, AUTOMATED	.7194
NAP TEST, TUBERCULOSIS	.7196

Execute WKLD code field (#500)

This field is located in the EXECUTE CODE file (#62.07).

Because of the wide variability in the amount of work necessary to achieve an identification and susceptibility, a laboratory's management may decide it wants more accurate data than the "80%" default file setup. This field allows the technologist the opportunity to add or edit workload when using either the Results Entry [LRMIEDZ] option or the Verify Micro Auto Data [LA MI VERIFY AUTO] option. By the nature of the type of results edited, using Results Entry (Batch) [LRMISTUF] option, (i.e., comments), does not allow for editing or adding workload.

The WKLD codes used in this field are the Etiology WKLD codes, either the 87102 VA codes or the modified CAP methodology codes. To properly set up your files, each execute code which is used to report an organism (BACTERIOLOGY, MYCOLOGY, etc., - not any of the "smear/prep" execute codes) must contain all WKLD codes applicable to data reportable through each execute code.

Example 7: Yeasts are routinely identified on a Vitek and are coded in the Etiology WKLD code field (#11) in the ETIOLOGY FIELD file (#61.2) as 87102.7305. The alternate identification system is the API 20C (manual ID system), coded 87102.7301. Both of these codes, plus any used for coding mold identifications, must be included in the MYCOLOGY (or custom) execute code.

Collection WKLD code field (#500)

The Collection WKLD field (#500) is located in the COLLECTION SAMPLE file (62). This field will provide information regarding specimen source, accession area, and test name. This data will be used for focused QA studies such as the number of tests per source. Current focus studies are concerned only with two collection samples (urine and blood).

TABLE E
Specimen Source Codes

Prefix: for all Microbiology accession areas

WKLD PREFIX PROCEDURE	CODE (from file #64)
Specimen Source	87103.0000

Suffixes: modified from '92 CAP Workload Recording Method

WKLD SUFFIX NAME	CODE (from file #64.2)
BIOPSY	.7600
CEREBROSPINAL FLUID	.7602
ENVIRONMENTAL	.7604
GENITAL	.7606
SPECIMEN/SOURCE 1	.7608
SPECIMEN/SOURCE 2	.7610
SPECIMEN/SOURCE 3	.7612
SPECIMEN/SOURCE 4	.7614
RESPIRATORY-OTHER	.7616
SPUTUM	.7618
STERILE FLUID-OTHER	.7620
STOOL	.7622
THROAT	.7624
URINE	.7626
WOUND	.7628
TISSUE	.7630
BONE	.7632
CATHETER	.7634
EXUDATE	.7636
BREAST MILK	.7640
BRONCHIAL ALVEOLAR LAVAGE (BAL)	.7642
BRUSH-BRONCHOSCOPY	.7644
BUFFY COAT	.7646
EYE	.7648
MOUTH	.7650
NARES	.7652
RECTAL	.7654
SKIN/HAIR/NAILS	.7656
THROAT WASHINGS	.7658
TRACHEAL ASPIRATE	.7660
VESICLE	.7662
WHOLE BLOOD	.7664
EAR	.7666

Gray Area Tests (MI and CH-subscript)

Certain tests may exit in a "so-called" gray area between MI and CH subscript. Some labs may subscript a test MI while others may use CH, such as Aminoglycoside levels, hepatitis testing, etc.,. The suggested rule of thumb is to code appropriately for your site's choice of subscript.

Example: If Site A considers an RPR a CH-test, coding should be similar to other CH- tests; 89630.3832 (WKLD coding for cardiolipin, Rapid Plasma Reagin, qualitative). The prefix 89630 is billable.

Example: If Site B subscripts the same test MI and coding should follow Microbiology conventions; 87992.7000 (Micro-serology, manual) and 87101.7800 Micro-serology, inhouse). The prefix 87992 is billable while 87101 is not.

Site B can also include both the CH-type coding and the micro coding. However, the WKLD code (89630.3832) must NOT be flagged billable. The advantage of using both MI and CH codes is to provide additional report granularity because all 87992.7000 coded tests will be "lumped" together on reports. The additional coding can provide more specific workload information for the site's own use.

Checklist to Implement Microbiology LMIP and Workload Recording

Follow the steps for each Microbiology accession area. However, please note that once etiology associated workload is set up for one accession area, it is set up for all areas that use that group of organisms (bacteria, etc.,). Steps 4 through 11 and 13 through 15 are not applicable to an accession area which only includes tests which do not report any sort of etiologies.

NOTES:

1. The steps with a "*" by them are required for minimal LMIP setup.

2. If the Etiology WKLD Code field (#11) is filled in, the data capture is automatic. Please see the LMIP/Workload section for details on filling this field.

*1. Determine Accession WKLD codes needed for each test (879nn and 87101 series).

*2. Use the Add a New WKLD Code [LRCAP CODE ADD] option to join prefix and suffix.

*3. Enter codes into Accession WKLD code field in the LABORATORY TEST file (#60). (879nn and 87101, excluding those with identification and susceptibility suffixes).

*4. Determine groupings of etiologies (based on Identifier, Susceptibility Edit Template, etc.,)

*5. Use FileMan to create sort templates based on groupings. Print the name and sort field to verify correct data.

*6. Use the Etiology WKLD Codes (Force) [LRCAPF] option to stuff 87101 identification and susceptibility codes in the Etiology WKLD Code field (#11) of the ETIOLOGY FIELD file (#61.2).

7. Determine 87102 series (or CAP) codes needed for WKLD method recording.

8. Use the Add a New WKLD Code [LRCAP CODE ADD] option to join prefix and suffix.

9. Determine groupings of etiologies with similar workups.

10. Use FileMan to create sort templates based on the newest groupings. Print if desired.

11. Use the Etiology WKLD Codes (Force) [LRCAPF] option to stuff 87102 codes into the Etiology WKLD code field (#11) or do it manually using FileMan.

*12. Create load/worklist for each work area, with a profile consisting of all appropriate tests. (See following example and the discussion about Load/Work lists in the general LMIP section.)

13. Determine execute code(s) used by all tests in accession area.

14. Enter all 87102 (or CAP) workup codes possibly used into each appropriate execute code WKLD field.

15. Repeat step #14 for each execute code used.

Multiply factor

All WKLD fields (accession, verify, sample, etiology, execute) possess a multiply factor field. For billable codes (87991-87996 and 87999), the multiply factor must ALWAYS be one.

The multiply factors operate in the same manner as else where in the package. The default value is one. If this procedure should be counted more than once, so indicate in this field.

File setups:

Example: All data collection activity is going on "behind the scenes", invisible to the user. The files were set up to reflect the typical workload performed 80% of the time on a particular kind of culture. Unlike AMIS, the new system is simplified to not collect such things as the number of plates set up or the number of readings done. A site may choose to record this data but it is not required by LMIP.

```
Select LABORATORY TEST NAME:    CULTURE & SUSCEPTIBILITY
ANOTHER ONE: <RET>
STANDARD CAPTIONED OUTPUT? YES// <RET>  (YES)
DISPLAY COMPUTED FIELDS? NO// <RET>  (NO)

NAME: CULTURE & SUSCEPTIBILITY          *ASK AMIS/CAP CODES: YES
TYPE: BOTH                              SUBSCRIPT: MICROBIOLOGY
UNIQUE COLLECTION SAMPLE: NO            *QUICK INDEX: YES
EDIT CODE: BACTERIOLOGY                 EXTRA LABELS: 1
HIGHEST URGENCY ALLOWED: ASAP           REQUIRED TEST: YES
FORCED URGENCY: ROUTINE
REQUIRED COMMENT: ORDER COMMENT MODIFIED
PRINT NAME: C & S                       PRETTY PRINT ENTRY: EN
PRETTY PRINT ROUTINE: LRMIPC            PRINT ORDER: 400.1
COLLECTION SAMPLE: URINE                FORM NAME/NUMBER: MICRO
MIN VOL (in mls.): 5                    MAX. ORDER FREQ.: 1
REQUIRED COMMENT: ORDER COMMENT MODIFIED
SINGLE DAY MAX ORDER FREQ: 1
COLLECTION SAMPLE: BLOOD                MIN VOL (in mls.): 5
MAX. ORDER FREQ.: 4                     SINGLE DAY MAX ORDER FREQ: 4
COLLECTION SAMPLE: PLEURAL              REQUIRED COMMENT: ORDER COMMENT
COLLECTION SAMPLE: STOOL                REQUIRED COMMENT: ORDER COMMENT
COLLECTION SAMPLE: STOOL                REQUIRED COMMENT: ORDER COMMENT
COLLECTION SAMPLE: SPUTUM               REQUIRED COMMENT: ORDER COMMENT
INSTITUTION: REGION 7                   ACCESSION AREA: MICROBIOLOGY
ACCESSION WKLD CODE: InHouse or Send Out Test~CULTURE/IN HOUSE
ACCESSION WKLD CODE #: 87101.7200
ACCESSION WKLD CODE: Micro Bacteriology Culture~MANUAL MICRO
ACCESSION WKLD CODE #: 87993.7000
OUTPUT FROM WHAT FILE: COLLECTION SAMPLE
Select COLLECTION SAMPLE NAME: URINE          URINE      CUP
ANOTHER ONE: <RET>
STANDARD CAPTIONED OUTPUT? YES// <RET> (YES)
DISPLAY COMPUTED FIELDS? NO// <RET> (NO)

NAME: URINE                             DEFAULT SPECIMEN: URINE  TUBE TOP COLOR:
CUP                  LAB SECTION: URINALYSIS  CAN LAB COLLECT: NO SYNONYM: UA
ACCESSION AREA: MICROBIOLOGY
LAB TEST: CULTURE & SUSCEPTIBILITY
WKLD CODE: SP Specimen~URINE
```

```
OUTPUT FROM WHAT FILE:ETIOLOGY FIELD (4773 entries)
Select ETIOLOGY FIELD NAME: ESCHERICHIA COLI          1571
ANOTHER ONE: <RET>
STANDARD CAPTIONED OUTPUT? YES// <RET> (YES)
DISPLAY COMPUTED FIELDS? NO// <RET> (NO)

NAME: ESCHERICHIA COLI                  SNOMED CODE: 1571
GRAM STAIN: GRAM NEGATIVE
SUSCEPTIBILITY EDIT TEMPLATE: LR GRAM NEG & URINARY
IDENTIFIER: BACTERIUM                 ABBREVIATION: EC
*SENSITIVITY DISPLAY TEMPLATE: GNR
SYNONYM: E.COLI                     SYNONYM: E.C.
*BIOCHEMICAL WORKUP: 1010101010
ETIOLOGY WKLD CODE: Etiology~BACTERIAL ID/SUSC COMBO, AUTOMATED, MICROSCAN
ETIOLOGY WKLD CODE #: 87102.7393      MULTIPLY BY: 1
ETIOLOGY WKLD CODE: InHouse or Send Out Test~IDENTIFICATION/IN HOUSE
ETIOLOGY WKLD CODE #: 87101.7300
ETIOLOGY WKLD CODE: InHouse or Send Out Test~SUSCEPTIBILITY/IN HOUSE
ETIOLOGY WKLD CODE #: 87101.7400


OUTPUT FROM WHAT FILE: LOAD/WORK LIST
Select LOAD/WORK LIST NAME:    MICRO-WKLDSH
ANOTHER ONE: <RET>
STANDARD CAPTIONED OUTPUT? YES// <RET> (YES)
DISPLAY COMPUTED FIELDS? NO// <RET> (NO)


NAME: MICRO-WKLDSH                    LOAD TRANSFORM: UNIVERSAL
TYPE: TRAY,CUP                        CUPS PER TRAY: 0
FULL TRAY'S ONLY: NO                  VERIFY BY: ACCESSION
PROFILE: STANDARD                     ACCESSION AREA: MICROBIOLOGY
TEST: CULTURE & SUSCEPTIBILITY        BUILD NAME ONLY: NO
TEST: ANAROBIC CULTURE                BUILD NAME ONLY: NO
TEST: NEISSERIA CULTURE               BUILD NAME ONLY: NO
TEST: LEGIONELLA CULTURE              BUILD NAME ONLY: NO
WKLD CODE METHOD NAME: MANUAL MICRO
WKLD CODE SUFFIX: .7000               MAJOR ACCESSION AREA: MICROBIOLOGY
LAB SUBSECTION: MICROBIOLOGY          WORK AREA: W-MICRO
```

Workload data capture:

Two differences will be apparent to the user of the Results Entry [LRMIEDZ] option. The first is the workload area prompt, which has no impact on data collection for Microbiology but is a mandatory prompt in order to proceed. The second is the "(D)isplay (A)dd Work Load" prompt at the end.

Example:

```
Select Microbiology menu Option: RE  Results entry
Select Microbiology Accession: MI 16
MICRO  MICROBIOLOGY
MICROBIOLOGY  (1994)  16
Work Load Area: MICRO-WKLDSH
Select TEST/PROCEDURE: CULT  CULTURE & SUSCEPTIBILITY
     BOGG,IMA   SSN: 303-00-0034P  LOC: GYN
          OK? YES// <RET> (YES)
CULTURE & SUSCEPTIBILITY completed: <RET>
COLLECTION SAMPLE: URINE// <RET>
SITE/SPECIMEN: URINE// <RET>
COMMENT ON SPECIMEN: <RET>
BACT RPT STATUS: P  PRELIMINARY REPORT
URINE SCREEN: <RET>
Select ORGANISM: EC  ESCHERICHIA COLI        1571
   ORGANISM ISOLATE NUMBER: 1// <RET>
ORGANISM: ESCHERICHIA COLI// <RET>
QUANTITY: 6U  (>100,000 CFU/ML)
Select COMMENT: STF  (SUSCEPTIBILITIES TO FOLLOW)
Select COMMENT: <RET>
COLISTIN: ^
Any other antibiotics? NO// <RET> (NO)
  1  ESCHERICHIA COLI
Select ORGANISM: <RET>
Select BACT RPT REMARK: <RET>
BACT RPT DATE APPROVED: N  (JUL 06, 1994)
CULTURE & SUSCEPTIBILITY completed:  <RET>

          (D)isplay (A)dd Work Load D
```

NOTES:

- Some codes are captured at time of accessioning (User = Postmaster).
- Specimen source codes are used by LMIP for focus studies based on particular collection samples.

```
CULTURE & SUSCEPTIBILITY

WKLD CODE: +SP Specimen~URINE
TEST MULTIPLY FACTOR: 1                WKLD CODE COUNTED: YES
WKLD CODE TALLY: 1                     COMPLETION TIME: JUL  6, 1994@14:52:38
USER: POSTMASTER                       INSTITUTION: REGION 7
MAJOR SECTION: MICROBIOLOGY            LAB SUBSECTION: MICROBIOLOGY
WKLD CODE: InHouse or Send Out Test~CULTURE/IN HOUSE
TEST MULTIPLY FACTOR: 1                WKLD CODE COUNTED: YES
WKLD CODE TALLY: 1                     COMPLETION TIME: JUL  6, 1994@14:52:38
USER: POSTMASTER                       INSTITUTION: REGION 7
MAJOR SECTION: MICROBIOLOGY            LAB SUBSECTION: MICROBIOLOGY

WKLD CODE: InHouse or Send Out Test~IDENTIFICATION/IN HOUSE
```

```
TEST MULTIPLY FACTOR: 1                WKLD CODE COUNTED: YES
WKLD CODE TALLY: 1                     COMPLETION TIME: JUL  6, 1994@14:52:38
USER: EMBREE, SUE                      INSTITUTION: REGION 7
MAJOR SECTION: MICROBIOLOGY            LAB SUBSECTION: MICROBIOLOGY

WKLD CODE: InHouse or Send Out Test~SUSCEPTIBILITY/IN HOUSE
TEST MULTIPLY FACTOR: 1                WKLD CODE COUNTED: YES
WKLD CODE TALLY: 1                     COMPLETION TIME: JUL  6, 1994@14:52:38
USER: EMBREE, SUE                      INSTITUTION: REGION 7
MAJOR SECTION: MICROBIOLOGY            LAB SUBSECTION: MICROBIOLOGY
```

NOTE: LMIP is concerned with what portion of testing is done inhouse versus sentout to reference laboratories. For microbiology, the scheme was developed that broke a test into component parts, such as culture, identification or susceptibility, and flags each component as being done inhouse or sendout.

```
WKLD CODE: +Micro Bacteriology Culture~MANUAL MICRO
TEST MULTIPLY FACTOR: 1                WKLD CODE COUNTED: YES
WKLD CODE TALLY: 1                     COMPLETION TIME: JUL  6, 1994@14:52:38
USER: POSTMASTER                       INSTITUTION: REGION 7
MAJOR SECTION: MICROBIOLOGY            LAB SUBSECTION: MICROBIOLOGY
```

NOTE: This above code represents the center of the LMIP method (the billable designation for the test). Support tests such as gram stains are not billable and are not counted in the LMIP. The "+" designates the billable code.

```
WKLD CODE: Etiology~BACTERIAL ID/SUSC COMBO, AUTOMATED, MICROSCAN
TEST MULTIPLY FACTOR: 1                WKLD CODE COUNTED: YES
WKLD CODE TALLY: 1                     COMPLETION TIME: JUL  6, 1994@15:04:10
USER: HEMBREE,SUSAN                    INSTITUTION: REGION 7
MAJOR SECTION: MICROBIOLOGY            LAB SUBSECTION: MICROBIOLOGY
WORK AREA: W-MICRO
```

NOTE: Etiology codes are used internally only by the lab as workload recording information only, not as part of LMIP. These codes are captured when an organism (etiology) is entered.

Editing Workload

Example:

```
          (D)isplay (A)dd Work Load A
Which Test CULT  CULTURE & SUSCEPTIBILITY
Which Test <RET>

          Additional Work load for CULTURE & SUSCEPTIBILITY

Select EXECUTE WKLD CODE: ?
 ANSWER WITH EXECUTE WKLD CODE NUMBER
CHOOSE FROM:
   100017          Etiology~BACTERIAL IDENTIFICATION, RAPID/PRESUMPTIVE
87102.7361
   100106          Etiology~BACTERIAL ID/SUSC COMBO, AUTOMATED, MICROSCAN
87102.7393
   100107          Etiology~BACTERIAL IDENTIFICATION, MANUAL, CONVENTIONAL
 87102.7362
   100108          Etiology~BACTERIAL IDENTIFICATION, MANUAL, ID SYSTEM
87102.7363
   100109          Etiology~BACTERIAL SUSCEPTIBILITY, KIRBY-BAUER
87102.7382
   100110          Etiology~BACTERIAL SUSCEPTIBILITY, RAPID       87102.7380
   100111          Etiology~BACTERIAL SUSCEPTIBILITY, AUTOMATED, MICROSCAN
87102.7385

Select EXECUTE WKLD CODE: 100108  Etiology~BACTERIAL IDENTIFICATION, MANUAL,
ID SYSTEM         87102.7363
          MULTIPLY BY 1 // <RET>
Select EXECUTE WKLD CODE: 100106  Etiology~BACTERIAL ID/SUSC COMBO, AUTOMATED,
MICROSCAN         87102.7393
          MULTIPLY BY 1 // -1
Select EXECUTE WKLD CODE:

          (D)isplay (A)dd Work Load <RET>
```

NOTE: Editing (adding or deleting) workload is driven by the test's execute code and the entries in its Execute WKLD code field. A multiply factor of "-1" is used to delete a code and exclude it from tallying

The Review Accession Workload [LR WKLD AUDIT] option, when viewed for the ACCESSION file (#68), will display all codes collected on an accession number. In addition, the verified data from ^LR(can also be displayed. This provides a convenient way for the LIM or Microbiology Supervisor to verify that the correct coding was captured by the system for the organism(s) reported.

```
Example: Select Microbiology menu Option:  Review accession workload

               Which File (68 or 64.1 ) 68
     Would like to view verified data from ^LR( also ? NO// <RET>  (NO)

Select ACCESSION AREA: MICRO  MICROBIOLOGY

Select MICROBIOLOGY Date: 1994// <RET>  1994
Enter Accession #(s) :16
Enter Accession #(s) : <RET>
DEVICE: HOME//  (Enter your printer's name) <RET>
LOG: 16                                 LRDFN: 135

  FILE #: PATIENT                       ORIGINAL ACCN DATE: 1994
  DATE ORDERED: JUL  6, 1994            SPECIMEN NUMBER: 10
  REPORT ROUTING LOCATION: GYN          PROVIDER: WELBY,HARRY
  TREATING SPECIALITY: OBSTETRICS/GYNECOLOGY
  LOG-IN PERSON: HEMBREE,SUSAN          LOCATION TYPE: WARD
  ORDERING LOCATION: GYN
 TEST: CULTURE & SUSCEPTIBILITY         URGENCY OF TEST: ROUTINE
  WKLD SUFFIX: 7000
WKLD CODE: +SP Specimen~URINE           TEST MULTIPLY FACTOR: 1
  WKLD CODE COUNTED: YES                WKLD CODE TALLY: 1
  COMPLETION TIME: JUL  6, 1994@14:52:38
  USER: POSTMASTER                      INSTITUTION: REGION 7
  MAJOR SECTION: MICROBIOLOGY           LAB SUBSECTION: MICROBIOLOGY
WKLD CODE: InHouse or Send Out Test~CULTURE/IN HOUSE
  TEST MULTIPLY FACTOR: 1               WKLD CODE COUNTED: YES
  WKLD CODE TALLY: 1                    COMPLETION TIME: JUL  6, 1994@14:52:38
  USER: POSTMASTER                      INSTITUTION: REGION 7
  MAJOR SECTION: MICROBIOLOGY           LAB SUBSECTION: MICROBIOLOGY
WKLD CODE: InHouse or Send Out Test~IDENTIFICATION/IN HOUSE
  TEST MULTIPLY FACTOR: 1               WKLD CODE COUNTED: YES
  WKLD CODE TALLY: 1                    COMPLETION TIME: JUL  6, 1994@14:52:38
  USER: POSTMASTER                      INSTITUTION: REGION 7
  MAJOR SECTION: MICROBIOLOGY           LAB SUBSECTION: MICROBIOLOGY
WKLD CODE: InHouse or Send Out Test~SUSCEPTIBILITY/IN HOUSE
  TEST MULTIPLY FACTOR: 1               WKLD CODE COUNTED: YES
  WKLD CODE TALLY: 1                    COMPLETION TIME: JUL  6, 1994@14:52:38
  USER: POSTMASTER                      INSTITUTION: REGION 7
  MAJOR SECTION: MICROBIOLOGY           LAB SUBSECTION: MICROBIOLOGY
WKLD CODE: +Micro Bacteriology Culture~MANUAL MICRO
  TEST MULTIPLY FACTOR: 1               WKLD CODE COUNTED: YES
  WKLD CODE TALLY: 1                    COMPLETION TIME: JUL  6, 1994@14:52:38
  USER: POSTMASTER                      INSTITUTION: REGION 7
  MAJOR SECTION: MICROBIOLOGY           LAB SUBSECTION: MICROBIOLOGY
WKLD CODE: Etiology~BACTERIAL ID/SUSC COMBO, AUTOMATED, MICROSCAN
  TEST MULTIPLY FACTOR: 0               WKLD CODE COUNTED: YES
  WKLD CODE TALLY: 0                    COMPLETION TIME: JUL  6, 1994@14:53:31
  USER: HEMBREE,SUSAN                   INSTITUTION: REGION 7
  MAJOR SECTION: MICROBIOLOGY           LAB SUBSECTION: MICROBIOLOGY
 WKLD CODE: Etiology~BACTERIAL IDENTIFICATION, MANUAL
  TEST MULTIPLY FACTOR: 1               WKLD CODE COUNTED: YES
  WKLD CODE TALLY: 1                    COMPLETION TIME: JUL  6, 1994@14:54:67
  USER: HEMBREE,SUSAN                   INSTITUTION: REGION 7
  MAJOR SECTION: MICROBIOLOGY           LAB SUBSECTION: MICROBIOLOGY
WORK AREA: W-MICRO
```

Etiology WKLD Codes (Force) [LRCAPF] option

The user can, by using FileMan sorts, identify groups of entries in a file which require WKLD Codes to be added. Once a sort template has been created, the user can use this template, multiple times if necessary, to allow automated stuffing of WKLD codes by a utility program.

The first step is to create the sort template.

Example: VA FileMan 20.0

```
Select OPTION: ?
 ANSWER WITH OPTION NUMBER, OR NAME
CHOOSE FROM:
   1               ENTER OR EDIT FILE ENTRIES
   2               PRINT FILE ENTRIES
   3               SEARCH FILE ENTRIES
   4               MODIFY FILE ATTRIBUTES
   5               INQUIRE TO FILE ENTRIES
   6               UTILITY FUNCTIONS
   7               OTHER OPTIONS
   8               DATA DICTIONARY UTILITIES
   9               TRANSFER ENTRIES

Select OPTION: SEARCH FILE ENTRIES

OUTPUT FROM WHAT FILE: LABORATORY TEST// 61.2  ETIOLOGY FIELD
                                          (4773 entries)

  -A- SEARCH FOR ETIOLOGY FIELD FIELD: suscEPTIBILITY EDIT TEMPLATE
  -A- CONDITION: [  CONTAINS
  -A- CONTAINS: LR GRAM NEG & URINARY

  -B- SEARCH FOR ETIOLOGY FIELD FIELD: <RET>

IF: A//  <RET>  SUSCEPTIBILITY EDIT TEMPLATE CONTAINS "LR GRAM NEG & URINARY"

STORE RESULTS OF SEARCH IN TEMPLATE: TEST TEMPLATE
  ARE YOU ADDING 'TEST TEMPLATE' AS A NEW SORT TEMPLATE? Y  (YES)

SORT BY: NAME//  <RET>
START WITH NAME: FIRST//  <RET>
FIRST PRINT FIELD: .01  NAME
THEN PRINT FIELD:  <RET>
HEADING: ETIOLOGY FIELD SEARCH  Replace  <RET>
DEVICE:   (Enter your printer's name) <RET>
```

```
ETIOLOGY FIELD SEARCH                          JUL 24,1994  12:09    PAGE 1
NAME
--------------------------------------------------------------------------------

A LWOFFI
ACHROMOBACTER SP
ALCALIGENES SPP
ARIZONA HINSHAWII
CITROBACTER SP
EDWARDSIELLA SP
EDWARDSIELLA TARDA
ENTEROBACTER GERGOVIAE
ENTEROBACTER SAKAZAKII
ENTEROBACTER SP
ESCHERICHIA COLI
FLUORESCENT PSEUDOMONAS GROUP
KLEBSIELLA PNEUMONIAE
KLEBSIELLA SP
MORAXELLA ATLANTAE
MORAXELLA LACUNATA
MORAXELLA NONLIQUEFACIENS
MORAXELLA OSLOENSIS
MORAXELLA PHENYLPYRUVICA
MORAXELLA SPP
MORAXELLA URETHRALIS
MORGANELLA MORGANII
PLESIOMONAS SHIGELLOIDES
PROTEUS SP
PROVIDENCIA SP
PS PUTREFACIENS
PSEUDOMONAS ALCALIGENES
PSEUDOMONAS DIMINUTA
PSEUDOMONAS MALTOPHILIA
PSEUDOMONAS PAUCIMOBILIS
PSEUDOMONAS PSEUDOALCALIGENES
PSEUDOMONAS SP
PSEUDOMONAS STUTZERI
SALMONELLA CHOLERASUIS
SALMONELLA ENTERITIDIS
SALMONELLA PARATYPHI A
SALMONELLA SP
SERRATIA SP
SHIGELLA BOYDII
SHIGELLA DYSENTERIAE
SHIGELLA FLEXNERI
SHIGELLA SONNEI
SHIGELLA SP
YERSINIA ENTEROCOLITICA
YERSINIA SP
```

NOTES:
• Any field in the ETIOLOGY FIELD file (#61.2) can be used as the basis of the search. The Susceptibility Edit Template field (#8) is very useful for bacteria, since often a group of organisms which share the same reportable antimicrobials also share the same workload coding. The Identifier field (#4) and the Gram Stain field (#3) can be used as well as the Class/Group -Tribe/Family field (#1.6), which, as mentioned earlier in this manual, can be used as a sorting group field for this file.

• It is imperative that the search parameter be setup and the search actually be run, placing the entries into the sort template, or the "Stuffer" routine will not work.

Now the user has created a sort template which contains a list of entries from the file which matched the search criteria. The result of the search function by FileMan, are the candidates which the user wishes to have WKLD Codes automatically inserted by the Etiology WKLD Codes (Force) [LRCAPF] option.

After selecting the option, the user will be prompted for a sort template name. Next the user will be prompted for WKLD code(s) to be inserted. This selection is not stored and must be entered each time the option is used.

Before the actual updating of the files occurs, the user will be shown for review the WKLD code(s) which will be inserted. After confirming the code(s), the option will begin adding the code to the file. If the user discovers an error, the process can be aborted by pressing the RETURN key.

Example:

```
Select LIM workload menu Option: etiology WKLD Codes (Force)
     You must have already defined and ran a search template for the
ETIOLOGY FIELD (#61.2). This option will use the results of that search
and automatically stuff WKLD Codes for those organisms. If you wish to edit
a single organism, use FileMan enter/edit option.

          This option will automatically add WKLD codes to your
                         ETIOLOGY FILE (#61.2).

Select Sort Template TEST TEMPLATE  (JUL 24, 1994@12:09) USER #1207 FILE #61.2

          Select WKLD Code(s) to be added
Enter WKLD Code : 87101.7300   InHouse or Send Out Test~IDENTIFICATION/IN
HOUSE        87101.7300
Enter WKLD Code : 87101.7400   InHouse or Send Out Test~SUSCEPTIBILITY/IN
HOUSE        87101.7400
Enter WKLD Code : 87102.7393  Etiology~BACTERIAL ID/SUSC COMBO, AUTOMATED,
MICROSCAN        87102.7393
Enter WKLD Code : <RET>
```

```
          You have selected
1    87101.7300     InHouse or Send Out Test~IDENTIFICATION/IN HOUSE
2    87101.7400     InHouse or Send Out Test~SUSCEPTIBILITY/IN HOUSE
3    87102.7393     Etiology~BACTERIAL ID/SUSC COMBO, AUTOMATED, MICROSCAN
          Wish to delete any selection(s) ? NO// <RET>  (NO)
Shall I purge already existing Wkld Codes ? NO// <RET>  (NO)

          Multiply Factor: 1 // <RET>

     Ready to have the WKLD Codes Added to the Etiology File ? NO// Y  (YES)

PRESS RETURN TO STOP PROCESS

Adding WKLD Codes to : ESCHERICHIA COLI
Adding WKLD Codes to : SHIGELLA DYSENTERIAE
Adding WKLD Codes to : SHIGELLA FLEXNERI
Adding WKLD Codes to : SHIGELLA BOYDII
Adding WKLD Codes to : SHIGELLA SONNEI
Adding WKLD Codes to : EDWARDSIELLA TARDA
Adding WKLD Codes to : SALMONELLA SP
Adding WKLD Codes to : SALMONELLA CHOLERASUIS
Adding WKLD Codes to : SALMONELLA PARATYPHI A
Adding WKLD Codes to : ARIZONA HINSHAWII
Adding WKLD Codes to : KLEBSIELLA PNEUMONIAE
Adding WKLD Codes to : ENTEROBACTER GERGOVIAE
Adding WKLD Codes to : ENTEROBACTER SAKAZAKII
Adding WKLD Codes to : MORGANELLA MORGANII
Adding WKLD Codes to : YERSINIA ENTEROCOLITICA
Adding WKLD Codes to : PSEUDOMONAS MALTOPHILIA
Adding WKLD Codes to : PS PUTREFACIENS
Adding WKLD Codes to : PSEUDOMONAS STUTZERI
Adding WKLD Codes to : PSEUDOMONAS PAUCIMOBILIS
Adding WKLD Codes to : PSEUDOMONAS SP
Adding WKLD Codes to : A LWOFFI
Adding WKLD Codes to : ALCALIGENES SPP
Adding WKLD Codes to : MORAXELLA SPP
Adding WKLD Codes to : PLESIOMONAS SHIGELLOIDES
Adding WKLD Codes to : ACHROMOBACTER SP...
Adding WKLD Codes to : PSEUDOMONAS ALCALIGENES...
Adding WKLD Codes to : PSEUDOMONAS DIMINUTA...
Adding WKLD Codes to : MORAXELLA OSLOENSIS...
Adding WKLD Codes to : MORAXELLA PHENYLPYRUVICA...
Adding WKLD Codes to : MORAXELLA LACUNATA...
Adding WKLD Codes to : MORAXELLA ATLANTAE...
Adding WKLD Codes to : SALMONELLA ENTERITIDIS...
Adding WKLD Codes to : MORAXELLA URETHRALIS...
Adding WKLD Codes to : FLUORESCENT PSEUDOMONAS GROUP...
Adding WKLD Codes to : MORAXELLA NONLIQUEFACIENS.
Adding WKLD Codes to : PSEUDOMONAS PSEUDOALCALIGENES...
Adding WKLD Codes to : CITROBACTER SP...
Adding WKLD Codes to : EDWARDSIELLA SP...
Adding WKLD Codes to : ENTEROBACTER SP...
Adding WKLD Codes to : KLEBSIELLA SP...
Adding WKLD Codes to : PROTEUS SP...
Adding WKLD Codes to : PROVIDENCIA SP...
Adding WKLD Codes to : SHIGELLA SP...
Adding WKLD Codes to : SERRATIA SP...
Adding WKLD Codes to : YERSINIA SP...
```

MultiDivisions Implementation

By Lynn Martinez
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The Multidivision functionality was designed to accommodate institutions comprised of more than 1 division (e.g., Tampa, FL and Orlando OPC). However, as noted in the following discussion, the concept of multidivisions can include a variety of site specific situations. Throughout this discussion the terms "institution" and "division" appear to be used somewhat interchangeably. Which, in itself, can often result in confusion. Whenever possible, nomenclature will specifically reflect the field names as they appear in the file of reference.

First, take a look at what can be accomplished with this functionality. Basically, this functionality is designed to provide a means of accepting, storing, and reporting lab test information from multiple divisions or satellites of the same institution, providing continuity in areas where similarities exist and distinction in areas of diversity. In reality, a glucose is a glucose, irrespective of where it is performed. Therefore, if methodologies, reference ranges, etc. are identical, it would appear logical to the user that test ordering, results look-up, and test reporting reflect these consistencies.

It should not be incumbent upon the user to decide whether he wants a GLUCOSE or an OP GLUCOSE. Nor should it be necessary for the clinician to search among various major and/or minor headers in the Cumulative Report for a particular type of glucose result. At some point in time, the patient previously treated in a given division may later be admitted or treated in an alternate division of the same institution (e.g., an outpatient treated in the clinic may later be admitted to the hospital, etc.,) Clearly, consolidated results lookup and reporting is optimal in efficiently providing the necessary information to the physician. This can be accomplished effectively through the use of the Multidivision functionality. Entries for identical tests in LAB DATA files (#63), LABORATORY TEST file (#60), and LAB REPORTS file (#64.5) are not duplicated. Rather, they are differentiated based on division, and ultimately, accession area. Accession areas are automatically assigned at the time of accessioning, based on institution/division.

Many sites have adopted this enhancement to accommodate not only separate divisions, but also satellite or "STAT" labs. Sites consisting of only a single lab may have little or no use for this functionality. To that end, we have presented the section on multidivisions separately, with the basic assumption that the Lab package is at least partly functional at one "division" or laboratory at the institution, and also, that the site is currently using Version 7.0 (or greater) of Kernel. The discussion on files is purposely brief, with primary focus on the fields that require editing.

Preliminary Preparation

First, assemble a team of working experts within your institution to assist in this task. The Lab Information Manager (LIM) or Clinical Coordinator could serve as the team captain or leader. Members of the team should include representatives from MAS, Nursing Service, IRM office, and if possible a physician knowledgeable with the area to be computerized.

Both divisions should be represented in the preliminary stages. Later, a more streamlined working group will be more practical. It is essential that the team meet regularly, both before and after implementation.

Initially, emphasis should be placed on gathering information. Work together to prepare a flow chart accurately depicting the current manual process. Examine this flow chart carefully, with special attention to bottle neck or problem areas. A copy of the actual blueprint or floor plan of the area is often helpful. Decide how automation could be ultimately used to enhance this flow.

Second, make a realistic evaluation of available options and resources. Work with management to arrive at answers to the following questions:

How will requests for lab tests be entered into the computer system? Will there be Ward Order Entry or will the lab assume the responsibility for entering the test results?

What type of order slips or request forms will be used?

Will orders be entered for future appointments (the software can accommodate up to six months in advance for Ward Collect and Send Patient requests), as well as current appointments?

How will the specimens and/or the patients get to the lab?

Are any specimens shared between the various labs within the institution?

How and where will accessioning take place?

What are the hours of operation of each of the labs within the institution?

How will results be made available to the physicians?

Will the area use Interims, Cumulatives, or both? How will the reports be made available to appropriate personnel for charting?

Third, meet with the section supervisor of the lab to be computerized. Determine what tests are performed, sent out, or shared with other labs. Obtain a copy of the procedure manual and read it over carefully. Determine which tests or procedures, if any, are identical to those set up in the existing division. Decide where differences exist, compiling a list of additional test names to be added to LAB DATA files (#63), LABORATORY TEST file (#60), and LAB REPORTS file (#64.5). Decide on accession areas, load/work lists, and instruments to be interfaced.

Work closely with personnel involved in the ordering process to determine groups of frequently ordered tests. If possible, develop ACCESSION TEST GROUPS to specifically satisfy their ordering needs. Ordering or requisition sheets, if used, may be designed to display the tests exactly as they appear in the ACCESSION TEST GROUP file (#62.6).

Remember to give special consideration to suggestions and/or preferences provided by personnel working in the area. Often criteria used effectively in a given division can result in chaos when implemented in an area with totally different needs. As with implementation of any new procedure, employees will more readily accept and adapt if they feel that they have had an integral part in the decision making. At this point, it may be helpful to provide a tour of the computerized division, so that the software and workflow can be observed in operation.

Fourth, examine closely your hardware resources. What will be readily available in terms of CRTs and printers? Use your flow chart to strategically locate each piece of equipment for maximum use. Plan several mock walk throughs, exploring every possible avenue for practical improvement. Improvise, if necessary. Arrive at a realistic target date for implementation. Initiate requests for hardware installation well in advance of this date.

Last, but certainly not least, develop a training plan. Work with other members of the task force to devise a systematic approach to accomplish this monumental task.

With all the preliminary groundwork complete, we now move on to the files. Because of the additional involvement of files not normally considered under the domain of Lab, it is suggested that the LIM work closely with both MAS and IRM to accomplish the necessary editing. Our discussion will focus primarily on the fields directly involved in support of the Multidivision functionality.

Setting Up The Files

File #4 (INSTITUTION)

This file arrives preloaded with entries for all officially defined institutions in the VA system. Entries are identified by Name and Station Number. Information in the file includes pertinent demographic data such as street address, city, state, district, region, etc., describing the facility. Should it be necessary to create additional entries in File #4, the established station numbering protocol should be used. Enter the appropriate site information into the fields. Answer "YES" to the field Multidivision Facility.

File #40.8 (MEDICAL CENTER DIVISION)

Entries in this file represent the actual divisions as established at your facility. Entries are identified by Facility Number. There are many fields within this file, most of which are used exclusively by ADT. The pertinent fields include:

.01 Name
1 Facility Number - (a whole number between 0 and 999999)
3 Outpatient Only - (enter 1 if this division does not have any wards)

Entries in the field Facility Number should reflect an established numbering protocol, using the three-digit station number multiplied by 1000, then incrementing by 1.

Example: XXX001 (where xxx represents the station number.)

NOTE: For workload purposes, the WKLD codes in the LABORATORY TEST file (#60) are counted when they are used. The Accession WKLD Codes (field #500.1) are assigned according to the accessioner's division even if the work is done elsewhere. The Verify WKLD Codes (field #500) are assigned to the verifier's division.

File #44 (HOSPITAL LOCATION)

The HOSPITAL LOCATION file consists of entries for all locations (wards, clinics, etc.) and divisions at the given facility. Fields of specific interest include:

.01 Name
3 Institution (points to the INSTITUTION file)
3.5 Division (points to the Medical Center DIVISION file)

It is of utmost importance that each entry in this file is properly assigned to both Institution and Division to ensure accurate accessioning.

File #42 (WARD LOCATION)

This file contains all the facility ward locations and their related data. The field of specific interest is:

.015 Division (points to the Medical Center DIVISION file)

Enter the name of the Division that this ward is in, if you are a multi-facility hospital.

NOTE: The division entered for a given ward in the WARD LOCATION file (#42) must be identical to the division entered for the corresponding ward entry in HOSPITAL LOCATION file (#44).

Obtain printouts of HOSPITAL LOCATION file (#44) and WARD LOCATION file (#42). Work together with MAS for appropriate field editing. This is critical for the Collection List. Often clinics or outpatient locations are defined in File #44 as physician-specific; e.g., DENTAL-DEMODOCl, DENTAL-DEMODOC2. This type of setup can result in chaos for test ordering, Interim Reporting, etc. Instead, consider a type of "parent" for each clinic in File #44; e.g., DENTAL*. These "parent" clinics, then, will aid in standardizing locations for test requests and results reporting.

File #200 (NEW PERSON)

This file contains pertinent information regarding access authority and other characteristics of all the authorized users of the computer system at your institution(s). The field of particular interest is:

16 Division (points to the INSTITUTION file (#4))

The term division is somewhat confusing at this point, as the pointed to file is actually the INSTITUTION file (#4).

This field is a multiple, allowing the user to be associated with more than one division (institution). If assigned to multiple divisions, the user will be prompted with:

```
Select Division:
```

each time that he/she logs on to the computer system.

Users assigned to a single division will not be prompted at sign on, but will always be associated with the single division (institution) as assigned in the NEW PERSON file (#200).

Careful consideration should be given in assignment of users to divisions. Determine specifically whether a given user performs solely in a given division or if the user rotates among more than one division. For the laboratory, this applies specifically to those persons involved in the accessioning process.

Lab personnel assigned to multiple divisions in the NEW PERSON file (#200) have the additional capability of selectively accessioning, based on the division selected at sign on. This concept will be further expanded in the discussion on accessioning.

Ensure that all current users are appropriately assigned to division (institution) in the NEW PERSON file (#200). Update if necessary. In a Multidivision facility, a user without a designation of division (institution) in File #200 will be prompted with:

```
Select INSTITUTION:
```

each time that he/she logs in to the system. Note that this is different from the "Select Division" prompt that is displayed whenever a user assigned to multiple divisions logs in to the system.

File #68 (ACCESSION)

This file is a dictionary of the various accession areas within the lab(s) at your facility. It is the third of five "Day One Files." Accession areas for the new institution MUST be added to this file before association of the tests in LABORATORY TEST file (#60) to institution and accession area. Refer to the section on files for further description and field definition.

When deciding upon name(s) for accession area(s) in the newly added institution(s), it is often advantageous to use a prefix plus the name of the parallel accession area in the main institution.

Example: If a second institution is typically an outpatient or clinic facility, then the name(s) of accession area(s) could possibly be prefixed with "OP" for Outpatient or "AC" for Ambulatory Care.

Hence, entries in File #68 could be:

```
OP-CHEMISTRY
OP-HEMATOLOGY
OP-URINALYSIS
```

An abbreviation of the name of the institution (e.g., ORL for ORLANDO OPC) could also serve appropriately as a prefix:

```
ORL-CHEMISTRY
ORL-HEMATOLOGY
ORL-URINALYSIS
```

This system of nomenclature has several advantages:

- Provides a form of continuity and parallels customary nomenclature for personnel in each of the lab(s).
- Simplifies file look-up by grouping together all the accession areas with the same prefix.
- Facilitates ease in pinpointing and resolving problems resulting from ordering/accessioning.

File #60 (LABORATORY TEST)

This file contains site specific information related to each laboratory test, both atomic and cosmic. It is the one file that needs no introduction to the Lab Applications Coordinator. Fields of particular involvement include:

#6 Accession Area (multiple)
#.01 Institution (points to the INSTITUTION file (#4))
#1 Accession Area (points to the ACCESSION file (#67))

Before you begin, it is important to remember that a given test assigned to multiple institutions must share identical methodologies, reference ranges, delta checks, etc. per site/specimen in each of the institutions. Likewise, entries in the fields, Type, Subscript, Highest Urgency, Unique Accession Number Required Test, Lab Collection Sample, Collection Sample, etc., will also be applicable to the given test in each of the institutions.

Obtain a FileMan printout of existing entries in File #60, sorting by accession area Compare existing entries with tests to be incorporated from the newly added institution. Decide which tests, if any, are identical in both institutions. These tests will only require editing of the fields, Institution and Accession Area. Alternately, decide which tests are comprised of distinct characteristics that will necessitate unique entries in File #60. For example, a given test performed in two institutions with distinctly different sets of reference ranges based on methodology would require an additional entry in File #60, as well as Files #63, #64.5, etc. It is often helpful to use a prefix when defining tests for an alternate division (e.g., OP-PT to indicate that the test is unique to the outpatient area).

In implementing the Multidivision functionality, careful consideration should be given to entries in the fields, Institution And Accession Area:

1. If a test is performed in separate accession areas based on institution, there must be an entry for each institution and accession area.

Example: Let us assume that a given test like GLUCOSE is performed at two institutions with the same methodology, set of reference ranges, etc. Let's further assume that GLUCOSE is performed in the CHEMISTRY accession area at one institution (TAMPA,FL) and in the OP-CHEMISTRY accession area at an alternate institution (ORLANDO OPC). Entries in File #60 for the test GLUCOSE should be:

Institution: TAMPA,FL
Accession Area: CHEMISTRY
Institution: ORLANDO OPC
Accession Area: OP-CHEMISTRY

2. Another scenario is the situation in which the given test is performed in the same accession area, regardless of the institution. Then the same accession area must be associated with each appropriate institution.

Example: Entries in File #60 for the test (THEOPHYLLINE in this example) should be:

Institution: TAMPA,FL
Accession Area: TOXICOLOGY
Institution: ORLANDO OPC
Accession Area: TOXICOLOGY

With this particular set-up, the test, THEOPHYLLINE, would always be automatically assigned to the TOXICOLOGY accession area irregardless of:

a. whether the user who is accessioning has designated/been assigned to institution TAMPA, FL or ORLANDO OPC

b. location of the patient and corresponding association of this location with institution (TAMPA,FL or ORLANDO OPC) in HOSPITAL LOCATION file (#44).

3. A third possibility can be effectively employed with panel (cosmic) tests. Often the constituent test(s) within a panel can be creatively directed to the desired load/work list and/or automated instrument by assignment to separate accession areas. The fields, Institution and Accession Area are appropriately defined in File #60 for all the component tests. The Accession Area field, is purposely left blank for the panel test. (An entry in the field, Institution, for the panel test is optional, but recommended for continuity.) At the time of accessioning, the institution will be determined. The panel test will split into its component parts. Subsequently, each component test will be assigned to the accession area associated with the given institution in File #60.

Example: For the purpose of illustration, consider the panel test, CPK ISOENZYME PROFILE, with two component parts:

1. CPK
2. CPK ISOENZYMES

This profile is performed at two institutions. However, it is handled differently in each. At the institution, TAMPA,FL, the profile is split into two different accession areas - CHEMISTRY for the test, CPK, and SPECIAL CHEMISTRY for the test, CPK ISOENZYMES. At the institution, ORLANDO OPC, the profile is handled in a single accession area - OP-CHEMISTRY.

Entries in for the test, CPK ISOENZYME PROFILE, should be:

Institution:	TAMPA,FL
Accession Area:	(purposely left blank)
Institution:	ORLANDO OPC
Accession Area:	OP-CHEMISTRY

Entries for the test, CPK, should be:

Institution:	TAMPA,FL
Accession Area:	CHEMISTRY
Institution:	ORLANDO OPC
Accession Area:	OP-CHEMISTRY

Entries for the test, CPK ISOENZYMES, should be:

Institution:	TAMPA,FL
Accession Area:	SPECIAL CHEMISTRY
Institution:	ORLANDO OPC
Accession Area:	OP-CHEMISTRY

The test, CPK ISOENZYME PROFILE, when accessioned at TAMPA,FL will split into two accession areas - CHEMISTRY for the test, CPK and SPECIAL CHEMISTRY for the test, CPK ISOENZYMES. When accessioned at ORLANDO OPC, the profile will not split. It will remain in a single accession area - OP-CHEMISTRY.

For the purpose of this example, entries in the fields, Institution and Accession Area, for the tests, CPK and CPK ISOENZYMES, are optional for the tests done at the ORLANDO OPC. The test, CPK ISOENZYME PROFILE, has been set up to accession properly for ORLANDO OPC. However, if either of the two tests can be ordered alone (TYPE: BOTH or INPUT) at ORLANDO OPC, then the appropriate designation of institution and accession area is necessary.

4. Consider the situation in which a given test, like OP PT, is performed and accessioned in ONLY one institution and accession area. This would be appropriately reflected in File #60:

Example: Institution: ORLANDO OPC
Accession Area: OP-COAG

In effect then, the test OP-PT could only be accessioned automatically from the institution ORLANDO OPC. Accessioning associated with the institution TAMPA, FL. has not been designated.

File #69.9 (LABORATORY SITE)

Answer “YES” to Standard Locations Only field (#530) in the LABORATORY SITE file (#69.9). This will restrict accessioning to entry of standard locations only (locations defined in the HOSPITAL LOCATION file (#44)).

File #64.5 (LAB REPORTS)

Decide whether Cumulatives will be printed for inpatients only, outpatients only, or for all patients. Set this up appropriately in the In/Out Patient field in the LAB REPORTS file (#64.5).

Outpatient locations may be excepted from the File Room print through use of the Separate Report Location field (#6). A separate Cumulative Report printed in alphabetical order will be generated for these locations.

If outpatient reports are to be included in the Cumulative, they can either be printed for the requesting location or they can all be printed for location, FILEROOM. This is accomplished by an entry in the FILEROOM field, in File #64.5.

Additional Files That May Require Updating

In addition to the files described above, it may also be necessary to edit/update other laboratory files as well:

```
#62                COLLECTION SAMPLE
```

```
#62.05          URGENCY
#62.2           LAB SECTION
#62.3           LAB CONTROL NAME
#62.4           AUTO INSTRUMENT
#62.5           LAB DESCRIPTIONS
#62.6           ACCESSION TEST GROUP
#63             LAB DATA
#64.6           INTERIM REPORTS
#68.2           LOAD/WORK LIST
```

Accessioning in a Multidivision Facility

Some basic insight into the accessioning process is probably appropriate at this point. Orders are accessioned either at the time of receipt or at the time that the Collection List is generated. Let us examine each of these methods separately.

Accessioning at the time of specimen order/receipt

Non phlebotomy orders that are accessioned through the use of the options:

- Accessioning tests ordered by ward order entry [LROE]
- Accession order then immediately enter data [LR ACC THEN DATA]
- Accessioning, standard [LRMICROLOGIN]
- Batch accessioning [LRMIBL]
- Bypass normal data entry [LRFAST]
- Manually accession Q.C., Environmental, etc. [LRQCLOG]
- Multipurpose accessioning [LRQUICK]

are assigned to the institution designated/assigned to the user who is accessioning. For a given test, the accession area associated with this institution in File #60 is the one that will be assigned. A panel test without designation of institution and/or accession area will split into its component parts for accessioning. This process is independent of the patient's location or the institution of the user who originally entered the order.

A word of caution- At the time of accessioning a given atomic test, the user will be prompted with

```
TESTNAME does not have an appropriate accession area. ORDER #XXX IS NOT
ACCESSIONED
```

if a determination of institution and/or accession area cannot be made because of any of the following conditions:

1. the user is not appropriately assigned to division (Institution) in the NEW PERSON file (#200)

2. a user assigned to multiple divisions (Institutions) in the NEW PERSON file (#200) fails to select the correct division upon logging in to the system

3. the test is not appropriately associated with institution and/or accession area in File #60.

The atomic test, therefore, will not accession. Additionally, the system restricts entry of results for any other tests (atomic or cosmic) on the order that have the same Collection Sample as that of the used accessioned test. When an attempt is made to enter results, the following message is displayed: You cannot verify an accession which has not been collected.

A panel cosmic test, on the other hand, without a designation of institution and/or accession area in File #60 will split into its component parts until it can assign an accession area to all tests. Accessioning will be based on the institution designated/assigned to the user who is accessioning. If an accession area cannot be determined for a given test within the panel, the user will be warned that the test does not have an appropriate accession area and the test will not accession. The remaining tests within the panel will accession appropriately and allow entry of results.

If, however, all entries in File #60 for institution and accession area are correct, but a determination of institution cannot be made at the time of accessioning a given panel (cosmic) test because of either of the following conditions:

1. the user is not appropriately assigned to division (institution) in the NEW PERSON file (#200)

2. a user assigned to multiple divisions (institutions) in the NEW PERSON file (#200) fails to select the correct division upon logging into the system,

the panel test will not accession or split into its component parts for accessioning. The user be warned that the tests “do not have an appropriate accession area.” The test will not accession.

A word of advice, ensure that all users involved in the accessioning process are assigned to division (institution) in the NEW PERSON file (#200). Further, ascertain that users associated with multiple divisions (institutions) log on to the system properly whenever accessioning. Finally, designate both institution and accession area appropriately for each test in the LABORATORY TEST file (#60).

Accessioning by creation of the phlebotomy collection list

Orders for phlebotomy are accessioned by the building of the Collection List. The Collection List uses the patient's location to determine the institution. If a given location does not have the institution appropriately defined in the HOSPITAL LOCATION file (#44) or the location is non standard (not an entry in File #44), then accessioning is based on the division (institution) designated/assigned to the user building the List.

Methods of generating the List include:

1. Tasked by the option, LRTASK PHSET

2. Manual, by the option, LRPHMAN

For a given test, the accession area associated with the institution in File #60 will be automatically assigned. A panel test without designation of institution and/or accession area will split into its component parts for accessioning.

Tasked by the option, LRTASK PHSET

If the Collection List is queued to be generated automatically by the option, LRTASK PHSET, the institution and corresponding accessioning is determined on the basis of patient location. The institution associated with the given location in the HOSPITAL LOCATION file (#44), then the division (institution) designated/ assigned to the user who set up the option to be tasked is used. If the option is tasked by a user without a designation of division (institution) in the NEW PERSON file (#200) then the user's division is assumed to be the site that VA FileMan was initialized to ^DD("SITE",l).

Perhaps a chart will help to elucidate. Assume the following file entries:

a. File #4 INSTITUTION

   Site A
   Institution: TAMPA,FL
   Station Number: 673

   Site B
   Institution: ORLANDO OPC
   Station Number: 673.1

b. File #44 HOSPITAL LOCATION

Location X
Institution: TAMPA,FL

Location Y
Institution: ORLANDO OPC

c. File #200 NEW PERSON

User 1
Division: TAMPA,FL

User 2
Division: ORLANDO OPC

d. File #60 LABORATORY TEST

Test: GLUCOSE
Institution: TAMPA,FL
Accession Area: CHEMISTRY
Institution: ORLANDO OPC
Accession Area: OP-CHEMISTRY

Test: PT
Institution: TAMPA,FL
Accession Area: COAG

Test: OP-PT
Institution: ORLANDO OPC
Accession Area: OP-COAG

Test: SODIUM
Institution: TAMPA,FL
Accession Area: (no entry)
Institution: ORLANDO OPC
Accession Area: (no entry)

The following chart is an example of assignment of accession areas under various possible conditions when the Collection List is tasked by the option LRTASK PHSET. We will use ERR to indicate that an error was produced, resulting in an interruption of the accessioning process.

COLLECTION LIST GENERATED BY THE OPTION LRTASK PHSET

TEST	LOC X	LOC Y	NO LOC USER 1	NO LOC USER 2	NO LOC NO USER SITE A	NO LOC NO USER SITE B
GLUCOSE	CH	OP-CH	CH	OP-CH	CH	OP-CH
PT	COAG	ERR	COAG	ERR	COAG	ERR
OP-PT	ERR	OP-COAG	ERR	OP-COAG	ERR	OP-COAG
SODIUM	ERR	ERR	ERR	ERR	ERR	ERR

If the Collection List encounters any of the possible situations in which is unable to determine an institution and/or accession area for a given test, an error will be generated. At that point, the accessioning process will be interrupted. The routine will be unable to proceed.

A word of advice, define the appropriate institution and division for each location in the HOSPITAL LOCATION file (#44). Ensure that each user in the NEW PERSON file (#200) is properly assigned to division (institution). Further, ascertain that users associated with multiple divisions (institutions) log on to the system properly when tasking the Collection List. Finally, designate both institution and accession area appropriately for each test in the LABORATORY TEST file (#60).

Manual by the option, LRPHMAN

If the Collection List is generated by the option, LRPHMAN (ADD TO COLLECTION LIST), the institution and, ultimately, accession areas, are determined by the patient's location. The institution associated with the location in the HOSPITAL LOCATION file (#44) will be used. If a given patient location does not have institution appropriately defined in File #44, then the division (institution) designated/assigned to the user who invoked the option, LRPHMAN, will be used.

The following chart is an example of assignment of accession areas under various possible conditions when the Collection List is generated by the option, LRPHMAN. Our examples will reference the file entries used in the chart for the tasked Collection List above.

We will use WAR to indicate that a determination of accession area could not be made for a given test and that the user was warned that the test did not have an appropriate accession area.

COLLECTION LIST GENERATED BY LRPHMAN

TEST	LOC X	LOC Y	NO LOC USER 1	NO LOC USER 2	NO LOC NO USER	NO LOC NO USER
GLUCOSE	CH	OP-CH	CH	OP-CH	WAR	WAR
PT	COAG	WAR	COAG	WAR	WAR	WAR
OP-PT	WAR	OP-COAG	WAR	OP-COAG	WAR	WAR
SODIUM	WAR	WAR	WAR	WAR	WAR	WAR

If the Collection List encounters any of the possible situations in which institution and/or accession area are not appropriately defined in File #60 for a given atomic test, the user will be warned with the following message on the screen:

```
NO ACCESSION AREA FOR ORDER NUMBER XXX TEST YYY
```

Likewise, if a determination of institution cannot be established from the location of the patient or the division (institution) designated/assigned to the user of the option, LRPHMAN, the user will also be warned that the atomic test “does not have an appropriate accession area.” In addition, any other test or order the order number that has the same Collection Sample will accession by LRPHMAN. However, the accession is not accurately received by LRPHITEM or LRPHEXCPT and each is a Lab Arrival Time.

A panel (cosmic) test, on the other hand, without a designation of institution and/or accession area in File #60 will split into its component parts until it can assign an accession area to all tests. Accessioning will be based on the institution associated with the location or designated/assigned to the user who invoked the option. If an accession area cannot be determined for a given test within the panel, the user will be warned that the test does not have an appropriate accession area. The remaining tests within the panel will accession appropriately. Additionally, when received by LRPHITEM or LRPHEXCPT, these tests will receive a Lab Arrival Time.

If, however, all entries in File #60 for institution and accession area are correct, but a determination of institution cannot be made from either the location of the patient or the user of the option, LRPHMAN, the panel test will not accession or split into its component parts for accessioning, nor will the user be warned that the test "does not have an appropriate accession area."

To summarize, the Collection List generated by the option, LRPHMAN, uses the patient location to determine institution. If a determination cannot be made from the location, the division (institution) designated/assigned to the user of the option, LRPHMAN is used.

A word of advice, define the appropriate institution and division for each location in the HOSPITAL LOCATION file (#44). Ensure that all users involved in the accessioning process are properly assigned to division (institution) in the NEW PERSON file (#200). Further, ascertain that users associated with multiple divisions (institutions) log on to the system properly when using the option, LRPHMAN. Finally, assign each test in the LABORATORY TEST file (#60) to the appropriate institution and accession area.

Automating An Ancillary Test Site

I. INITIAL ENCOUNTERS

A. Request is received for automating an ancillary site.

B. Have initial meeting with personnel from the ancillary test site obtain **preliminary** information and discuss the type of procedures performed.

C. Assemble a multi-disciplinary project team to assist in the implementation.

II. PRELIMINARY ANALYSIS

A. Present an overview of the DHCP Lab package to the project team. Plan a walk through of an automated Lab to demonstrate the functionality in use at various stages.

B. Visit the ancillary site and prepare a flow chart of the manual process currently in use.

III. BRAINSTORMING AND DATA COLLECTION

A. Utilize the project team to brainstorm and arrive at responses to the following questions:

1. Are tests performed on inpatients, outpatients, or both?

2. Who will enter requests for Lab tests?

3. Will any type of request form. be used?

4. Will requests for the ancillary site be on the Collection List for the main lab?

   How will collected specimens be handled/stored on weekend holidays if the ancillary site is closed?

5. How will specimens and/or patients get to the site?

6. Will requests be entered for future appointments? If so, how far into the future?

   How will paperwork be handled?

7. Will specimens be shared with other labs within the medical center? If so, are these other labs automated?

8. How and where will accessioning take place?

9. What are the hours of operation of the ancillary site?

10. Are there instruments to be interfaced?

11. What types of personnel will be entering data into DHCP?

12. What level of access should be assigned to personnel in the ancillary site?

13. How will results be made available to physicians?

14. Will the site use Interims, Cumulatives, or both?

B. Obtain a list of tests with reference ranges, units, Collection Samples, and highest urgencies from the ancillary site.

C. Determine whether to incorporate test(s) into an existing accession area, set up a separate accession area(s) locked by a security key, or set- up a separate division.

D. Examine existing hardware resources and ascertain if additional CRTs and printers are necessary. Determine where they should be located for optimal use.

IV. ACTIVATING THE PLAN

A. Initiate requests for CRTs and printers through IRMS. Initiate requests for **data lines** for interfacing instruments. Inquire into the availability of the appropriate DHCP auto instrument routine.

B. Set up the DHCP files.

C. Coordinate with the project team to devise Accession Test Group(s) and, if **necessary**, request forms. Develop a menu consisting of all necessary options for the ancillary site.

D. Formulate a list of necessary DHCP supplies such as computer paper, ribbons, labels, etc. along with a suggested mechanism for obtaining them. Provide this list to the ancillary site.

E. Collaborate with the project team to set a realistic target date for implementation.

F. Develop a training plan. Initiate training sessions two weeks prior to implementation. Encourage the trainees to practice on the **test account**.

G. Prepare Memorandums and/or Hospital Bulletins announcing the integration of the ancillary site with the DHCP Laboratory System. Briefly describe the requesting process, as well as results reporting and options available for results retrieval. Distribute one or two weeks prior to implementation.

H. Install DHCP hardware. Interface automated instruments.

I. Assist the ancillary site in devising a plan for manual back-up procedures during periods of computer down-time.

J. Assign menus, security keys, and access/verify codes to the ancillary site.

K. Have another walk-through of an automated Lab to reinforce workflow and functionality. If possible, have personnel from the ancillary site spend some time observing personnel in the automated lab.

V. ACHIEVING THE GOAL

A. Implement on the target date

AUTOMATING AN ANCILLARY TEST SITE

DHCP FILE SET-UP

TESTS IN COMMON WITH MAIN LAB

SET UP SEPARATE ACCESSION AREA

Files to be updated:
#19.1 SECURITY KEY
#200 NEW PERSON
#68 ACCESSION
#60 LABORATORY TEST

SET UP SEPARATE DIVISION

Files to be updated:
#4 INSTITUTION
#40.8 MEDICAL CENTER DIVISION
#44 HOSPITAL LOCATION
#42 WARD LOCATION
#19.1 SECURITY KEY
#200 NEW PERSON
#68 ACCESSION
#60 LABORATORY TEST

Additional Files that may require updating:

#62 COLLECTION SAMPLE
#62.05 URGENCY
#62.2 LAB SECTION
#62.3 LAB CONTROL NAME
#62.4 AUTO INSTRUMENT
#62.5 LAB DESCRIPTION
#62.6 ACCESSION TEST GROUP
#63 LAB DATA
#64.5 LAB REPORTS
#64.6 INTERIM REPORTS
#68.2 LOAD/WORK LIST

Uploading and Downloading with a PC

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Uploading and downloading describe a process of two computers talking to each other. This could be two PC s, two mainframes, a PC and a mainframe, or a lab instrument and a computer. A PC in this discussion could refer to any IBM compatible or a MacIntosh computer.

The up and down part refers to the direction in which the information flows. For example, if you connect your PC to DHCP and send a memo from your word processor into a MailMan message, you are up loading. If you connect your PC to a bulletin board or computer information service such as the Source, and you make copies of software or other information, you would be "down" loading. Therefore, sending information out of your computer is uploading. Receiving information into your computer is downloading.

There are numerous ways to accomplish this process. This discussion is not intended to be an all encompassing procedure, but rather a general guide or overview that will serve as a starting point with a few specific examples to illustrate the ideas.

Uses

Some examples of ways to use uploading and downloading are to upload documents from various word processors and spreadsheets into DHCP files or into MailMan messages. You may also wish to download FileMan search data into spreadsheets and word processors for further manipulation and reporting. It is also very convenient to download data which may be needed for various kinds of documentation, but is not really needed on crowded DHCP discs. It is very easy to move this information onto floppy discs and store those rather than making bulky paper copies to store. Downloading can be used to develop procedure manuals which contain exact copies of the screen dialogues used in DHCP options. PC uploading /downloading can be used to send or capture information to and from Forum and other networks as well.

Equipment Needed

You will need a personal computer with an available serial port. Serial ports may have 9 pins or 25 pin connectors. A cable must be obtained which connects the serial port to a DHCP port. There are several ways to connect to the DHCP computer; Direct connect (may be a hard wired wall jack or a phone line data jack just like the ones used for regular DHCP terminals) Modem, Data phone, and Asim. Your cable must have the appropriate connectors to attach your PC serial port to whatever device you are going to use to connect to DHCP. Most device manuals have the correct information for making these cables. Not only must the end connectors be the correct size and type, but the internal wiring in the cable must be correctly matched to the device as well. All cables are not interchangeable. Most Biomed or IRM services have the expertise to build the cable. Some cables can also be purchased from computer shops for about $10-20.

Software Needed

You will also need a communications program for your PC. There are many different programs commercially available. Three very common ones are ProComm, Smart Com, and Crosstalk. These programs are similar in function, but vary in the exact details, and just like word processors, everybody has their favorite. The examples given in this discussion will use ProComm and Word Perfect as the word processing software. If you have a different program, you will need to consult your user manual for the appropriate details. These programs are relatively inexpensive--generally from $50-$75. It is worth the money to purchase one that you know is in common use so that you can get help when you have a problem. It can take large amounts of time to track down some obscure problem with a program that is not commonly tested and heavily used.

The features available in a communications package vary, but in general they must be able to send and receive data, must be able to emulate a variety of terminals and have a large number of user selectable parameters to accomplish the transfer of information between large varieties of devices.

Direct Connects

If you are using a direct connect method, then read the section on terminal emulation in your communication user manual. There will be no dialing or phone calls involved. It will be similar to doing the "setup" that you do for your regular DHCP terminals. That is you will have to set the Baud rate, data bits, parity and stop bits to be the same as the port configuration on the DHCP computer. Common setups are 2400,8,1,0 and 9600,8,1,0. Common terminal emulation s are VT102 and ANSI. Different terminal emulations may assign different functions to the various keys of your PC keyboards and may also display information differently.

Modem Connects

If you are using a device such as a data phone or a modem, then you will need to enter some kind of a phone number to make the connection between the two computers. This can be done manually from your PC keyboard, manually from the modem device or you can install the numbers in your communication package and have the dialing done by the communication software. Your IRM systems manager should be able to help you with the correct phone numbers to use. There are numerous ways to set up phone connections and often there is more than one way to accomplish the connection.

Speed of Transmission

Since uploading and downloading involve the transfer of data between 2 computers, the speed of transfer will be critical to a successful transfer. In addition to the baud rate there are other parameters in your communications software that can be used to control the speed of transmission. XON/XOFF should be enabled. ProComm also has parameters for setting character pacing and line pacing. These can be increased as needed. On days when the computer response time is very slow, characters may be dropped. A baud rate of 2400 is more reliable than 9600 for direct connects and increasing the pacing can make the transmissions more complete. Most modems are set for 1200 or 2400 baud.

Protocols

There are numerous methods for data transfer called protocols. The most common method used is ASCII or Text files. The idea here is that both computers must be able to recognize the data format. Most spreadsheets and word processors and DHCP packages are able to produce and recognize ASCII format text or data. Some of the other protocols such as Kermit may be faster or more accurate especially over long distances, but they require that both the sending and the receiving computer have special software to "pack" and "unpack" the data. On our PCs we can install and invoke the Kermit routines at will, but ordinary users of DHCP do not have the ability to access the Kermit routines on DHCP.

Security

One caution that must be observed with downloading is that all the same security restrictions apply to any DHCP information that is downloaded into a PC. Any data which contains patient identification or employee identification must be safeguarded with all the same precautions that are observed with DHCP data, if desired.

Upload Sequence

As previously described, uploading is moving information from your PC to another computer such as DHCP. Once you have decided what information you want to upload, the first task is to get the information saved in a text or ASCII file on your PC. For example, if you had a letter on your word processor and wanted to upload it into a mail message on DHCP, step one would be to save it as a text file. This is not the same as the standard way of saving most word processor documents. On WordPerfect, for example, regular saving is done under F10, but text files are saved under CTRL-F5. So if your file is saved the standard way, you must call it into the word processor and resave it as a text file. Be sure to note the exact file name and path.

Then using your communications software (ProComm, Smart Com, or Crosstalk), log on to DHCP and go to MailMan. Go to Send a Message and proceed to the first line of the message. This is the place where you want the uploaded letter to go. Here is where you initiate the upload. In ProComm, this is done by pressing the Page Up key. A window will open showing the protocols. Select ASCII and then another window will open asking for the location on your PC of the file to be uploaded. Give the exact path and filename. Press Return and the upload will proceed. You will see the text arriving on the screen. When it is all loaded, press return and edit your message if needed and proceed to send the message.

It may take some experimenting with these files to see which things transfer and which do not. Many of the fancy word processor formatting commands and fonts etc. will not transfer because Mailman editor may not have comparable formats. The margins may have to be adjusted on the original document so that the lines wrap properly. Carriage returns may not always be handled the same way on both computers. The simplest documents with the minimum of special formats will work the best.

Uploading can be done into any word processing field on DHCP. Many sites have chosen to type the anatomic pathology gross and microscopic dictation into a PC word processor and then upload the finished cases using the upload procedure described above. There are some advantages to doing this. On PCs there are powerful spelling and medical dictionary checking available. Potential downtime is eliminated so transcription is never delayed. Although editing is improving on DHCP, standard word processors are still much more powerful and incoming transcriptionists are more likely to be familiar with commercial word processors than they would be with DHCP word processing so training is easier.

NOTE: Before attempting to UPLOAD or DOWNLOAD any information, make sure your DHCP user characteristics are set for the LINE EDITOR, not the alternate SCREEN EDITOR. The Screen Editor can cause problems.

Download Sequence

In this case we will be moving data from DHCP (or it could be Forum) down into your PC. Just like the upload, the process will be initiated from DHCP, so using the communications software, log on to DHCP first. It is not necessary to save the data as a text file because the data coming "down" will be coming through the terminal which is already in ASCII format and it will merely pass through the terminal and be captured by the communications package and transferred into a text file on your PC.

If we wanted to download 40 mail messages on hospital policies that are in a particular mail box, for example, go to Read a Message, then select the box where the messages are located. At the message action prompt, enter P for print. Then enter the numbers of the messages to be printed.

At this point initiate the download. In ProComm, you do this by pressing the Page Down key. The window with the list of protocols appears. Select ASCII and then the file window opens. Enter the exact path and filename where you want the downloaded data to be stored on your PC. Press return and select home as the device. As the data scrolls across the terminal, it will be copied into a text file on your PC.

When all the messages are printed, hit escape to close the file and stop the download. All 40 messages will be located in a single file which can now be brought up in a word processor and printed or edited or just stored for future reference. When retrieving these files from your word processor use the function to retrieve Text files (on WordPerfect this is under CTRL F5) rather than the standard retrieval method. Once the file is in the word processor, it can be saved with the standard word processor format.

There are lots of possibilities with downloading data. You could do a FileMan search and save the report as a spool document. Then initiate a download and print your spool document to the home device. Your report will be captured in a text file on your PC. You could also do user manual preparation by initiating a log file at anytime while you are logged on to DHCP (ALT Fl on ProComm). Then proceed to work through any option. Every line that appears on your terminal screen will be copied into a text file on your PC. You could then incorporate or merge these into procedure manuals for your users or documentation of software testing or examples to demonstrate processes for CAP documentation.

Another possibility for downloaded data is to pass it into original programs. If you or someone in your section knows how to write programs, these can also access the text files with your downloaded data and further process the data into reports or other records on your PC. Since graphics are essentially unavailable at this time on DHCP, using the downloaded data to pass to PC graphics programs is another possibility.

Preventative Maintenance

Every Laboratory must decide how they are going to perform preventative maintenance on their software but here are a few suggestions.

1. Run the option Check Files for Inconsistencies at least once every three months. This option generates a report of potential inconsistencies in various files. You can consult with your local ISC on how to clear these errors.

2. Purge Old Orders and Accessions is another option that should be run regularly, (Probably once a month). This option looks at the Grace Period For Orders field in LABORATORY SITE file (#69.9). We suggest that at least 30 days worth of orders be maintained.

3. After any change to the Cumulative, you should run the Diagnostic Routine for LAB REPORT file (#64.5). Problems reported by this option can be fixed by editing the appropriate fields in the LAB REPORT file (#64.5) or by using the Recross reference Indexes in the LAB REPORT file (#64.5) option.

Troubleshooting

This section has been designed to help you figure out solutions for any problems you might have encountered while first defining the Laboratory files. Each subject or problem discussed lists possible causes and solutions, and is cross referenced by file and field number (when applicable) so that you will easily be able to refer to the particular area in question.

Labels

PROBLEM: You are getting too many labels with the same accession number, too many labels with different accession numbers or are NOT getting labels to print for certain tests or accession areas.

POSSIBLE REASONS:

1. You may have an excessive number defined in the field as “Extra Labels” LABORATORY TEST file (#60). Either you overestimated or did not change the number that was in the field as exported with the package.

2. You may have the FIELD:Unique Accession LABORATORY TEST file (#60) set to “YES” on many of the tests in question, OR those tests on that order were of many different specimen types (each type of specimen will force a different accession number, which means another label).

3. The volumes you have indicated that you require for a series of tests (FIELD:Min Vol LABORATORY TEST file (#60) may be too large, OR the volume you have indicated that a particular sample container will hold is too small FIELD:Volume Large COLECTION SAMPLE file (#62).

4. You may have the FIELD:Extra Labels LABORATORY TEST file (#60) filled in with a -1 OR have the FIELD:Inhibit Area Label Printing ACCESSION file (#68) set to “YES” for an accession area.

Test Missing

PROBLEM: The wards are complaining that every once in a while there is a test missing from one of their ordered panel tests.

POSSIBLE REASON:

The most likely reason is that the FIELD:Required Test in the LABORATORY TEST file (#60) was not set to "YES" for this test. If the results are being transmitted from an instrument run on line, there may have been a problem with the quality of that result. If the result was not transmitted it may have been overlooked in the verifying process. Since the result will not be stuffed with pending, it will not show up on the next build of load or work lists.

Delta Check

PROBLEM: Your lab people say that the delta check function for comparing previous results with current entries is not working for some tests, or seems to work intermittently.

POSSIBLE REASONS:

1. You did not define a delta check for that test, OR you did not use the proper choice in the FIELD:Type Of Delta Check and FIELD:Delta Value LABORATORY TEST file (#60).

2. The FIELD:Days Back For Delta Checks LABORATORY SITE file (#69.9) may not have an entry or has one that is too short.

3. The test in question can be performed on both "serum" and "plasma." The delta checking is done **within** specimen type, so a morning "K+" done on serum will not be compared with one done on plasma in the afternoon.

Entry/Verification problems

PROBLEM: Results are verified that people do not remember verifying.

POSSIBLE REASONS:

1. This is one reason why letting users have the type ahead function allowed and having values defined in the FIELD:Default Value LABORATORY TEST file (#60) can be risky.

2. The people in certain areas are using EM to enter results manually. However, there are other tests on that same accession number that do have default values. If the responsible party selects ALL when editing test values, instead of going to the specific tests to be entered, default answers may inadvertently be accepted when stepping through the accession and default answers will be verified.

PROBLEM: When trying to verify results using EA from an interfaced instrument, you want to be able to verify by accession number, but the prompts you receive ask for "TRAY/CUP" number. The patient data displays after you enter a "1" for the "TRAY" prompt and you enter the SEQUENCE number from your built list at the "CUP" prompt.

POSSIBLE REASONS:

1. The FIELD:Verify By LOAD/WORK LIST file (#68.2) is not set up correctly for your instrument.

2. The FIELD:Entry For Lagen Routine AUTO INSTRUMENT file (#62.4) is not set for Accession x-ref.

3. The FIELD:Cross Linked By AUTO INSTRUMENT file (#62.4) is not set correctly for the instrument.

NOTE: The last two fields are in the AUTO INSTRUMENT file (#62.4), and you should refer to that file in this section and the chapter entitled Instrumentation /Interfacing for details on how they should be defined for a particular instrument.

PROBLEM: Your techs are complaining that they are unable to enter results for a particular test. The test name appears on the screen, but there is no prompt for entry of the result.

POSSIBLE REASONS:

1. They are using the EL or EW data entry options and the results for that specific test have already been verified. The **only** option which allows you to see previously verified results upon data entry is Enter/verify/modify data (EM) [LRENTER] option.

2. The test being edited does not have an entry in the FIELD:Data Name in the LABORATORY TEST file (#60). All tests which will have results entered must have a data name defined! Check this field for the test in LABORATORY TEST file (#60) and enter an appropriate data name if necessary. (See LABORATORY TEST file (#60) - for more details).

3. The specific test has been designated as NEITHER or INPUT in the Type field in LABORATORY TEST file (#60). All tests requiring the entry of results should be of type BOTH or OUTPUT.

PROBLEM: You are attempting to review and verify a batch of tests run on an interfaced auto instrument. The software tells you that there is No data to report

POSSIBLE REASONS:

1. Check to see that the LSI is functioning properly. If located in the lab, first make sure the power switch is “ON”. Use the Check the Lab Interface [LA1103] option, to see if the interface line hooking the instrument to the LSI is functioning. If it is functioning, use the Restart processing of instrument data [LR JOB] option, to see if your instrument has data. If it does restart the specific instrument routine to move the data over to the ^LAH global for you to review, edit, and verify. If by restarting the instrument interface routine you still DO NOT get any data to report (review), see below.

2. Check the type of the load or work list you are using on this instrument. You may have to adjust the instrument run mode by using the Set instrument to run by load list [LR AUTO LIST] option or Set the instrument to run by accession [LR AUTO ACC] option. The run by mode must MATCH the way you are CURRENTLY running the instrument, or the data and the accession numbers will not cross reference each other in the right way.

3. If the particular instrument you are running has its own transmit data or similar type switch or setting, check to see that it is set properly as well.

4. As a last resort, enter the test results manually (easiest if you use EW or EL data entry options), since the software will prompt for the results in the same order in which they appear on your load or work list.

Load/Worklist

PROBLEM: You are trying to build a load/work list, only to receive the message waiting for another build to finish. You check to see if someone else is trying to build the same list you are, but that is not the case.

POSSIBLE REASONS:

1. Someone was editing the LOAD/WORK LIST file (#68.2) and set the Building In Progress field in File #68.2 to "YES". This field should always be set to "NO" unless the list is actually being built.

2. Someone tried to build a list, received an error message, and got bumped out of the building option. Often when an error occurs during an unfinished build, the Building In Progress field in the LOAD/WORK LIST file (#68.2) will get stuck on "YES" for that particular list. It must be edited (through FileMan) back to "NO".

PROBLEM: You have a series of accessions sitting in a rack which will not build onto a list, but the labels indicate that they should, OR you have a test which is done very infrequently and the sample will not build to your worklist area.

POSSIBLE REASONS:

1. Upon receiving the routine lab collection specimens into the lab, one location was not received (all of the specimens were collected but the collection list from that ward was misplaced and was not processed with the others). Accessions from ROUTINE lab collection will build onto the lists only after being received.

2. The infrequent test might not have been defined to the FIELD:Profile LOAD/WORK LIST file (#68.2) for the group of tests normally run on this particular load/work list. It is possible that the test name from LABORATORY TEST file (#60) in the FIELD:Profile LOAD/WORK LIST file (#68.2) is similar to but not the same as the test you are allowing the wards to use when ordering the test.

3. You may be using a load/work list profile which excludes the specimen types in your rack either because you indicated another type of specimen for the SUBFIELD:Specimen, FIELD:Profile LOAD/WORK LIST file (#68.2) OR because the specimen type was listed in the SUBFIELD:Specimens To Exclude, FIELD:Profile LOAD/WORK LIST file (#68.2) for the load or work list being used.

NOTE: Any orders which are not received when using the Itemized routine lab collection [LRPHITEM] option will be canceled, and thus will be harder to track down should a similar circumstance arise.

PROBLEM: You are using either a load or work list and when going down the list to enter results manually, using EW or EL, you get a prompt with the message "Invalid entry pointer - entry skipped" and the sequence you are trying to enter is bypassed.

POSSIBLE REASONS:

1. The load or work list was not cleared at the beginning of the shift (use the option Clear instrument/worklist data [LRINSTCLR] to do this). BOTH load and work lists must be cleared, whether or not they are run on an instrument. To solve the current problem, it is best to use the EM option to enter these results, since clearing the list at this point would remove any remaining unverified data from the list.

2. Occasionally when the build of a particular load or work list stops with an error, it may be necessary to clear the instrument again. (And probably a good idea whenever a build results in an error!)

PROBLEM: You consistently have errors occurring when you attempt to build a profile defined for a specific load or work list.

POSSIBLE REASONS:

1. Try to find out if the problem is associated with a particular test under the FIELD:Profile LOAD/WORK LIST file (#68.2) entries by deleting them one at a time until you are able to build the profile.

2. Look at the problem test and compare it with other tests in LABORATORY TEST file (#60) that are not giving you trouble.

3. Sometimes the problem test is buried deep within panels defined for the profile. For example, a specific cardiac enzyme, which is part of a cardiac panel, which in turn is part of a Chem 8 panel, which in turn is part of a Chem 18 panel (which is defined for the profile) could prove to be the guilty one.

PROBLEM: The quality control specimens which you have specified to build onto a particular load or work list are NOT appearing on the list.

POSSIBLE REASONS:

1. The control name in the LAB CONTROL NAME file (#62.3) may not have the appropriate test(s) defined in the FIELD:Accession Test. You should enter the same test names here for the control as for the patient specimens which are pulled onto the list. For example, on your Chem 7 load list, if you want the control name "CHEMCONTROL" included, you must enter the same tests listed under the FIELD:Profile file LOAD/WORK LIST file (#68.2) for this list in the accession test field.
2. The TaskManager routine LRTASK CONJAM may not have been set (or queued) to run by the system shortly after midnight as it should have. This routine must be run nightly in order for the controls to be built onto a load or work list automatically.

3. You assigned the controls a low accession number and there was a conflict with Rollover.

PROBLEM: The techs have noticed that all of their pending accession lists and load/work lists for their work area have only accessions with today date, and none from any previous day, although they know that some of the work did not get finished yesterday and should have appeared on the list.

POSSIBLE REASONS:

1. The TaskManager routine "LRTASK ROLLOVER" may not have run shortly after midnight by the system as it should have. This routine rolls over any pending or unverified accessions and tests if defined as required tests in the FIELD:Required Test in LABORATORY TEST file (#60) onto the next day accession and load/work lists.

NOTE: Rollover can be run during the day if it becomes apparent that this is the source of the problem, and then again shortly after midnight, as usual.

2. Should the accessions for only a few specified tests from a previous data not rollover or show up on an accession or work list, check to see that the FIELD:Required Test in LABORATORY TEST file (#60) for those tests has been set to "YES." If set to "NO," the unverified or pending accessions from previous dates will not show up again on a list of any kind.

3. If, in addition to the controls not showing up on the load/work lists (see problem above), and the pending accessions not showing up, you also notice that your accession labels are not printing, and that your queued patient reports are not queuing (what a horrible combination! it does happen sometimes), the POSSIBLE REASONS are:

   a. Your system has crashed. (Do not pass GO, do not collect $200, but DO contact your site manager!!)

   b. TaskManager is not running. (Another situation in which to contact your site manager and possibly think about leaving early!)

All of the conditions listed in #3 above (plus others) will occur should TaskManager stop running for any reason. It is a relatively easy to fix problem (you simply restart the program), but it is important that the cause of the situation be determined to prevent further occurrences.

Ward Order Entry

PROBLEM: The wards are complaining that they are unable to:

1. place a Urinalysis order into the system

2. order a STAT B12/folate test.

3. unable to choose an urgency of STAT or ASAP when placing orders into the system for morning collection by the lab.

4. unable to get a prompt asking them to choose an urgency when they order a particular test.

POSSIBLE REASONS:

1. When ordering this test, they are using either the Lab test order [LROW] option (choice B) or the option Fast lab test order (ROUTINE) [LROW ROUTINE], and specifying an additional test (Urinalysis is not on the Fast lab ordering screen as a numbered choice). Neither of these options will allow the ordering of a test which does not have an entry in FIELD:Lab Collection Sample in LABORATORY TEST file (#60).

2. The panel test B12/folate has ROUTINE defined as the entry in FIELD:Highest Urgency Allowed file in LABORATORY TEST file (#60).

3. The FIELD:Can Lab Collect URGENCY file (#62.05) was not set to "YES" for these two urgencies.

4. The FIELD:Default Urgency LABORATORY TEST file (#60) for this test had an entry.

NOTES:
• This field automatically "forces" the one default urgency as the only urgency and NO choice is given to the person ordering the test, even if you have STAT listed as the entry in the FIELD:Highest Urgency Allowed in LABORATORY TEST file (#60).

• This holds true only for those persons ordering tests outside the lab.

Reports

PROBLEM: The ward clerks have brought to your attention that the option Interim Report for Selected Test(s) does not always work properly (does not let them specify the test name CBC if they only want to see CBC results for a patient).

POSSIBLE REASONS:

1. They are selecting the wrong name of the test they are trying to display; if they are entering Blood Count as the name of the test at the "Select ordered test: ANY//" prompt in the option and you DO NOT have this name defined as the test name or as an entry in the FIELD:SYNONYM in File #60, the system will not display the results. (Another good reason to enter any and all synonyms you can think of for any given test!)

2. The FIELD:TYPE in File #60 may be defined as INPUT for the CBC test. Any tests with this type designation cannot be selected by entering the test name in the option above. (It will display results, however, if you accept the default of ANY.) Check this field and make sure the test name CBC is not defined as INPUT.

FileMan problems

PROBLEM: You are happily editing a test name in the LABORATORY TEST file (#60) until you try to enter a site/specimen name in the FIELD:Site/Specimen. The system responds with a beep and "??"

POSSIBLE REASONS:

1. This test entry has nothing entered in the FIELD:Data Name which points to the specific subfield entry in the LAB DATA file (#63) defining the type of input parameters for that specific test. This could be due to a few different reasons:

    a. This test is the name of a panel or profile test. Remember, panels DO NOT have data names OR site/specimens defined, since they are already defined for each test making up the panel.

    b. This test is NOT a CH subscripted test. Only tests with the entry of CH in the Subscript field in File #60 can have data name, therefore, site/specimen types are defined.

    c. This test is of the type NEITHER. Check the field entry for FIELD:Type LAB DATA file (#63) for this test.

d. This test has not previously been pointed to a data name in LAB DATA file (#63) (if this is one of the exported test names). You will have to check the data dictionary of the LAB DATA file (#63) to see if there is an existing data name which is appropriate for this test. If there is no appropriate data name entry in LAB DATA file (#63), see the note for the next reason.

e. This test is a new test name which you are creating in addition to the exported entries in LABORATORY TEST file (#60). If, after checking the entries in the LAB DATA file (#63), you have determined that there are no existing data names pertaining to this test, it will be necessary for you to add a new data name entry to LAB DATA file (#63).

NOTE: Specific instructions for how to add a new data name and examples can be found in the How to modify/edit the LAB DATA file (#63) section.

2. You are trying to enter the name of a site/specimen in the field which currently does NOT exist in the TOPOGRAPHY FIELD file (#61). All site/specimen names must first be defined in TOPOGRAPHY FIELD file (#61) **before** you can add them to the Site/ Specimen field in LABORATORY TEST file (#60). (Remember the order of those important "day one" files!!)

Collection list

PROBLEM: Your phlebotomist informs you that the collection list will not build or print. (This usually happens very early in the morning!)

POSSIBLE REASONS:

1. Check to see that the FIELD:Building Collection List in the LABORATORY SITE file (#69.9) is set to "NO". As was the case with building load or work lists, if an error should occur during the build of a collection list, this field entry can get stuck as "YES". Use FileManager to edit this field back to "NO" to allow the collection list to build.

NOTE: This problem assumes that you are using the manual build/add to and NOT the tasked options for creating the collection list, [LRPHSET] and [LRPHSET1] options. Should the tasked options fail to function, refer to the problem regarding TaskManager failure.

Cumulative Report

The laboratory reports themselves can be set up rather easily, with time and patience on the part of the laboratory application coordinator. The key word here is patience. The LIM may have to print some of the cumulative pages several times before you have your desired output.

The cumulative reports are a printed accumulation of laboratory test results that have been reported (verified) during a given time interval (usually one day). With these reports, it is possible to see trends in laboratory results over a period of time. New data is displayed together with previous data so that the ultimate result is better patient care. Another feature is the ease with which results can be retrieved in a patient's chart. Some sites may choose to print these reports daily. Others may choose to print them Monday-Friday only.

The cumulative is generally printed alphabetically by location. Within each location, it is printed alphabetically by patient name. When the location is FILEROOM, the cumulative prints by the last four digits of the patient's SSN# (sorted by last two, then the next two digits). The report is designed to replace the usual lab reporting slips that are filed in the patient's chart. With these reports, it is possible to see trends in lab data over a long period of time. The LAB REPORTS file (#64.5) is used to define a site's cumulative report.

Cumulative Report Generation

Before printing ever occurs, there are several decisions that will need to be made at your site, including:

1. What time of day should your report print?

2. Who is responsible for monitoring the printing and distributing the reports?

3. What printer or printers will you use? Where will they be located?

4. What kind of paper will you use?

5. Do you want to task your cumulative or start it by selecting an option from a menu?

If you are to be involved with the printing of the CUME, be sure that you know the answers to these questions because you will be asked by someone and usually it will be in the middle of the night by an upset someone who wants to know where are the CUME.

The fields that must have entries in LAB REPORT file (#64.5) are:

Lab Report Name: For each printer that you set up, you will need a lab report name. An entry here allows you to designate a device for printing and a range of locations to print for each device.

Device: Name of printer to be used.

Starting Location: First location to print to the device.

Ending Location: Last location to print to the device.

NOTE: It is a good idea to check the Abbreviation field in File #44. If two locations have the same abbreviation, the CUME routines can become confused.

If you have decided to start your cumulatives by the use of a menu option [LRAC MANUAL], this is all you need to set up.

If you have decided to have your cumulatives print automatically, read the section on the TaskManager.

Further Cumulative Functionality (Version 5.2)

With Version 5.2, the capability to print the FILE ROOM cumulatives at a different time from the INPATIENT cumulatives exists.

Two new functionalities exist.

1. Inpatients and separate locations print on one time schedule and all other outpatients print on another schedule. For the outpatients to print on the different schedule, the following file entries must exist.
   64.5,4 (File Room) =“YES”
   64.5,17 (Separate File Room) = “YES”
   Reports multiple has File Room 1 and File Room 2 with 64.56,3 (FileRoom Report) =“YES” in each Starting and Ending location containing “FileRoom”

2. Inpatients and separate locations print on one time schedule, one set of outpatient reports print on a different time schedule, one location and another set of outpatient reports print at the same time of the other outpatients but at a different location. This is done by filling out 64.57,1 (Alternate File Room).

Fields for Fileroom Cumulative (LAB REPORTS file (#64.5))

A. File Room Report Date field (#16): This field is used if the site prints the FILEROOM location on a different schedule than the regular Cumulative print. If this feature is utilized, the last date the FILE ROOM location(s) were printed is stored in this field.

B. Separate File Room field (#17):This new field is used to designate the FILE ROOM cumulative being printed on a schedule different from the regular cumulative. To utilize this feature the following needs to be setup.

C. File Room Report field (#3) in Report Name multiple field (#2): This new field is used to designate a report to print a file room location. It is used in conjunction with File Room field (#4) and Separate File Room field (#17). It allows the cumulative to identify those reports which should be run when a site wishes to print the file room reports and they are doing so on a schedule separate from the regular cumulative.

D. Alternate File Room field (#1) in the Separate Report Location multiple field (#6): This new field is used to designate those locations which a site wishes to print to a "FILE ROOM" location but which they do not wish to be a standard file room. This could be sites which have satellite clinics which have their own file rooms. The name entered here will cause this location to be sorted to a location called "FILE ROOM_ alternate file room name" followed by a "1" or "2". The patients will be sorted in terminal digit order similar to the regular file room. This requires that the site has File Room field (#4) set to "YES" to sort non inpatients to location "FILE ROOM".

Setting up the files

1. Set Separate File Room field (#17) to "YES" - this tells the cumulative that you are printing the FILE ROOM on a schedule different from the regular cumulative schedule.

2. For regular FILE ROOM patients, set up one or two reports as follows (FileMan requires the different names):

If one report: starting location: FILE ROOM1
ending location: FILE ROOM2

If two reports:
first report: starting location: FILE ROOM1
ending location: FILE ROOM1

second report: starting location: FILE ROOM2
ending location: FILE ROOM2

Define the other fields as with a regular report.

3. Set File Room field (#4) to "YES" - this old field allows the program to sort all non-inpatients to two locations, FILE ROOM1 and FILE ROOM2, based on terminal digit of SSN.

4. If you also want to print certain locations to an alternate file room, such as a file room at a satellite clinic then in addition to #2 above, perform the following:

A. Enter the location(s) that you want to print as a separate report location by entering them in the Separate Report Location field (#6).

B. Enter in Alternate File Room field (#1), the name to use for this File Room. This name will be concatenated with "FILE ROOM".

Example: DALLAS OPC would result in file rooms FILE ROOM_DALLAS OPC1 and "FILE ROOM_DALLAS OPC2."

NOTES:

- The "_", underscore is used to insure that these locations sort after the regular file room locations.

- Two locations for each file room would be created based on terminal digit of SSN or identifier (non PATIENT file (#2)) similar to the regular file rooms. These locations will print on the same schedule as regular file rooms. Either set up separate reports to print these locations or utilize reports defined in Step #3 above and alter the ending location to include these locations.

5. On each report, set the File Room Report field (#3) in the Report Name multiple field (#2) to "YES".

The cumulative software will check when attempting to print a cumulative for a location that contains the name "FILE ROOM" in the following. If Separate File Room field (#17) is set to "YES" and the report being run is not set to "YES" for File Room Report field (#3) then it will skip running the cumulative for that location. This is to prevent another report which may print locations "A" thru "Z" from printing the file rooms unintentionally.

Example: Sample of a filled in file

```
Select OPTION: ENTER OR EDIT FILE ENTRIES

INPUT TO WHAT FILE: LAB REPORTS// <RET>
EDIT WHICH FIELD: ALL// 17  SEPARATE FILE ROOM
THEN EDIT FIELD: 2  REPORT NAME    (multiple)
   EDIT WHICH REPORT NAME SUB-FIELD: ALL// .01  REPORT NAME
   THEN EDIT REPORT NAME SUB-FIELD: 5  STARTING LOCATION
   THEN EDIT REPORT NAME SUB-FIELD: 10  ENDING LOCATION
   THEN EDIT REPORT NAME SUB-FIELD: 3  FILE ROOM REPORT
   THEN EDIT REPORT NAME SUB-FIELD: <RET>
THEN EDIT FIELD: 4  FILE ROOM
THEN EDIT FIELD: 6  SEPARATE REPORT LOCATION    (multiple)
   EDIT WHICH SEPARATE REPORT LOCATION SUB-FIELD: ALL// .01  SEPARATE REPORT
LOCATION
   THEN EDIT SEPARATE REPORT LOCATION SUB-FIELD: 1  ALTERNATE FILE ROOM
   THEN EDIT SEPARATE REPORT LOCATION SUB-FIELD: <RET>
THEN EDIT FIELD: <RET>
STORE THESE FIELDS IN TEMPLATE:


Select LAB REPORTS NAME: CUMULATIVE REPORTS
SEPARATE FILE ROOM: YES// <RET>
Select REPORT NAME: FILE ROOM1// <RET>
  REPORT NAME: FILE ROOM1// <RET>
  STARTING LOCATION: FILE ROOM1// <RET>
  ENDING LOCATION: FILE ROOM1// <RET>
  FILE ROOM REPORT: YES// <RET>
Select REPORT NAME: <RET>
FILE ROOM: YES// <RET>
Select SEPARATE REPORT LOCATION: CARDIOLOGY// <RET>
  SEPARATE REPORT LOCATION: CARDIOLOGY// <RET>
  ALTERNATE FILE ROOM: EEE TEST// <RET>
Select SEPARATE REPORT LOCATION: <RET>
SEPARATE FILE ROOM: YES// <RET>
```

Changed routines

1. Routine LRAC changes:

   A. Code to prevent selection of file room reports if printing on separate schedule.

   B. Task separate file room reports both using tasked option and manually.

   C. Includes the last file room patient list in building the current list. Same criteria apply, if the report date is greater than the report date stored for the patient then it is added to the list. This was to catch any patients who are on the previous file room cumulative but were not actually printed. If for some reason a patient is not printed, they will roll forward to the next cumulative list.

2. Routine LRAC1: Code to check if report and location are file room and is this a file room report. Will skip location if it is not suppose to print.

3. Routine LRAC8: Routine to only go thru LAC global once when checking for header changes. Previously it would go thru global for each change. If more than one change would increase delay in starting the printing by factor of the number of changes. This routine allows the LIM to make multiple changes without adversely delaying start on cumulative.

4. Routine LRACK:

   A. Routine to check if separate file rooms are implemented and only clear those reports which are not file room.

   B. Changed cumulative device status report to print manual print and file room report fields, separate file room turned on and last file room report date.

5. Routine LRACKL1: Routine to check if site wants alternate file rooms in addition to regular file rooms. Checks separate locations for alternate file room name.

6. Routine LRACM2F

   A. Display the date of last cumulative (REPORT DATE) when asking for report date.

   B. Allow user to select multiple locations or all locations. When printing file rooms on a separate schedule, the list can get quite long.

   C. Patients are numbered within location, corresponds to display when user uses reprint option. Also tells you how many patients in each location. Total of all patients and number processed at end of report.

   D. If user prints only some locations then report indicates those locations printed.

   E. On FILE ROOM patients, the report prints the patients SSN not the sorted terminal digit number. The reports still come out in the sorted terminal digit number order.

   F. If printed to a terminal, does page breaks at end of page.

   G. If location continued on successive pages, locations marked as continued.

   H. Prints date/time report is generated and report date.

These are the tasked and interactive options to control printing of the File Room Cumulative:

1. NAME: LRTASK CUM FILEROOM
MENU TEXT: Task Cumulative Fileroom Report
DESCRIPTION: This option is used to print fileroom cumulative patients. This option determines the last time the fileroom patients were printed. It then identifies all fileroom patients that require printing since the last run and moves them into the patient list for the most recent cumulative run. Finally, it queues a task to print these patients to specified printers.

WHEN THE LAB REPORTS FILE HAS BEEN PROPERLY SET, THIS OPTION WILL ALLOW THE PRINTING OF THE FILEROOM CUME ON A DIFFERENT SCHEDULE THAN THE INPATIENT CUMES.

The manual version of this option is LRAC MANUAL FILE ROOM CUM. This option is designed to be tasked. The manual version SHOULD NOT be tasked.
ROUTINE: CLOCK^LRACFR

2. NAME: LRAC MANUAL FILE ROOM
MENU TEXT: Manual queuing of File Room cumulative
TYPE: run routine
DESCRIPTION: This option is the manual version of the LRTASK CUM FILEROOM option. If you do not wish to schedule automatic printing of the fileroom cum via the LRTASK CUM FILEROOM option, you may use this option instead. This option should never be tasked. There are some questions asked when this option is used. When the proper file setup as been done, this option will allow the printing of the file room cum on a different schedule than inpatient cums.
ROUTINE: LRACFR

TaskManager

The TaskManager can controls the printing of the cumulative by means of an option in the OPTION file [LRTASK CUM]. Although the time interval between prints is usually one day, it may be set to any time period convenient to your station. The output device can be any printing terminal.

The cumulative has the ability to print portions of the report to different devices, thereby sending reports to locations near where they will be needed.

Example: Locations ranging from A to LZ can be sent to device A, and locations ranging from LZZ to ZZZ can be sent to device B, or a remote site can specify a printer at the remote site. Dividing the task between printers and CPUs will optimize the run-time required for the cumulative.

Automatic queuing of the report is done using the LRTASK CUM option. The fields Queued To Run At What Time and Rescheduling Frequency in the option file need to be set up appropriately. This option will then spawn reports for all devices defined in the Lab Report Name field of the LAB REPORTS file (#64.5), with the exception of those reports that have an entry in the Manual print field of the LAB REPORTS file (#64.5).

If you want to queue a device on another CPU, the DEVICE file on each CPU must have the queued device as one of its entries with the field OTHER CPU containing the Volume set of the other CPU.

Device Parameters

The device parameters for all devices that print (or reprint) the cumulative should be the same. Because paging and permanent determinations are made at the time of printing, the device parameters (IOM, IOSL, CPI, LPI, etc.,). See the VA FileManager Programmer Manual for a discussion of these parameters need to remain constant.

When initially setting up the device parameters, there are no restrictions on selection of lines per inch, characters per inch, form length, or form width. If you are using profiles that are large and require multiple lines of headings (horizontal format), then it is suggested that you use eight lines per inch and possibly greater than 80 columns in your definitions to accommodate more data per page.

The cumulative should not be sent to a CRT except for testing purposes. If you do specify a CRT, you will need to redefine the lines per screen and number of columns to emulate a printer.

The horizontal display uses the variable IOM (right margin) to decide when to break a line of tests into a second line. If a line of tests is too long to fit on one line, changing the value of IOM (through the DEVICE file or when prompted with "DEVICE:") may get all the tests on one line. Be sure to choose the correct pitch on the printer that you are using.

The vertical display calculates the number of data columns, based on the total number of columns defined in IOM. Likewise, by manipulating the page length (IOSL), you can reduce or increase the number of sets of data to be printed on a given page.

Once these parameters have been determined and you are in production, they should not be changed. It is critical if medical center printers are used, that their parameters are identical.

☛**WARNING:** This rule applies to new, additional or different printer devices. Otherwise the cumulative report may be seriously affected.

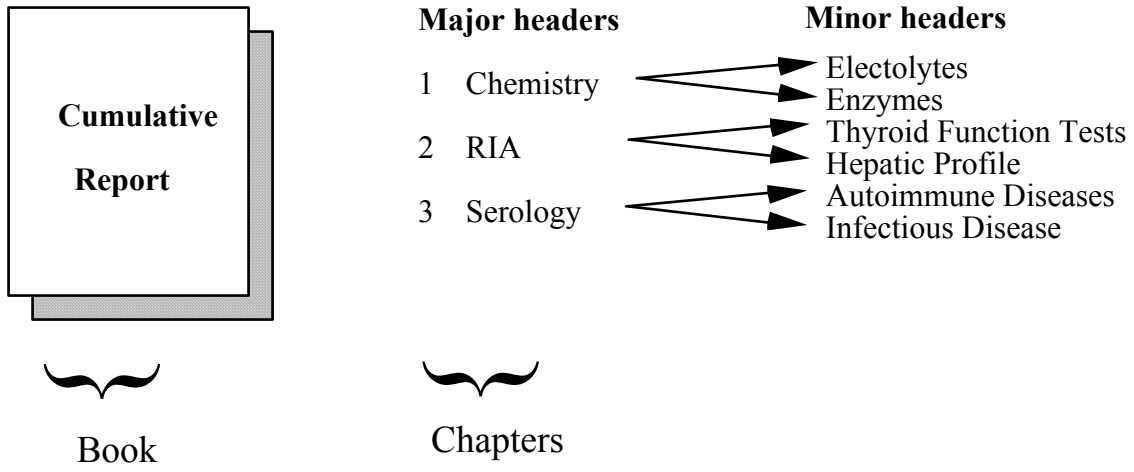
Structure

Data to be printed on the cumulative is collected and stored in the ^LAC global. There are two global cross references that aid in the collection of this data. When a test is verified by the medical technologist, a reference is created in ^LRO(68, “AC”, that points to patient data in ^LR (lab results global) and a reference is created in ^LRO(69,DT,1,“AR”, that is used to sort the report by location. The pointers in these two cross references cause the data to be copied from the ^LR global to the ^LAC global where it can easily be manipulated by the cumulative print routines. Some of the ways data is stored in ^LAC and the format of the cumulative are controlled by the LAB REPORTS file (#64.5). The Type of Display subfield defines for each minor header either forward or reverse chronology and either vertical or horizontal display.

Formatting of the Cumulative

What is a Major Header?

The major header name prints in full for the page title on your cumulative report. When you think of a cumulative, try to think of it as a book with chapters. The internal number (page number printed) can be selected at the time of creating the major header page or the next default may be taken. Maybe chapters 1-10 are about Chemistry, chapters 11-15 for hematology, etc., or if you take the system defaults, the numbers are keep in the order of their entry into the file. Once set, the internal number cannot be edited.



The cumulative report formatting features are set up in File #64.5. When you look at the page on the top of the cumulative report sheet, what you will see is the section number and then the page within that section. The page that you see on the report is in the format, X:Y, and in this case X is the section number, or what is termed in our software as the major header, and Y is the page number within that section. This X is the internal entry number of that major header into File #64.5. The LIM can make this number whatever he/she wants to when he/she creates a new major header. Once set, it cannot be changed unless the major header is deleted and then entered again. Also, you can never have two major headers within the same internal entry number. X will remain constant for that section, and the Y part of the page will increment.

For each major header, the name of the facility performing the tests is entered. Remember that this is a CAP requirement. This will appear either on the top or bottom of the report, depending on your entry for field TOP/BOTTOM in the LAB REPORTS file (#64.5).

In our example of X:Y (internal entry number of the major header: page increment within that major header), Y will increment when the page becomes full. When full, the page is designated at the bottom of the report as PERMANENT. The next time data is verified for this major header, a new page will print (X:Y+1). Once a page is designated PERMANENT, it will not reprint with the cumulative report. This PERMANENT page will never have a follow-up page to take its place. There will never be any updated or new data printed on it. The TEMPORARY page may or may not be updated in the future. For filing purposes, if there are two pages with the same designation X:Y, only the page with the most recent date needs to be maintained.

The tests to print to the Major Headers are set up in Minor Headers for each page. There are two types of displays available: vertical and horizontal.

Minor Headers

Since our major headers are the sections of our report and are used for naming the pages, we need to consider just what the contents of each of these pages are. The contents of these pages are set up in the minor headers. There are two formats that can be used for these minor headers: the vertical display and the horizontal display. These displays have several features in common. The full name of the minor header will be printed. You can have these names more fully define the contents of that page; e.g., Hepatic Profile, General Chemistry Tests, Autoimmune Disease Panel, CBC, etc.

The features of Minor Headers are:

- Each minor header is linked to one site/specimen. The site/specimen must exist in the TOPOGRAPHY file (#61). A test and a site/specimen can only appear on one header. If you wish to report out two serum chlorides on different pages, or two urine volumes, etc., the only way to do this is to have two different data names in File #63. This is also important to know if you want to be able to display tests with two different reference ranges.

- Units of measurement, reference ranges, therapeutic ranges will print for each test. The therapeutic range will not print if a reference range is also defined for a test. The ranges may be numeric, free text or executable code (e.g., $S(SEX="M":45,1:50). If this were set in the subfield Reference Low under the Site/Specimen multiple in File #60, the low reference range for men would start with 45; for females, the range would start with 50.

- Test values are flagged as L (low), H (high), L* (low, critical) and H* (high, critical).

- Comments are footnoted on the report. They are linked to the accession area. There should be consideration of either entering the test name in the comment (if tests print to more than one minor header) or setting up unique accession numbers for some tests. This may help avoid ambiguity.

- Print name for the test are from File #60 Print Name field. The name may be edited in File #64.5. Up to seven characters are allowed. The ability to edit this field may become a necessary feature if a site has abbreviated the Print Name field to one-two characters in File #60 for purposes of label printing.

- Print code may be used for expansion of free text data, alignment of decimal points, etc. Although the print code is executed on printing, it is not stored with the data in the ^LR global. If the [LR SUP SUMMARY] option is used for supervisory review, this may lead to some confusion.

Example:

```
INPUT TO WHAT FILE: LAB REPORTS (2 entries)<RET>
EDIT WHICH FIELD: ALL// 10 MAJOR HEADER (multiple)
   EDIT WHICH MAJOR HEADER SUB-FIELD: ALL// 10 MINOR HEADER (multiple)
      EDIT WHICH MINOR HEADER SUB-FIELD: ALL// 10 LAB TEST (multiple)
         EDIT WHICH LAB TEST SUB-FIELD: <RET>
         THEN EDIT LAB TEST SUB-FIELD: <RET>
      THEN EDIT MINOR HEADER SUB-FIELD: <RET>
   THEN EDIT MAJOR HEADER SUB-FIELD: <RET>
THEN EDIT FIELD: <RET>
Select LAB REPORTS NAME: CUMULATIVE REPORTS
Select MAJOR HEADER: DIFFERENTIAL// CBC
   Select MINOR HEADER: CBC PROFILE// <RET>
      Select LAB TEST: PLT// WBC
         ...OK? YES// <RET> (YES)
       TEST PRINT CODE: XXXXXXXX
```

- The print code can be an invaluable tool when setting up horizontal headers for decimal alignment, < or > characters, or right and left justifying columns. You do not need programming access to use MUMPS in the print code fields — only an understanding of MUMPS formatting commands.
- If desired, the locale field (routing location for the test when ordered) may print with the test.
- You can combine several accession areas to a minor header. The only thing they need to have in common is the site/specimen.
- Displays cannot be mixed within a major header.
- If a test is not defined to a minor header, the test will print to the MISCELLANEOUS page.

Display types

There are two displays types, vertical and horizontal. Following are the characteristics of the two displays:

Vertical Displays: Only one vertical Minor Header may exist for a major header page. The tests print to the far left hand side of the page. The column width for all tests is hard coded to be 10 characters wide. The data contained in the Test Print Length field is ignored. The first print field for test values is in column nine. Units of measurement and reference ranges appear to the right of the test values.

Horizontal Displays: Test names, units of measurement, reference ranges are listed horizontally under the Minor Header name. If you are using more tests than can print across the page, the additional tests will wrap to a new line.

More than one horizontal Minor Header may be set up for a Major Header page. This is a useful feature for tests having several site/specimens. An example of this is low-volume tests performed in Chemistry. You might want to call the major header SPECIALS. Under this major header, you could have several minor headers such as STOOL SPECIAL TESTS - site/specimen: Stool, PLASMA SPECIAL TESTS - site/specimen: Plasma, URINE SPECIAL TEST-site/specimen: Urine, etc. In this manner, you could designate many infrequently ordered tests to one major header of your cumulative.

However, a Minor Header will not print to a page unless one test in the Minor Header has verified results. The first print field will begin in column 20 if the locale field is set to “NO” and column 24 if set to “YES”. The default column width for tests with the horizontal formats is 7. However, wider widths give an easier to read display (nine and eleven seem to be optimal). When initially setting up a Major Header page, the option Print Full Patient Summary may be used for testing. This option uses the major/minor header setup for printing.

Miscellaneous information

- The VAMC field is displayed on each page of the cumulative at either the top or bottom of the page, depending on the entry in the TOP/BOT field. The VAMC field should have the name of the VAMC, and, if desired, the name of the lab section doing the tests within the major header. Having the name of the laboratory on the printout is a Lab CAP requirement.

- Any test not assigned to a CUM header will print on miscellaneous pages. Print codes to not work on these tests.

- Editing/crossferencing the cumulative display setups.

  1. Do not edit/crossference while the cumulative is building or printing.

  2. Once a vertical format is set up - do not change it to a horizontal one.

Relationship to Files #64.5 and #60

The cumulative report uses values in a cross reference for File #64.5 to display reference ranges, therapeutic ranges, and units. The entries in this cross reference are created when a test is entered into a minor header. At that time it uses whatever is defined in File #60 for that test and specimen. If any changes are made in File #60 to the above-mentioned fields, and if those changes need to be reflected on the cumulative report, File #64.5 should be reindexed. Within the Cumulative Menu, there are options that will correctly reindex a desired cross reference.

Cumulative Reprint Options

When a reprint option is selected, you are informed about the status of the last run cumulative. If the cumulative finished, the finish time is displayed. Otherwise you are told where the cumulative had completed processing. You are then given an opportunity to start at that point.

If the cumulative fails to print, is interrupted, or a permanent page becomes lost, there are several reprint (rerun) options available.

Reprint cumulative on a given patient [LRAC PT]

Reprint a permanent page from cumulative [LRAC 1 PAGE]

Reprint cumulative on a given location [LRAC LOC]

Reprint cumulative from location to location [LRAC LOC-LOC]

By Patient

Use either the Reprint Cumulative on a Given Patient or the Reprint a Permanent Page from Cumulative option when the request concerns a specific patient.

Rerun cumulative on a given patient [LRAC PT]

If a single patient cumulative needs to be reprinted after the full run of cumulative, use this option. This option can be used to reprint the patient's entire cumulative (Select 1 of this option) from a specified date. Initially, this may not take a long time to run. However, if the patient's entire cumulative needs to be rerun to a much earlier date, it may take a long time to run and might affect the system's performance. Selection 1 should not be used except in extreme cases, and it should be stressed to ward staff, etc. how important it is to know what to maintain in a patient's chart. If Selection 1 is chosen, a warning message will appear:

****THIS PRINTOUT MUST BE CHARTED!!!****

The computer system will then tell you the starting date for which there is a cross reference for data to appear on the cumulative. If only a single page in a patient's chart needs to be reprinted, you should use the Reprint a Permanent Page from Cumulative [LRAC 1 PAGE] option.

Selection 2 of this option should be used for printing the patient last cumulative printing. However, you can only reprint from the day's previous run. If the cumulative has been run again, you will not be able to print a patient's cumulative for runs other than the last printing. This has caused a lot of problems for many sites.

Reprint a permanent page from cumulative [LRAC 1 PAGE]

This option reprints a single permanent page from a patient's cumulative. The page number must be specified in the same format as it is printed on the cumulative. Device settings and definitions must be the same as when the page originally printed.

By Location:

Use one of these two options when you need to reproduce an entire section of the Cumulative (e.g. one of the printers failed to print).

Reprint cumulative on a given location [LRAC LOC]

This can be used to print a single ward location if something happened during the full run of the cumulative. This option cannot be used for nonstandard locations such as FILEROOM.

Reprint cumulative from location to location [LRAC-LOC-LOC]

By far the easiest to use. This option may also be used to initiate the unfinished portion of a cumulative. If pages have misprinted you can designate a location and choose the patient within that location to start with, and then choose the ending location and the patient to end with. A very easy to use option.

Initialize LAC global and X references [LRAC INITIALIZE]

This option is used when the medical center is ready to begin actual charting of the daily cumulative. It may be run multiple times to restart the page numbering during the **testing phase** of the implementation. Once actual charting has begun, THIS OPTION SHOULD NEVER BE RUN AGAIN! While all pages are numbered and dated, the potential for confusion is obvious.

☛**WARNING:** Once in production, the Initialize LAC global and X references [LRAC INITIALIZE] option should be removed from menus OR disabled!

Updating the Cumulative Report

When the cumulative report file is designed and entries made in the subfield LAB TEST under the MINOR HEADER, several entries are triggered. Since these entries are triggered, no updating in the cumulative report file occurs when the tests are modified in File #60. There are menu options available to recross-reference the cumulative file so that the changes made in File #60 are accurately reflected on the cumulative report.

Recross-reference Indexes in LAB REPORTS File

This menu contains the three options which will allow you to select the appropriate index for recross-referencing. This is not system intensive and can be done any time of day. These are well-documented in the OPTION file (#19).

> **MUMPS A Index of the LAB REPORTS file [LRAC A]**
> If any changes are made under the Site/Specimen field in File #60, i.e., Reference ranges, therapeutic ranges, critical ranges, units, the A cross reference needs to be reindexed.
>
> **MUMPS AR Index of the LAB REPORTS file [LRAC AR]**
> This option will probably not be used as much as the A Index. It is for re-cross referencing the site/specimen has other significant impacts in the system and should be well thought out before this type of change is implemented.
>
> **MUMPS AC Index of the LAB REPORTS file [LRAC AC]**
> This option allows the updating of the Data names from the tests in File #60.

There is also an option available to update all three indexes at one time (MUMPS A, AC, AR indexes of the LAB REPORTS file [LRAC A AC AR] option).

When do you need these other than for updating? You should make it a standard practice to periodically check the Cumulative Report file for potential errors. Diagnostic Routine for LAB REPORTS file (#64.5) allows the LIM to check for potential problems or errors. Warning and fatal errors are listed in the report. Even if no updating has occurred in File #60, the routine only takes seconds to run and gives the peace of mind that the cumulative report is up to date. These cumulative utilities provide the LIM with necessary resources for keeping file entries current without having VA FileMan utility options.

Interim Reports

Interim reports are designed to display or produce a printed report of verified lab results that occur in the interim of the running of the cumulative. Thus the name Interim Reports. These reports are in a different format from the cumulative and should not be charted.

It is most important to remember that the interim was not intended to keep up with patient movement. The location entered during the accessioning process will be the location used for printing purposes.

Interim reports will include comments from File #60, field SITE/SPECIMEN, subfield INTERPRETATION. At this time, these comments do not appear on the cumulative report.

Both MI and CH subscripted are available for review with the interim report options. An accession area must have a print order set up in File #68, the ACCESSION file, for results to print on the interim report. For non lab users (no LRLAB key), only those tests set up as Both or Output in File #60 will print on interim reports. Users having the LRLAB key may see data entered as "Input Only."

Since only verified reports will be displayed, the interim reports will not display the status of tests (i.e., incomplete, testing in progress) and hospital staff should be instructed to check the option Order/Test Status before generating an interim.

Interim reports can be printed at various times during the day to a centralized printer. Printing is controlled by the LRTASK options, run by TaskMan, and the INTERIM REPORTS file (#64.6). The appropriate LRTASK option should have fields 200, 201, and 202 filled in with the tasking information. File #64.6 needs to have locations defined for which interim reports are printed, and the Hospital Location file (#44) must also have the Abbreviation field filled in. Whether or not to transmit results immediately upon verification and whether or not to include location on interim reports is also defined. In order to transmit results upon verification, the Que Verified Test(s) fields in the LABORATORY SITE file (#69.9) needs to contain a value of "YES". If an accession area does not have a print order, the results for that area will not be printed on the interims.

There are several ways to generate interim reports:

- Called up automatically for various times of the day using TaskManager
- Printed as reports become available (Immediate Interims)

The automatic interim report feature allows a site to select a range of urgencies to print. A field is available in File 64.6 called Urgency Cutoff. This field can be used to establish a range of urgencies to print automatically to a certain location (i.e., If Stat = 1, Pre Op= 2, Routine = 3 and Pre Op is entered into this field, then any urgency less than or equal to 2 will print automatically. The numeric designation is assigned during the enter/edit process on creation of the urgency in the URGENCY file (#62.05).

When deciding to use the automatic interim feature, please keep in mind that every time a test is verified, re verified, etc., a report will print. If you have several tests per accession number and each test is verified separately, you will generate a sheet for each time a test on the accession number is verified.

- Called up manually through a menu option for either one patient, a hospital location, or by physician.

  Those using the interim for lookup purposes (other than Interim Report for Selected Tests as Ordered [LRRSP]), you need to remember that the dates used in the selection for review are the collection date and time. All interim reports print in inverse date order. This can be very frustrating if your Lab routinely holds tests over for batching purposes. If you verify a test today but it's collection time is last week, it will not print with today's interims since the interim option works from the collection date and not the verify date.

  Both MI and CH subscripted tests can be available for review with the interim report options.

Menu Options (Manual)

Menu options can be selected for locations or patients. The real plus for all the options by patient is the ease by which data can be retrieved. For lookup, all you need is the patient's name and an approximate date range.

By Patient

There are five options in the Lab Menu to manually generate an interim report for a given patient:

- [LRRP2] gives all tests for a specified time period
- [LRRSP] gives selected tests for a specified time period
- [LRRS] will manually queue or print the interim reports by location
- [LRRS BY LOC] will manually print the interim report for a given location.
- [LRRP3] gives interim reports for selected tests.

These options can be run at any time.

Interim Report [LRRP2]

This report will output all tests within a specified time period for a given patient. At present, the default time range is T (for today) through T-7. Only verified results are available. Microbiology data is available through this option. One page is printed per accession area if this option is printed.

```
Select Patient Name: FARKLE,SPARKLE J 12-2-43 444557788
Date to START with: TODAY// <RET> (APR 9, 1989)
Date to END with: T-7// <RET> (APR 2, 1989)

DEVICE: HOME// PRINTER
```

Many of the ward staff are using the defaults that have been set up in these options. For acute care patients, this might lead to an overwhelming amount of paper. Instruct anyone using the system to use the smallest date range possible. If they are unsure of a date or do not know the date, encourage them to use the option Order/Test Status to look up the date or display the data on a screen until they know the exact date to select.

```
 Select Patient Name: FARKLE,SPARKLE J 12-2-43 444557788
Date to START with: TODAY// <RET> (APR 9, 1989)
Date to END with: T-30// <RET> (MAR 2, 1989)

DEVICE: HOME// <RET>
```

Please note that the user can specify any time period. It is important that your hospital staff know an approximate time range available to them. (How long will you keep data in the system — 90 days, 60 days?) If data is to be looked up for a previous calendar year, the date entered must include the month, the day, and the year.

Because of the complexities of the archiving algorithm, there is no good way of indicating an exact time period available in the system. Data is available if it is still in the ^LR global. Your site, if T-90 is used at the time of archiving, can at least guarantee 90 days for CH subscripted tests and 365 days + 90 days for MI-subscripted tests.

Interim Report for Selected Tests as Ordered [LRRSP]

This report is a detailed format for an individual patient. The report is displayed for selected tests as they were ordered (lookup is done by orders in ^LRO(69)). This option allows the user to select a specific test or panel, or select the ANY test default which will output all verified tests for that patient during the specified time period.

Special output for certain tests can be set up in File #60 in the Pretty Print Entry and Pretty Print Routine fields. These fields can be used if you write special display routines. However, this does take an in-depth knowledge of the internals of the laboratory package.

There were originally some entries in these fields already set up in the laboratory package when it was distributed. However, these will not work if you have changed or added data names to File #63 for those tests involved. These entries should be deleted since they may cause some unusual displays.

The default printing for this option if these fields are empty will then be the same as Interim Report [LRRP2].

Again, please remember, only verified tests will print with this option or any of the interim report options.

The time period available for lookup with this option is based on different criteria from the other interim report options. The period of time available for lookup is set up in the field for Grace Period For Orders in File #69.9. Whatever is in this field entry will be the maximum retention available for lookup.

Interim Report for Selected Tests [LRRP3]

Not to be confused with LRRSP, this interim allows you to select a test or multiple tests for lookup. Even if the orders have been purged, the data is available.

By Physician

Interim Report by Provider [LRRD]

This report can be used to select single physicians, a range of physicians, or all physicians. Only one day's worth of results can be printed. If more than one physician is selected, the printout is alphabetical by physician. There will be a title page with the first few characters of the physician name as section breaks. Then the patients will follow in alphabetical order.

```
DAILY REPORT FOR DAY: TODAY// <RET>
Do you want (A)ll physicians, a (R)ange of physicians,
or (S)elected physicians? S// <RET>
```

Interim Report for 1 Provider (manual queue) [LRRD BY MD]

This report is for only one physician for one day. When several reports print on a single page, there may be more than one physician's reports printed. The first one will be the selected physician.

By Location

Interim Reports for 1 Location [LRRS BY LOC]

This option can be used by ward staff to call up data for patients on their respective floors. This option could be useful to call up before ward rounds. The only information that needs to be entered through this option is the date and location. Many floor locations in the computer may be different from what the house staff is currently using. These location names should be known by the staff. CCU may now be 5ICU or other floors may be subdivided into several wards. Ward location, 3B may be divided into three locations in the computer — 3B (NEURO), 3B (RHEUM), and 3B (ORTHO).

These reports contain more than one accession per page and print by order number. Therefore, less paper is generated than by "Interim report by patient."

Each time the option is called, all the data which was collected and verified that day will print. An example of this would be if you use this option at 6 A.M. for rounds to get the verified results for that day, you would get all verified data since 12:00 A.M. to 6:00 A.M. If you call this report again at 1:00 P.M. that afternoon, you would get all the data which was collected and verified for that day from 12:00 A.M. until 1:00 P.M. that day. You can't get only the new data since the last printing of your interim report. The old data is repeated with the new verified data.

Interim Report by Location [LRRS]

This option is the manual equivalent of the tasked options. All verified patient data for that day will print if the samples were collected that day. All locations will print unless otherwise specified. Again, all data for that day will print whether or not the option or floor had data printed at earlier times.

The sorting sequence of this report will be alphabetically by location and then alphabetically within location.

Interim Contents

What can you expect to find on your interims?

The format of the interim is entirely different from that of the cumulative report. Some of the features of this report include:

1) Form number 10-1338

2) Patient demographic information: Name, social security number, age, and ward location

3) Title, which includes hospital name followed by Clinical Laboratory Report (might need to be changed if you are using this report for In Vitro Nuclear Medicine or Pulmonary Laboratory)

4) Date and time of printing of the report

5) Ordering information: Physician, date and time of collection, and specimen type

6) Laboratory data

   This section includes the name of the test as it appears in LABORATORY TEST file (#60). However, for laboratory test names in File #60 that exceed more than 20 characters, the report defaults to the name in the Print Name field of File #60.

   For long panels, if one name exceeds 20 characters, this can make for some strange output.

   The laboratory result is displayed with units of measurement and reference range for the specimen type. If the $SELECT function was used for sex or age for reference lows and highs, the correct reference range to match the patient's age or sex will be displayed.

   The collection date and time.

   The tests will also appear according to the print order number assigned within an accession area. Please be careful not to assign a print order number more than once or one of your tests will not print. Also, the Accession Area in ACCESSION file (#68) must have a print order for the reports to print.

   If you have entered information in the Interpretation subfield of the field Site/Specimen in LABORATORY TEST file (#60), the information will be displayed as:

   ```
   Eval: And your interpretation...
   ```

   There is also a KEY: to explain any high, low, or critical value flags.

Tasking the Interim

There are basically two different interim reports that can be tasked. There is the tasked batched interim which is generated at a particular time of day and another interim that is called an immediate interim.

Immediate Interim

You must edit several files or have the files edited.

File (#69.9):	Field:Que Ch, He Etc. Verified Test(S) Field:Que Micro Verified Test(S) These fields must be set to no if you do not want the interim to print automatically.
File (#64.6):	Field:Location Must contain the location name that acts as a pointer to File #44. Field:Immediately Transmit Results Must be set to yes Field:Device Field:Urgency Cutoff All reports will print if field is blank. When it has an entry, only higher urgencies will print

Batched Interim

Batched Interim can be set up for various times of the day to a centralized printer.

NOTE: This device is set up in File #19 under the option name and is not that designated in File #64.6.

The information that will print on this report will be the verified data for that day, from midnight until the time of printing. If you elect to have more than one printing each day, you will not get just the reports since the time of the last printing but all verified results for the day. The printing will occur alphabetically by location and within each location, alphabetically by patient name.

File (#64.6) Field:Location
Must contain an entry for each ward location

Field:Interim Reporting must contain "YES".

File (#19) Option Name: LRTASK Daily Interim 1, Fields #200, #201 and #202 must contain entries. These fields are for device, frequency (once a day, once a week) and time. For each interim time of day, you will need a different tasked option. (e.g. LRTASK daily Interim I, LRTASK Daily Interim 2, etc.)

Supervisor's Report

The Supervisor's Report outputs results by hospital location for a single (or group of) major headers as defined in the LAB REPORTS file (#64.5). This report uses the same file as the cumulative report to retrieve data. Since the cumulative report updates this file, the Supervisor Summary report should be run after the cumulative report is finished.

- The field Daily Summary Reports in LAB REPORTS file (#64.5) is an arbitrary name given to a particular report. For each name, any number of headers can be selected to be included in the report. These headers point to the major headers already defined in the same file. All tests that are defined for the major headers will be included in the report.

- Unless the Sort By Patient field in the LAB REPORTS file (#64.5) is set to "YES" the report is sorted by location.

- To task the report, use the Supervisor's Summary Report for TaskMan [LRTASK ACS] option and fill in Queued To Run At What Time fields (#200), Device For Queued Job Output field (#201), and Rescheduling Frequency field (#202).

- To manually request a Supervisor's Report, use the Supervisor's Report [LRACS MANUAL] option in the Supervisor Reports Menu.

INTERFACE GUIDE

FOR OE/RR PACKAGE

Interface Guide For OE/RR Package

NOTE: Please refer to the OE/RR documentation for the most **recent** information.

Use the menu options, OE/RR Interface Parameters on the Lab Liaison Menu to edit the parameters as indicated by the OE/RR documentation.

```
Edit a lab administration schedule     Option name: LRXOSX1     Synonym: AS
     This option allows the user to edit a lab schedule in the Administration
     Schedule used in the OE/RR interface.

Edit HOSPITAL SITE parameters     Option name: LRXOSX2     Synonym: EH
     This option allows editing the HOSPITAL SITE multiple of the LABORATORY
     SITE file (69.9).  The parameters edited here are used in the OE/RR
     interface to allow or restrict the use multiple-continuous orders.

Inquire to a Lab administration schedule     Option name: LRXOSX0     Synonym: IL
     This option allows the user to inquire to the Administration Schedule
     file for schedules that apply to Laboratory orders used in the OE/RR
     interface.

Update Lab protocols for OE/RR     Option name: LRX0     Synonym: UP
     This is a menu of options that update protocols used by OE/RR to
     be consistent with changes made in Lab files.

Update ALL lab protocols     Option name: LRX1     Synonym: AP
     This option updates all lab protocols used with OE/RR.

Update protocol for a single lab test     Option name: LRX2     Synonym: SL
     This option will update lab protocols for selected tests used with
     OE/RR.

Update protocols for all accession groups     Option name: LRX4     Synonym: GP
     This option will update lab protocols for all accession test groups
     used with OE/RR.

Update protocols for all lab tests     Option name: LRX3     Synonym: LT
     This option will update lab protocols for all lab tests found in file
     60. These protocols are used with OE/RR.

Update protocols for single accession group     Option name: LRX5     Synonym: PS
     This option will update lab protocols for selected accession test
     groups used with OE/RR.
```

Comments:

1. Integration between the Lab package and OE/RR can be switched ON or OFF by editing a single field. To do so, edit the ON field of the Package Parameters multiple of the ORDER PARAMETERS file.

2. A cross reference exists in LABORATORY TEST file (#60), field #200.01 to enhance the capability to check for duplicate orders.

3. Review the accuracy and applicability of the Laboratory administration schedules.

PURGING AND ARCHIVING

Purging And Archiving

Force Cumulative Data to Permanent Page [LRAC FORCE]

The concept of temporary and permanent pages is part of the cumulative design. For pages to be in this format, the cumulative must have been initialized.

One of the eligibility requirements for archiving of laboratory data from the ^LR global assumes that the cumulative is in use and that the 9th piece of ^LR is set to a permanent page designation when a page becomes “full.”

Unfortunately, many patients do not have the activity level which will result in a “full” page within a reasonable time frame. In the case of deceased patients, the temporary pages have no mechanism to become permanent since there is no longer any activity for these pages.

This, in conjunction with some site selectable parameters such as not printing cumulatives for either inpatients or outpatients, not initializing the cumulative report, etc., has resulted in increasing disk space requirements by laboratory.

The option, Force Cumulative Data to Permanent Page [LRAC FORCE] can be used to set the 9th piece in the ^LR global to a permanent page designation. This option can be used whether or not a cumulative report has printed. By setting the page designation in ^LR, the data is considered to be permanent and eligible for subsequent archiving. Data is not removed from the system until the archiving utilities have been run.

To use the option, the field Grace Period For Inactivity in File #69.9 must contain an entry. Each site should establish a reasonable time frame for inactivity (e.g., if a patient has not had any activity - no tests ordered for 6 months, 2 years, etc., we might want to make it eligible for archiving). The field entry represents the number of days of inactivity.

For those patients who had cumulative data forced to a permanent page for a cumulative report, the page numbers will reflect the last temporary page. There is no reprinting of the cumulative report at this time.

Example: If the last temporary pages to print on SMITH,JOHN were 1:1,2:2,25:1 and there has been no activity on this patient for the grace period for inactivity, the current page designation will be forced into the 9th piece of ^LR global. When the pages are forced to permanent, the ^LR(LRDFN, PG node is updated. The next time the patient has data for each of these pages, the pages to print will be 1:2,2:3,25:2.

NOTE: If there has been any data reported within the grace period for any page, the patient data is not forced. Either all pages are forced or no pages are forced.

If the patient's results have not been initialized and printed in the cumulative report format, the data is still eligible for forcing to permanent pages. The routine looks at the data in ^LR and determines the major header page for the results. The increment within the major header will be set to "1" for all results, regardless of the amount of data for each of the headers. If this patient subsequently does have a cumulative report printed, the temporary pages will start with the second page increment within the Major Header; i.e., MAJOR HEADER: 2 (increment within the major header).

A list of patients is generated during the running of this routine, which will print the LRDFN, patient's name, and pages that were forced to permanent.

The ^LRO(68,"AC" and ^LAC("LRAC" cross references to the data in ^LR(LRDFN,"CH" are also killed off.

NOTE: You may want to stop journaling during the running of this routine, because of the increased amount of journal space used when global nodes are killed off.

Purge Old Orders and Accessions [LROC]

Ordering and accession information for those accession areas in ACCESSION file (#68) set up to have a transform of Daily is purged with this utility option. Data stored in ^LRO(68,"LRAA",^LRO(69,"C", and ^LRO(69,"B" are killed off during the running of this routine. The amount of data retained will be determined by the Grace Period For Orders field in File #69.9. Once this data is purged, any option referencing the accession number (e.g., CH 0814 44), or the order number will no longer be accessible. Some examples of options are EM (Enter/verify/modify data), Review by Order Number and Interim Report for Selected Tests as Ordered.

This option should be run on a regular basis to control the amount of disk space required by laboratory. Your site should determine an appropriate length of time to retain at this type of information. It is recommend that the site retain at least 120 days of accession/orders.

For accession areas (i.e., for referral tests) where the turnaround time may exceed the Grace Period for Orders, consider setting these up for monthly or yearly accession area transform.

Never run this option Purge Old Orders and Accessions [LROC] during peak activity hours since it is system-intensive. A Site Manager may want to disable journaling ^LRO, depending on the amount of data in these files to be purged and the frequency with which the option is run. To purge the data for ^LRO(68, LRAA for those Accession areas other than daily, VA FileManager must be used.

This is an example of purging of a yearly, quarterly or monthly accession area transform deletion.

```
Select OPTION:    E    (ENTER OR EDIT FILE ENTRIES)
INPUT TO WHAT FILE:    OPTION//    68    ACCESSION    (22 entries)
EDIT WHICH FIELD:    ALL//    DATE    (multiple)
             EDIT WHICH DATE SUB-FIELD:    ALL//    <RET>
THEN EDIT FIELD:     <RET>

Select ACCESSION AREA:     MICROBIOLOGY

Select DATE:    1987//    <RET>
         DATE:    1987// @
         SURE YOU WANT TO DELETE THE ENTIRE DATE?    Y    (YES)
```

NOTES:

1. An answer of "YES" will delete an entire year.
2. Monthly Accession Areas delete entire month.
3. Quarterly Accession Areas delete entire quarter.

Archiving Data

Archiving is intended to be used as a space management tool and should be used on a regular basis as part of a disk management plan. It should **not** be used as a last resort when available disk space becomes critically low. Be aware that the archiving process temporarily uses additional disk space. If disk space is already critical, sufficient space may not be available for archiving.

There are now four new files which can be archived. They are ARCHIVED LR DATA file (#63.9999), ARCHIVED WKLD DATA file (#64.19999), ARCHIVED LAB MONTHLY WORKLOAD file (#67.9999) and ARCHIVED BLOOD INVENTORY file (#65.9999). Only the ARCHIVED LR DATA (#63.9999) is required by regulatory agencies.

These files will be archived using a new FileMan functionality.

First, the data is moved from the source file based on certain user defined criteria to the archive files. All four archive files are FileMan compatible. Then a process uses the archive files as a template to delete entries from the source file. Then the archived files are copied to long storage medium. Then the archived is purged of data.

Archive of LAB DATA file (#63)

The archive process looks through the LAB DATA file (#63) for data from microbiology (MI), chemistry, urinalysis, hematology, serology, etc., (CH). Any found eligible are copied to the global ^LAR for subsequent processing by the archive utilities.

Eligibility is determined by the following criteria:

a. Lab determines the minimum retention period. The default is currently T-180. Note that the retention period should be longer than the time the data is saved in the Accession and Order files. Micro data is retained an additional 370 days by the archive search, to accommodate the yearly accession area.

b. For CH tests, the results must have been printed to a cumulative permanent page. For MI tests, any data older than the retention period is eligible to be archived. Clinic patients with low activity, deceased patients, or any other group with few lab tests ordered will never turn over permanent pages and the current utility will never archive this data. The Force cumulative data to permanent page [LRAC FORCE] option, can be used to set the 9th piece in the ^LR global to a permanent page designation. By setting the page designation in ^LR, the data is considered to be permanent and eligible for subsequent archiving.

c. Tests for Lab Controls, Research, Environmental, and Reference patients are selected for archive solely on the basis of the retention period.

You reach the archiving options using the following pathway:

```
Supervisor menu [LRSUPERVISOR]
Lab liaison menu [LRLIASON]
Archive lab data [LR ARCHIVE MENU]
1  Search for lab data to archive [LR ARCHIVE SEARCH]
         **> Locked with LRLIASON
```

```
2  Write data to off-line media [LR ARCHIVE WRITE MEDIA]
3  Clear data from the LAR global [LR ARCHIVE CLEAR]
           **> Locked with LRLIASON
4  Read data from off-line media [LR ARCHIVE READ MEDIA]
5  Purge data found in the Search option [LR ARCHIVE PURGE]
           **> Locked with LRLIASON
6  Find patient's archived data [LR ARCHIVE DATA]
7  Restore archived data to LR global [LR ARCHIVE RESTORE]
8  Convert archived data to use New Person file [LR ARCHIVE NP CONVERSION]
```

The seven archiving options are listed below in the required sequence for archiving (they MUST be run in this order):

1. Search For Lab Data To Archive

   Data to be archived should be older than the beginning of the month three months ago. Anatomic Pathology and Blood Bank data are not archived.

2. Write Data To Off-Line Media

   After having created entries in the ^LAR global, the data should be written to off-line media for purposes of long-term storage. The site manager should determine the method of data storage of the ^LAR global.

3. Clear Data from the LAR Global

   This option clears any old data from the ^LAR global.

4. Read Data From Off-Line Media

   After having cleared the ^LAR global, the data should be read back in, to verify and purge what has been archived. The site manager should determine the method of data retrieval of the ^LAR global.

5. Purge Data Found In The Search Option

   Data found in the Search archive option are stored in the ^LAR global. Note that the data is removed from both the ^LR and the ^LAR globals. This step cannot be run unless step 3 has been done. This step loops through LAR and removes the corresponding entry from the LAB DATA file (#63). Accession nodes are checked before deletion to make sure that nothing has been modified since the search phase. A record is kept in the LAB DATA file to indicate that this patient has had archived data and to tell which tape has been used.

6. Find Patient's Archived Data

   Once the archived tape has been restored to the system, a single patient or all patients may be retrieved from that archived tape. Data for a patient which has been archived, the storage location of the data is saved with the patient's remaining entry in the ^LR(global. This information can be found using this option.

7. Restore Archived Data To LR Global

   This option is used to restore data into the LR global that has been archived.

Convert Archived Data to Use NEW PERSON file

After you restore old data to the system, you must use the Convert Archived Data to Use NEW PERSON file option. This option allows you to repoint old data to the NEW PERSON file (#200).

☛**Warning:** It is required that this step be performed before any patient data is utilized. Failure to do so will result in various names being incorrect. Patients name in clinical data does not require this conversion process.

NOTES:

1. To reproduce a cumulative for patient data that has been restored from the archives, use the Reprint Cumulative on a Given Patient [LRAC PT] option, and reinitialize the patient's entire cumulative.

2. The physical and logical names you are asked for during the archiving process are meant to be identifiers for you to keep record of archiving processes. They are NOT physical or logical devices (e.g., printer, terminal, etc.).

3. When you restore a patient to the ^LR global, you now have two records. One active on the ^LR global and one archived. When you archive that section of the ^LR global, you will have two archive records on that one patient.

GLOSSARY

Glossary

This Glossary contains terms and their definitions that may not be familiar to the user who is accessing the facility's computers for the first time. Basic terms, acronyms, and phrases that are used throughout the DHCP environment are included.

Abbreviated Response	This feature allows you to enter data by typing only the first few characters for the desired response. This feature will not work unless the information is already stored in the computer.
Access Code	A code that allows the computer to identify you as a user authorized to gain access to the computer. Your code is greater than six and less than twenty characters long; can be numeric, alphabetic, or a combination of both; and is usually assigned by a site manager or application coordinator. (See the term verify code in the Glossary.)
Accession	A unique alpha numeric (combination of letters and numbers) assigned to an individual patient specimen when it is received in the laboratory. The accession is assigned by the computer and contains the laboratory departmental designation, the date and an accession number. This accession serves as identification of the specimen as it is processed through the laboratory. (Example: HE 0912)
Accession Area	A functional area or department in the laboratory where specific tests are performed. The accession area defines the departmental designation contained in each accession.
Accession Date	The date of the accession, part of the total alpha-numeric accession of each specimen.
Accession Number	A unique number assigned to each accession.
ADP	Automated Data Processing
ADT	Admission, Discharge, Transfer. A component of the MAS software package.

AFIP	Armed Forces Institute of Pathology; an external review board.
AEMS	Automated Engineering Management Systems. This is the Engineering Service software package.
AMIE	Automated Management Information Exchange. A system that allows the Veterans Benefits Administration to use their WANG System to query medical centers via the VADATS network.
AMIS	Automated Management Information System; a method for tabulating Workload.
ANSI	American National Standards Institute. An organization that compiles and publishes computer industry standards.
ANSI MUMPS	The MUMPS programming language is a standard; that is, an American National Standard. MUMPS stands for Massachusetts General Hospital Utility MultiProgramming System.
APP	Applications Portability Profile
Algorithm	A predetermined set of instructions for solving a specific problem in a limited number of steps.
Application	A computer program (e.g., a package) that accomplishes tasks for a user.
Application Coordinator	The designated individual responsible for user level management and maintenance of an application package (e.g., IFCAP, Laboratory, Pharmacy, Mental Health).
ARG	Applications Requirements Group
Array	An arrangement of elements in one or more dimensions. A MUMPS array is a set of nodes referenced by subscripts which share the same variable name.

ASCII	American Standard Code for Information Interchange. A series of 128 characters, including uppercase and lowercase alpha characters, numbers, punctuation, special symbols, and control characters.
Attribute Dictionary	See data dictionary.
Audit	An audit is a physical record of access to a file. The VA FileMan and Kernel provide audit tools that may be used to maintain a continuous audit trail of changes that are made to an existing database. Elements that can be tracked include, but are not limited to, fields within files and files themselves. Records are kept of the date/time and user making changes. In addition, the Kernel provides tools for auditing system access, option access, and device usage. Logs store the date/time of access, user identification and name of the option or device used.
Audit Access	A user's authorization to mark or indicate that certain information stored in a computer file should be audited.
Audit Trail	A chronological record of computer activity automatically maintained to trace the use of the computer.
Auto Instruments	Automated instruments used in the Lab that identify and measure tissue or other specimens.
Backup	The process of creating duplicate data files and/or program copies as are serve in case the original is lost or damaged.
Baud (Baud rate)	A measure of times per second that switching can occur in a communications channel. Data transmission speed roughly equivalent to 1 bit per second (bps). Commonly used baud rates include 300, 1200, 2400, 3600, 4800, and 9600.
Bidirectional	Automated instruments that send and receive information from DHCP.

Boolean	A term used in computer science for data that is binary (i.e., either true or false).
Boot	To load instructions into main memory to get a computer operational.
Buffer	A temporary holding area for information.
Bug	An error in a program. Bugs may be caused by syntax errors, logic errors, or a combination of both.
CAP	College of American Pathology
CAP Codes	Numbers assigned to lab procedures by the College of American Pathology for compiling work statistics.
Caret	A symbol expressed as "^" (up caret), "<" (left caret), or ">" (right caret). In many MUMPS systems, a right caret is used as a system prompt and an up caret as an exiting tool from an option. The "^" up caret is also known as the up arrow symbol or shift-6 key.
Checksum	The result of a mathematical computation involving the individual characters of a routine or file.
Cipher	A system that arbitrarily represents each character by one or more other characters.
Collection List	A listing of routine laboratory tests ordered for inpatients. The list is used by the Phlebotomy team during routine collection of specimens from the wards. The list is sorted by ward location, and includes both patient information (Name, SSN, bed/room number) and test information, type of specimen to collect, amount needed, date and time tests were ordered, urgency status, order number and accession number.
Command	A combination of characters that instruct the computer to perform a specific operation.

Computed Field	This field takes data from other fields and performs a predetermined mathematical function (e.g., adding two columns together). You will not, however, see the results of the mathematical calculation in the file. Only when you are printing or displaying information on the screen will you see the results for this type of field.
Computer	A device that processes information. A machine that has input, output, storage, and arithmetic devices plus logic and control units.
Control Key	The Control Key (Ctrl on the keyboard) performs a specific function in conjunction with another key. In some word-processing applications, for example, holding down the Ctrl key and typing an A will cause a new set of margins and tab settings to occur; Ctrl S causes printing on the terminal screen to stop; Ctrl Q restarts printing on the terminal screen; Ctrl U deletes an entire line of data entry when the return key is pressed.
Core	The fundamental clinical application packages of DHCP. The original core of applications built on the Kernel and VA FileMan were Admission, Discharge and Transfer (ADT), Scheduling, Outpatient Pharmacy, and Clinical Laboratory. Additional software packages were added to implement Core+6 and Core+8 configurations.
CPU	Central Processing Unit. Those parts of computer hardware that carry out arithmetic and logic operations, control the sequence of operations performed, and contain the stored program of instructions.

Cross Reference	A cross reference on a file that provides direct access to entries in several ways. For example, the PATIENT file (#2) is cross referenced by name, social security number, and bed number. When asked for a patient, the user may then respond with either the patient's name, social security number, or bed number. Cross reference speeds up access to the file for printing reports. A cross reference is also referred to as an index or cross index.
CRT	Cathode Ray Tube. A piece of computer hardware that looks something like a television screen. The CRT and keyboard collectively are called your terminal. A vacuum tube that guides electrons onto a screen to display characters or graphics. Also called VDT for video display terminal.
Cumulative	A chartable patient report of all data accumulated on a patient over a given time period.
Cursor	A flashing image on your screen (generally a horizontal line or rectangle) that alerts you that the computer is waiting for you to make a response to an instruction (prompt).
Data	In the generic sense, data is information that can be processed and/or produced by computers.
Data Attribute	A characteristic of a unit of data such as length, value, or method of representation. VA FileMan field definitions specify data attributes.
Database	A set of data, consisting of at least one file. that is sufficient for a given purpose. The Kernel database is composed of a number of VA FileMan files. A collection of data about a specific subject (e.g., the Patient file). A data collection has different data fields (e.g., patient name, SSN, date of birth). An organize collection of data about a particular topic.

Database Management System	A collection of software that handles the storage, retrieval and updating of records in a database. A Database Management System (DBMS) controls redundancy of records and provides the security, integrity, and data independence of a database.
Data Dictionary	A Data Dictionary (DD) contains the definitions of a file's elements (fields or data attributes); relationships to other files; and structure or design. Users generally review the definitions of a file's elements or data attributes; programmers review the definitions of a file's internal structure.
Data Dictionary Access	A user's authorization to write/update/edit the data definition for access computer file. Also known as DD Access.
Data Dictionary Listing	This is the printable report that shows the data dictionary. DDs are used by users, programmers, and Documenters.
Data Processing	Logical and arithmetic operations performed on data. These operations maybe performed manually, mechanically, or electronically. Sorting through a card file by hand would be an example of the first method; using a machine to obtain cards from a file would be an example of the second method; and using a computer to access a record in a file would be an example of the third method.
DBA	Within the VA, the Database Administrator oversees package development with respect to DHCP Standards and Conventions (SAC) such as name-spacing, file number ranges, and integration issues.
Debug	To correct logic errors and/or syntax errors in a computer program. To remove errors from a program.

Default	A response the computer considers the most probable answer to the prompt being given. It is identified by double slash marks (1/) immediately following it. This allows you the option of accepting the default answer or entering your own answer. To accept the default, you simply press the enter (or return) key. To change the default answer, type in your response.
Delete	The key on your keyboard (may also be called D or backspace on some terminals) which allows you to delete individual characters working backwards by placing the cursor immediately after the last character of the string of characters you wish to delete. The @ sign (the “shift-2” key) may also be used to delete a file entry or data attribute value. The computer will ask “Are you sure you want to delete this entry?” to insure you do not delete an entry by mistake.
Delimiter	A special character used to separate a field, record, or string. VA FileMan uses the (") character as the delimiter within strings.
Device	A terminal, printer, modem, or other type of hardware or equipment associated with a computer. A host file of an underlying operating system may be treated like a device in that it may be written to (e.g., for spooling).
DHCP	The Decentralized Hospital Computer Program of the Veterans Health Administration (VHA), Department of Veterans Affairs (VA). DHCP software, developed by the VA, is used to support clinical and administrative functions at VA medical centers nationwide. It is written in MUMPS and, via the Kernel, will run on all major MUMPS implementations regardless of vendor. DHCP is composed of packages which conform with name spacing and other DHCP standards and conventions.
Disk	The medium used in a disk drive for storing data.

Disk Drive	A peripheral device that can be used to read and write on a hard or floppy disk.
Documentation	User documentation is an instruction manual that provides users with sufficient information to operate a system. System documentation describes hardware and operating systems provided by a system vendor. Program documentation describes a program's organization and the way in which the program operates and is intended as an aid to programmers who will be responsible for revising the original program.
DRG	Diagnostic Related Group
DSCC	The Documentation Standards and Conventions Committee
DSS	Decision Support System
E3R	Electronic Error Enhancement Reporting System
Electronic Signature	A code that is entered by a user which represents his or her legally binding signature.
Encryption	Scrambling data or messages with a cipher or code so that they are unreadable without a secret key. In some cases encryption algorithms are one directional; they only encode and the resulting data cannot be unscrambled (e.g., access/verify codes).
Enter	Pressing the return or enter key tells the computer to execute your instruction or command or to store the information you just entered.
Entry	A VA FileMan record. It is uniquely identified by an internal entry number (the .001 field) in a file.
Extended Core	Those applications developed after the basic core DHCP packages were installed (e.g., Dietetics, Inpatient Pharmacy). Also referred to as Core+6 or Core+8.

EP	Expert Panel
Field	In a record, a specified area used for the value of a data attribute. The data specifications of each VA FileMan field are documented in the file's data dictionary. A field is similar to blanks on forms. It is preceded by words that tell you what information goes in that particular field. The blank, marked by the cursor on your terminal screen, is where you enter the information.
File	A set of related records treated as a unit. VA FileMan files maintain a count of the number of entries or records.
FileManager	See VA FileMan.
FOIA	The Freedom Of Information Act. Under the provisions of this public law, software developed within the VA is made available to other institutions, or the general public, at a nominal charge that covers the cost of reproduction, materials, and shipping.
Free Text	The use of any combination of numbers, letters, and symbols when entering data.
FTAM	File Transfer, Access, and Management
GKS	Graphic Kernel Standard
Global	In the MUMPS language, a global is a tree structured data file stored in the common database on the disk.
Global Variable	A variable that is stored on disk (MUMPS usage).
GOSIP	Government Open Systems Interconnection Profile
Hacker	A computer enthusiast; also, one who seeks to gain unauthorized access to computer systems.

Hardware	The physical equipment pieces that make up the computer system (e.g., terminals, disk drives, central processing units). The physical components of a computer system.
Header	Information at the top of a report.
Help Prompt	The brief help that is available at the field level when entering one or more question marks.
HINQ	Hospital Inquiry. A system that permits medical centers to query the Veterans Benefits Administration systems via the VADATS network.
HIS	Hospital Information Systems
HOST	Hybrid Open Systems Technology
IFCAP	Integrated Funds Distribution, Control Point Activity, Accounting and Procurement
IHS	Indian Health Service
IHS	Integrated Hospital System
Interactive Language	The dialogue that takes place between the computer and the user in the form of words on the screen of the user's CRT.
Initialization	The process of setting variables in a program to their starting value.
Input Transform	An executable string of MUMPS code which is used to check the validity of input and converts it into an internal form for storage.
IRAC	Information Resources Advisory Council
IRM	Information Resource Management
ISC	Information Systems Center
JCAHO	Joint Commission for the Accreditation of Health Care Organizations.

Jump (also called Up-Arrow Jump)	The Up Arrow Jump allows you to go from a particular field within an input template to another field within that same input template. You may also Jump from one menu option to another menu option without having to respond to all the prompts in between. To jump, type an up arrow "^" - the shift 6 key on most keyboards - and then type the name of the field in the template or option on your menu you wish to jump to.
Kernel	A set of DHCP software routines that function as an intermediary between the host operating system and the DHCP application packages such as Laboratory, Pharmacy, IFCAP, etc. The Kernel provides a standard and consistent user and programmer interface between application packages and the underlying MUMPS implementation. Two Kernel components, VA FileMan and MailMan, are self contained to the extent that they may stand alone as verified packages. Some of the Kernel components are listed below along with their associated namespace assignments. VA FileMan Dl MailMan XM Sign-on Security XU Menu Management XQ Tools XT Device Handling ZIS Task Management ZTM
Key	A security code that is assigned to individual users that allows access to options.
LAC	Laboratory Application Coordinator.
Lab Data	Patient verified laboratory data.
Lab Sub-section	Refers to the subdivision of lab major sections. If your lab uses this system, your reports will be printed and totaled by lab sub-section as well as lab section.

LAYGO access	A user's authorization to create a new entry when editing a computer file. (Learn As You GO, the ability to create new entries).
LIM	Laboratory Information Manager.
Line Editor	This is VA FileMan's special line oriented text editor. This editor is used for the word-processing data type.
Local Variable	A variable that is stored in a local partition.
Load List	Used for organizing the workload in various accession areas of the laboratory. A load list is generated for each automated instrument, and is used to arrange the order in which standards, controls and patient specimens are to be run on the specific instrument.
Log In/On	The process of gaining access to a computer system.
Log Out/Off	The process of exiting from a computer system.
Looping	A set of instructions in a program that are repeatedly executed. When set up correctly, VA FileMan allows you to loop through groups of entries in a file without having to select each entry individually.
LSI	Large Scale Integrating Device also known as Laboratory System Interface, an instrument for translating data between DHCP and auto instruments.
Magnetic Tape	Plastic or mylar tape on reels or cassettes used for data storage (also called mag tape).
MailMan	An electronic mail system that allows you to send and receive messages from other users via the computer.

Major section	Refers to the grouping of lab subsections into major groups within the lab. A lab may consist of the following major sections: General Clinical (may include hematology, toxicology, serology, chemistry, etc.), Blood Bank and Anatomic Pathology. If your lab uses this system, your workload report will be reported by major section ("Section Workload Report").
Mandatory Field	This is a field that requires a value. A null response is not valid.
MAS	Medical Administration Service
Menu	A list of options you are authorized access to and may select from.
Menu Tree	A series of menus you sequence through in order to get to the specific option you desire.
Microscan	An automated instrument used for organism identification and for measuring antibiotics within the Microbiology module.
MIRMO	Medical Information Resources Management Office in the Department of Veterans Affairs Central Office in Washington, DC.
MIS	Management Information Systems
Modem	A device for connecting a terminal to a telephone line, allowing it to communicate with another modem. Modems include the following types. Direct Connect —The modem is directly hooked into the phone line. Acoustic—The modem is connected to the telephone through the handset. Auto Answer—When it detects a ring signal, the modem will answer the phone. Auto Dial—The modem, upon command from the terminal or the computer, will dial another modem.

Multiple-valued	More than one data value is allowed as the value of a data attribute for an entry.
MUMPS	Massachusetts General Hospital Utility Multi-Programming System
Name spacing	A convention for naming DHCP package elements. The DBA assigns unique character strings for package developers to use in naming routines, options, and other package elements so that packages may coexist. The DBA also assigns a separate range of file numbers to each package.
NAVAP	National Association of VA Physicians
NCD	National Center for Documentation, located at the Birmingham ISC.
NIST	National Institute of Standards and Technology
NOAVA	Nationwide Office Automation for Veterans Affairs
Node	In a tree structure, a point at which subordinate items of data originate. A MUMPS array element is characterized by a name and a unique subscript. Thus the terms node, array element, and subscripted variable are synonymous. In a global array, each node might have specific fields or “pieces” reserved for data attributes such as name. In data communications, the point at which one or more functional units connect transmission lines.
Numeric field	A response that is limited to a restricted number of digits. It can be dollar valued or a decimal figure of specified precision.
OE/RR	Order Entry and Results Reporting

On-line	A device is on line when it is connected to the computer.
On-the-fly	A term given to the process of not permanently storing data in the data dictionary but having a computation performed at run time.
Operating System	A basic program that runs on the computer, controls the peripherals, allocates computing time to each user, and communicates with terminals.
Order number	A number generated daily by the computer each time a test is ordered - unique for each patient's order - starting at midnight with order number 1. The order number provides identification of patient specimens both during transport to the laboratory and until accession numbers have been assigned to the specimens. Generally used by non laboratory personnel; e.g., ward, section, number.
OS/M	Occurrence Screen/Monitor
Output Transform	An executable string of MUMPS code which converts internally stored data into a readable display.
PACS	Picture Archiving and Communications Systems
Package	The set of programs files, documentation, help prompts, and installation procedures required for a given software application. For example, Laboratory, Pharmacy, and MAS are packages. A DHCP software environment composed of elements specified via the KERNEL'S PACKAGE file. Elements include files and associated templates, name spaced routines, and name spaced file entries from the Option, Key, Help Frame, Bulletin, and Function files. Packages are transported using VA FileMan's DIFROM routine that creates initialization routines to bundle the files and records for export. Installing a package involves running the installation routines that will recreate the original software environment. Verified packages include documentation. As public domain software, verified packages may be requested through the Freedom of Information Act (FOIA).
Password	A user's secret sequence of keyboard characters, which must be entered at the beginning of each computer session to provide the user's identity.
Pattern Match	A preset formula that includes any one of the following types: letters, numbers, or symbols; 2) letters, numbers, and symbols; 3) letters and numbers; 4) symbols and letters; 5) numbers and symbols. If the information entered (does not match

	the formula exactly, the computer rejects the user's response.
Peripheral Device	Any hardware device other than the computer itself (central processing unit plus internal memory). Typical examples include card readers, printers, CRT units, and disk drives.
Pointer	Points to another file where the computer stores information needed for the field of the file in which you are currently working. If you change any of the information in the field in which you are working, the new information is automatically entered into the “pointed to” file.
POSIX	Portable Operating System Interface for Computing Environments
Printer	A printing or hard copy terminal.
Program	A list of instructions written in a programming language and used for computer operations.

Programmer Access Code	An optional three to eight character code that allows the computer to identify you as a user authorized to enter into programmer mode (see also access code). Once in programmer mode, you will use Standard MUMPS, DHCP's official programming language to interact with the computer. Programmer access is very tightly restricted to authorized and qualified individuals.
Programmer Access	Privilege to become a programmer on the system and work outside many of the security controls of Kernel.
Prompt	The computer interacts with the user by issuing questions called prompts, to which the user issues a response.
QA	Quality Assurance
RAM	Random Access Memory
Read Access	A user's authorization to read information stored in a computer file.
Record	A set of related data treated as a unit. An entry in a VA FileMan file constitutes a record. A collection of data items that refer to a specific entity. For example, in a name-address-phone number file, each record would contain a collection of data relating to one person.
Required Field	A mandatory field, one that must not be left blank. The prompt for such a field will be asked until the user enters a valid response.
RMEC	Regional Medical Education Center
ROM	Read Only Memory. A type of memory that can be read but not written.
Routine	A program or a sequence of instructions called by a program, that may have some general or frequent use. MUMPS routines are groups of program lines which are saved, loaded, and called as a single unit via a specific name .
SAC	Standards and Conventions. Through a process of verification, DHCP packages are reviewed with respect to SAC guidelines as set forth by the Standards and Conventions Committee (SACC). Package documentation is similarly reviewed in terms of standards set by the Documentation Standards and Conventions Committee (DSCC).

SACC	Standards and Conventions Committee of the Decentralized Hospital Computer Program.
Screen	(Noun) - The display surface of a video terminal.
Screen	(Verb) - The process of checking a user's input for a predefined format or condition (e.g., date within a permitted range).
Screen Editor	This is VA FileMan's special screen oriented text editor. This editor is used for the word processing data type.
Scroll/no scroll	The scroll/no scroll button (also called hold screen) allows the user to "stop" (no scroll) the terminal screen when large amounts of data are displayed too fast to read and "restart" (scroll).
SERA	Systematic External Review of Autopsies.
SERS	Systematic External Review of Surgical Pathology.
Set of codes	Usually a preset code with one or two characters. The computer may require capital letters as a response (e.g., M for male and F for female). If anything other than the acceptable code is entered, the computer will reject the response.
Site Manager/IRM Chief	At each site, the individual who is responsible for managing the computer systems; installation, maintaining new modules, and serving as liaison to the ISCs.

SIUG/ARG	Special Interest User Group/Application Requirements Group. A designated group of applications experts who work with the developers of a software package to define and approve the contents of the package.
SNOMED	Systematized Nomenclature of Medicine, developed to standardize the coding of information regarding specific diseases.
Software	The set of instructions and data required to operate the computer. One type is called operating system software - fundamental computer software that supports other software. The second type is called applications software - customized programs that tell the computer how to run applications (e.g., Pharmacy, Laboratory)
Spacebar Return Feature	You can answer a VA FileMan prompt by pressing the spacebar and then the return key. This indicates to VA FileMan that you would like the last response you were working on at that prompt recalled.
Spooling	Procedure by which programs and output can be temporarily stored until their turn to print.
SQL	Structured Query Language
Stop Code	A number assigned to the various clinical, diagnostic, and therapeutic sections of a facility
Sub-routine	A sequence of MUMPS code that performs a specific task, usually used more than once.
Subscript	A symbol that is associated with the name of a set to identify a particular subset or element. In MUMPS, a numeric or string value that is enclosed in parentheses; is appended to the name of a local or global variable; identifies a specific node within an array.
Syntax	A term for the rules that govern the construction of a machine language.
Template	A means of storing report formats, data entry formats, and sorted entry sequences is the opposite of “On the Fly”. A template is a permanent place to store selected fields for use at a later time.
Terminal	See CRT. May be either a printer or CRT/monitor/visual display terminal.
Treating Area	The section or service of the hospital that requests a test. Some hospital systems have an embedded code

	that determines if the ordered test is for an inpatient or outpatient.
Tree Structure	A term sometimes used to describe the structure of a MUMPS array. This has the same structure as a family tree, with the root at the top, and ancestor nodes arranged below, according to their depth of subscripting. All nodes with one subscript are at the first level, all nodes with two subscripts at the second level, and so on.
Trigger	A trigger is an instruction that initiates a procedure. In VA FileMan, a trigger can be set up when entry of data in one field automatically updates a second field value.
Truncate	Truncating is a process that drops characters of text or numbers (without rounding) when the text or numbers are limited to a specific location to store or print them. For example, the number 5.768 is truncated to 5.76 when stored or printed in a location that holds only four characters.
Uneditable Field	This is a status given to fields to prevent any editing of data in the field.
Up Arrow	A character on your keyboard that looks like this: The character is used mainly for exiting or opting out of answering VA FileMan prompts and jumping to other fields in VA FileMan. The “^” character is the (shift 6 key) on most keyboards.

User Access	Access to a computer system. The user's access level determines the degree of computer use and the types of computer programs available. The systems manager assigns the user an access level. (See also access code and programmer access code.)
Utility Routine	A routine that performs a task that many programmers utilize.
VA	The Department of Veterans Affairs, formerly called the Veterans Administration.
VACO	Department of Veterans Affairs Central Office
VADATS	Veterans Administration Data Transmission System
VA FileMan	A set of programs used to enter, maintain, access, and manipulate a (also called database management system consisting of files. A package of on line VA FileManager) computer routines written in the MUMPS language which can be used as a stand-alone database system or as a set of application utilities. In either form, such routines can be used to define, enter, edit, and retrieve information from a set of computer-stored files.
VA MailMan	A computer based message system.
VAMC	Department of Veterans Affairs Medical Center
Variable	A character or group of characters that refer to a value. MUMPS recognizes three types of variables: local variables, global variables, and special variables. Local variables exist in a partition of main memory and disappear at sign off. A global variable is stored on disk, potentially available to any user. Global variables usually exist as parts of global arrays. The term "global" may refer either to a global variable or a global array. A special variable is defined by system operation (e.g., $TEST).
VAX	Virtual Address Extension
VDT	Video Display Terminal (See CRT)
Verification (data verification)	The process by which technologists review the data the computer for a specific patient and verify (validate) that it is accurate before releasing the data to the physician.
Verification (package verification)	A process of internal and external package review carried out by a DHCP verification team (people who were not involved in the development of the package). Software and associated

	documentation are reviewed in terms of DHCP Standards and Conventions.
Verify Code	An additional security precaution used in conjunction with the access code. Like the access code, it is also 6 to 20 characters in length and if entered incorrectly will not allow the user to access the computer. To protect the user, both codes are invisible on the terminal screen.
VHA	Veterans Health Administration.
VITEK	An automated instrument is used for organism identification and for measuring antibiotics within the Microbiology module.
WKLD	Abbreviation for workload
WKLD code	Numbers assigned to lab procedures by the Laboratory program for compiling work statistics.
Work List	Used for collecting and organizing work in various accession areas of the laboratory. A work list is generated for manual or automated tests (singly or in batches) and can be defined by number of tests and/or which tests to include. It can also be used as a manual worksheet by writing test results directly on the worklist.

Wrap-around mode	Text that is fit into available column positions and automatically wraps to the next line, sometimes by splitting at word boundaries (spaces).
Write Access	A user's authorization to write/update/edit information stored in a computer file.

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