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BATH IRON WORKS CORPORATION

Quality Defects Measurement and Control Systems

Task ES-8-23 .

FINAL REPORT

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QUALITY DEFECTS ANALYSIS

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WELCOME TO QUALITY DEFECTS ANALYSIS

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Editors:

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INTRODUCTION:

   In February 1985 Bath Iron Works and Marinette Marine were
awarded funding for TASK ES-8-23 Quality Defects Measurements which
involved the development of a computer software package that would
be universal for the use in any size shipyard.   The Program is a
measurement and control system in aiding the shipyard to reduce
defects and material discrepancies by:

         Rapidly identifying significant error causes in both rework
         and material discrepancies.
         Separating significant from insignificant cost areas on an
         exception basis.
         Generating reports highlighting the high cost areas of
         rework and material discrepancies.
         Monitoring the results of corrective action taken in these
         areas.

   After careful consideration the software package called
Revelation by Cosmo was chosen for the project.   In order to run
this program the user is required to purchase their own run-time
version of Revelation.*

*If unable to find a distributor of Revelation we will recommend one
for you.

TERMS AND CONVENTIONS

Certain terms and standard ways of indicating information are
used in this manual and in the QUALITY DEFECTS ANALYSIS
program. You should familiarize yourself with these terms and
conventions before attempting to read this manual or use the
QUALITY DEFECTS ANALYSIS program.

TERMS:

Enter .....Whenever you are asked to
           Enter some information as in
           "Enter END", it means you
           should type the word or
           characters indicated (in the
           example END) and press the
           Enter Key. The Enter Key is
           known on a typewriter as the
           Return key and is in the
           same position as a Return
           Key on your keyboard.

ENTER. . . . . When the word ENTER appears
           in capitals, it indicates
           that the Enter Key is all
           that needs to be pressed.
           AS in "Press ENTER To
           Continue".

<E> . . . . This is an abbreviation for
           ENTER and means you should
           press the ENTER Key. As in
           "Press <E> To Continue".
           This abbreviation for the
           Enter **key is** used throughout
           the QUALITY DEFECTS ANALYSIS Program and Manual.

Type . . . . When you are asked to Type
           something, you should simply
           press the characters
           indicated without pressing
           the Enter Key afterward.

Press......"Press X" is asking you to
           push down on the X Key once.
           No Enter Key is required.

Hold Down..Sometimes you may be asked to

Hold Down a key and press
another key as in "Hold Down
ALT and Press P".   This
means while handling down the
first key indicated, you
should press the second key
 indicated once. This will
also be shown with the +
symbol. When you see this
symbol you should know that
it means to hold down the
key indicated to the left of
the + symbol and press the
key indicated to the right
of the + symbol.

CONVENTIONS :

Capitals... In this manual a word typed
in capitals indicates the
actual Word to be entered
into the computer. For
example, "Enter RETURN"
means to Type RETURN and
Press the Enter Key. The
only exception to this is
when reference is made to
the Enter Key itself. see
ENTER above.

<> . . . . Indicates an abbreviation as
opposed to a literal. For
example <E> stands for
ENTER, not for the letter E.

[ ] . . . . Square bracketS are used to
indicate something that is
mandatory in a Direct
Command. For example, in
the command "COUNT [File
Name] ", a file name is
required after the Direct
Command COUNT. The brackets
themselves should not by
typed.

{} . . . . Braces are used to indicate
something optional in a
Direct Command. For
example, in "COUNT [File
Name] {With Clause}", the
With Clause is optional.
The braces themselves should
not be typed.

"" or ''...Quotation marks, either
single or double, indicate a
literal character or
characters to be typed. For
example, "Type "C" To
Continue", would indicate
the character C should be

I I - 3

typed.   Do not type the
                    quotation marks.

( ) . . . . Parentheses are used to
                    list a default value as in
                    "CONTACT (DEFAULT=JOHN
                    DOE)?", or to indicate
                    options as in "Is Printer On
                    (Y/N)?".   In the first case,
                    pressing <E> will cause the
                    name JOHN DOE to be entered
                    as the CONTACT.   In the
                    second case the program is
                    asking you to Enter a "Y"
                    for Yes or an "N" for No.

KEYS TO YOUR SUCCESS

Certain keys and keystroke combinations have special meaning
to QUALITY DEFECTS ANALYSIS. QUALITY DEFECTS ANALYSIS also
uses Function Keys and Cursor Control Keys.

You should take the time to familiarize yourself with the
following keys as you will constantly be using most of them
while working with QUALITY DEFECTS ANALYSIS.

\ (BACKSLASH) OR CONTROL + L

The Backlash Key **or** the Control + L combination are used in
Entry and report screens in reponse to prompts where for
example, a record number is requested and where you wish
instead to enter a name which is cross referenced to that
record number.

  Where.......The Backslash Key is located
       toward the bottom left of
       your keyboard on the second
       row from the bottom about 1/4
       of the way from the left of
       the keyboard.

  Markings...The Backslash Key has a (\)
       on the bottom half of the key
       and a (1) on the upper - half
       of the key.

DESCRIPTION:

The Backslash or Control + L can be used when, for example,
you know a RPT.NO but not its ID number.

For example, in response to a prompt which requests the ID
number you may type a backslash followed by any word in the
RPT.NO and then press the ENTER Key. You can also hold down
the Control key and press the L key. You will be prompted for
a value to locate. At this point you could enter the RPT.NO.

The program will look up the ID number and enter it for you.
If there is more than one RPT.NO with the same word in it, the
program will list all of them for you and you may then select
the RPT.NO you want.

See also CONTROL KEY

BACKSPACE KEY

The Backspace Key, also known as a destructive Backspace Key
moves your cursor one character to the left and erases that
character as the cursor moves over it.

    Where......It is located on the top row
              of your keyboard 3/4´ to the
              right of the keyboard.

    Markings. . . It is marked with a straight
              left -pointing arrow.

DESCRIPTION:

The Backspace Key is used to erase characters you have just
typed from the keyboard .

Each time you press the Backspace Key the character
immediately to the left of the cursor is removed and the
cursor moves one character to the left.

Once you have used the Backspace Key you Can type a new
character to replace the one you just erased.

CONTROL KEY

The control key is used in combination with other keys to
execute certain functions or commands. This is done by holding
down the Ctrl key and while holding down the Ctrl key you
press and her key.

    Where......The control key is located
            on the lefthand side of the
            keyboard, just to the left   .
            of the A key.

    Markings...The Control key is marked
            with the contraction Ctrl.

DESCRIPTION:

If you press the Control key by itself nothing happens. The
Control key is only useful when used in conjunction with
another key. Think of the Control key as an extra "Shift" key
on your computer. It "adds" or gives another meaning to the
key you are pressing.

CONTROL + F1

The Control + F1 key combination is used to display the Help
Screen for the TEXT option.

    Where......The F1 key is located at the
              complete left of the keyboard,
              on the top row.

    Markings. . . The F1 key is simply marked
              with an F1.

DESCRIPTION:

When you are using the TEXT option either at Direct command
level, in an Entry Screen or to input lengthy Multi-values,
holding the Control Key and pressing the F1 key will display
the TEXT Help screen.

See also CONTROL KEY

DELETE KEY

The DELETE Key lets you delete text at the current cursor position. Each time you press it one character of text immediately above the Cursor will be deleted.

  Where. . . . . . The DELETE Key is located by the
                numeric keypad on the far right
                side of the keyboard, below the
                numeric keypad on the right. To
                use this key you must be sure that
                the Numlock key has not been prev
                iously pressed. If it has then
                press it once again.

  Markings...The DELETE has the DEL on
                the lower part of the key
                and a period (.) on the
                upper part of the key.

DESCRIPTION:

When you press the Delete key, characters directly above the cursor will be deleted one character at a time.

END KEY

In an Entry Screen the END Key will cause the cursor to move
to the end of the response line.

   Where.......The END key is located on the
            numeric keypad on the far
            right side of the keyboard,
            To use this key you must be
            sure that the Numlock key
            has not been pressed
            previously. If it has then
            depress it once again.

   Markings...The END key has a 1 on the
            upper part of the key and the
            word End on the lower part
            of the key.

DESCRIPTION:

Pressing the END key while editing a misspelled line, will
cause the cursor to move to the end of the line of text. For
example, if you were editing the following line:

    JOHN J. SMITH

and your Cursor was positioned at the beginng of the second
word, pressing the END key would bring you to the end of the
line. You could then backspace to erase "ITH" in JOHN J. SMITH
and retype "YTH".

ENTER KEY

The Enter Key is the last key you would press after you have
typed something. It "enters" or submits what you have typed
into the program. It's also used to tell the program to
continue.

    Where.......It is located midway down and
                3/4 of the way toward the
                right of your keyboard. It
                holds the same position as
                the Return Key on a
                typewriter.

    Markings...It is marked with a left
                pointing arrow which has an
                upturned stem. Don't confuse
                it with the Backspace Key
                which also has a left
                pointing arrow and is right
                above the Return Key!

DESCRIPTION:

By far, the key you will be asked to press the most is the
Enter Key. The Enter Key is your way of giving a signal to
QUALITY DEFECTS ANALYSIS that you wish to proceed.

When you type characters from your keyboard, they appear on
your screen. These characters, however, are not considered
finalized until you OK them by pressing the Enter Key.

Until you press the Enter Key you are allowed to backspace
over the characters and retype new characters. When you are
satisfied with the characters on the screen, you then Press
the Enter Key and then the characters on the screen are
accepted.

There are times when the program wants to make sure you have
performed a certain action (such as changing a diskette) and it
asks you to "Press <E> To Continue". Pressing the Enter Key in
this situation is a signal to the program to continue.

See also TERMS AND CONVENTIONS

F2   FUNCTION   KEY

This Key is to be used in single valued fields only.

This Key allows you to bring forward the current contents of the same field from the previous record.

    Where........The F2 key is located at the
            far left side of the keyboard,
            on the function keypad.

    Markings...The F2 Key is simply marked
            with an F2.

DESCRIPTION:

When you are in an Entry Screen and you wish to repeat the last Entry you made from a previous record, you may press the F2 key one or more times. Pressing this key will cause the contents of the current field to be filed with the contents of the same field of the previous record.

F7 FUNCTION KEY

This Key is useful when you are in an Entry Screen, Direct Command or other "TEXT" situation and you wish to clear text to the beginning of **a** line.

Where. . . . . . The F7 key is located at the **complete left of the** keyboard, on the function keypad.

Markings... The F7 key is simply matrked with an F7.

DESCRIPTION:

The F7 key will clear tO the beginning of the line you are on and text to the right of the cursor will be moved left to the beginning uf the line.

F8 FUNCTION KEY

This Key is useful when you are in an Entry Screen, Direct
Command or other "TEXT" situation and you wish to clear text
to the end of a line.

  Where. . . . . . The F8 key is located at the
               complete left of the keyboard,
               on the function keypad.

  Markings. . . The F8 key is simply marked
               with an F8.

DESCRIPTION:

The F8 key will clear to the end of the line you are on. Text
left of the cursor will remain unchanged.

See also TEXT.

HOME KEY

In an Entry Screen or at a Direct Command (colon prompt) the
HOME Key will cause the cursor to return[to {the start of the
response line.

  Where. . . . . . The Home Key is located at
               the bottom right hand side of
               the keyboard, on the numeric
               keypad. To use this key you
               must be sure that the Numlock.
               key has not been pressed
               previously. If it has then
               depress it once again.

  Markings. . . The Home key has a 7 om the
               upper part of the key and the
               word home on the lower part
               of the key.

DESCRIPTION:

The Home key will allow you to reenter a misspelled line. When
the Home key is pressed, the cursor is repositioned at the   .
beginning of a response line.

INSERT KEY

The INSERT Key lets you insert text at the current cursor
position. It must be pressed once again to exit the insert
mode.

Where. . . . . . The INSERT Key is located by the
                 numeric keypad on the far
                 right side of the keyboard,
                 below the numeric keypad.
                 To use this key you must be
                 sure that the Numlock key
                 has not been previously
                 pressed. If it has then
                 press it once again.

Markings. . . The INSERT Key has INS on
              the lower part of the key
              and a zero on the upper part
              of the key.

DESCRIPTION :

When you press the INSERT key, all the keystrokes from that
point on are inserted at the cursor position. Characters to
the right of the cursor are moved to the right to make room
for the characters you are inserting. To disable the Insert
mode, simply press the INS key again.

When INSERT is disabled, characters that are typed overwrite
characters above and to the right of the cursor.

LEFT AND RIGHT ARROW KEYS

The Left and Right arrow keys are used to move the cursor
either left or right one character without deleting text.

    Where......The Left and Right arrows are
              located on the numeric keypad
              on the far right side of the
              keyboard. To use these keys,
              you must be sure that the Num
              lock key has not been pressed
              previously. If it has then
              press it once again.

    Markings...The Left arrow key has a 4 on
              the upper part of the key and
              a small arrow on the lower part
              of the key. The Right arrow has
              a 6 on the upper part of the
              key and a small arrow on the
              lower part of the key.

DESCRIPTION:

The arrow keys need not be entered. The Left arrow will cause
the cursor to move to the left one character without erasing
anything. The Right arrow will cause the cursor to move to the
right one character without erasing anything.

CONTROL + LEFT OR RIGHT ARRROWS

The Left and Right arrow keys, when used with the Control key,
are used to move the cursor either left or right one word
without deleting text.

  Where.. . . . . The Left and Right arrows are
               located on the numeric keypad
               on the far right side of the
               keyboard. To use these keys
               you must be sure that the Num
               lock key has not been pressed
               previously. If it has then
               depress it once again.

  Marking. . . The Left arrow key has a 4 on
               the upper part of the key and
               a small arrow on the lower part
               of the key. The Right arrow has
               a 6 on the upper part of the
               key and a small arrow on the
               lower part of the key.

DESCRIPTION:

The arrow keys need not be entered. The Control + Left arrow
combination will cause the cursor to move to the left one word
without erasing anything. The Control + Right arrow
combination will cause the cursor to move to the right one
word without erasing anything.

See also CONTROL KEY

? (QUESTION MARK) OR F1

The Question Mark or F1 are used to elicit help from the
program when you are in an Entry Screen.

Where......The Question Mark is located
           on the bottom row of your
           keyboard about 2/3 of the way
           toward the right side. To
           type a question mark, you
           need to hold down the Shift
           Key and then press the Key
           with the Question Mark on it.
           The F1 key is located at the
           complete left of the keyboard,
           on the top row.

Markings. . . The Question mark Key has a
           Question Mark (?) on the
           upper part of the key. and a
           slash mark (/) on the bottom
           of the key. The F1 key simply
           has an F1 on it.

DESCRIPTION:

The Question Mark needs to be entered. That is, after Typing a
Question Mark, you need to press the Enter Key.

The F1 key need not be entered, meaning that you do not need
to press the enter key after having pressed the the F1 key.

The Question mark function only works in Entry Screens.

When you Enter a Question Mark, or hit the F1 key from any
prompt in an Entry Screen, the program changes screens and
gives you a desciption of the prompt you are on.

After reading the help description, you press the Enter Key to
return to the prompt in the Entry Screen.

SHIFT + F1

The Shift + F1 key combination is used to display the edit and
pattern checks for the current field.

  Where......The F1 key is located at the
            complete left of the keyboard,
            on the top row.

  Markings. . . The F1 key is simply marked
            with an F1.

DESCRIPTION:

The Shift + F1 key combination will allow you to check what
form a response needs to take. For a clearer explanation of
pattern checks go to the appropriate Entry Screen section of
this manual and read the prompt description.

UP AND DOWN ARRROW KEYS

The Up and Down arrow keys are used only in Entry Screens to
move Up or Down one prompt.

    Where.......The Up and Down arrow keys are
             located on the numeric keypad
             on the far right side of the
             keyboard. To use these keys
             you must be sure that the Num
             lock key has not been previously
             pressed. If it has then depress
             it again one time.

    Markings...The Up Arrow key has an 8 on the
             upper part of the key and a small
             arrow on the lower part of the
             key. The Down Arrow key has a
             2 on the top part of the key and
             a small arrow on the bottom part
             of the key.

DESCRIPTION:

The Arrow keys need not be entered. Pressing the Up arrow key
will cause your cursor to move up one to the previous Enrty
Screen prompt, and position itself at the beginning of the
response line. Information may now be entered again. Pressing
the Down arrow key will cause your cursor to move down one to
the next Entry Screen prompt, and position itself at the
beginning of the response line. Information may now be entered
and you may go on.

KEYS - FUNCTION CROSS REFERENCE

```
Cross reference....\ BACKSLASH-CONTROL + L
Destructive backspacing......BACKSPACE KEY
Used with other keys..........CONTROL KEY
Displays help for TEXT....CONTROL KEY + F1
Delete at cursor position.......DELETE KEY
Go to end of line...................END KEY
Enter command into program.......ENTER KEY
Copy previous field........F2 FUNCTION KEY
Clear to start of line.....F7 FUNCTION KEY
Clear to end of line.......F8 FUNCTION KEY
Go to beginning of line...........HOME KEY
Insert at cursor position.......INSERT KEY
One character L or R..........L & R ARROWS
One word L or R.....CONTROL + L & R ARROWS
Help...................? QUESTION MARK KEY
Display pattern checks......SHIFT KEY + F1
Go up or down a prompt....UP & DOWN ARROWS
```

COMMAND PERFORMRNCE

Commands are special words which QUALITY DEFECTS ANALYSIS
recognizes and which cause QUALITY DEFECTS ANALYSIS to perform
specific functions. For example, the command you will use the
most is: END. Typing END and pressing the Enter Key in
response to a prompt will cause QUALITY DEFECTS ANALYSIS to
quit whatever you were doing and return you to your last menu
screen.

Commands are Entered. This means, after typing the Command
word or words, you must press the Enter Key to execute the
Command.

Some Commands, such as TOP, are specific to certain sections
of the QUALITY DEFECTS ANALYSIS program and have no meaning in
other sections. Others, such as END, have meaning and will
work almost everywhere in QUALITY DEFECTS ANALYSIS.

The Commands you can use in QUALITY DEFECTS ANALYSIS are
listed alphabetically in this section of the manual. Following
the initial description of each Command are the words "Entry",
"Reports" and "Direct Command". Three asterisks under each of
the above words indicates that the command works in that
section of the program.

Thus, three asterisks under the word "Entry" indicates that
the Command works in Entry Screens. No asterisks under the
word "Reports" indicates that the command is not used when you
are generating reports.

A "Direct Command" is a command that is entered at the colon
prompt, or at what is known to REVELATION as TCL, or Terminal
Control Level.

The one place in the program where almost no Commands will
work is in Menu Screens. Menu Screens will only accept a
number as a valid response to the selection prompt, although
END and certain function keys will work.

You should take the time to read about each Command and what
it does. For your convenience, listed below are some of the
most commonly used commands grouped by the section of the
program in which they are most commonly used.

    Entry Screens

    END   EXECUTE   DELETE

```
FILE        PERFORM         TOP

CLEAR       DONE

Direct  Command

DIR         END        COUNT

HELP        LIST       SELECT

SO RT       SUM        RETURN

PC    --    EXIT

Reports & Utilities

Y (Yes)     N (No)     END
```

If you have not already done so, you should also review the "Keys To Your Success" section of this manual to get a full understanding of what you can do within QUALITY DEFECTS ANALYSIS.

CLEAR OR CONTROL + C

Used in entry screens to erase associated entries which follow
a WHICH VALUE prompt.

Entry   Reports   Direct Command
***

When you are in an entry screen and are presented with a WHICH
VALUE prompt, you may Enter CLEAR or Control + C to erase all
entries to which the WHICH VALUE prompt refers.

The entries which will be cleared are those preceded by a
number and a ")" symbol (i.e. 01))

The CLEAR command should only be used after a WHICH VALUE
prompt.

Also see Multi-valued keystrokes and CONTROL KEY.

COUNT [FILE NAME] {WITH CLAUSE}

Used to count the total number of records in a file, or, if used with a WITH Clause, will count the number of records that conform to the WITH Clause.

 Entry   Reports   Direct Command
                       ***

For example, to get a count of how many QDS are in the QD file, Enter the following command from your Direct Command prompt:

     COUNT QD

To get a count of how many QDS with an RPT.NO of MDR*12345 are in the QD file, Enter:

     COUNT QD WITH RPT.NO = "MDR*12345"

The COUNT Command is useful to get a quick idea of the size of your data files.

DELETE CONTROL + D

Will entirely delete the information displayed on the screen
from the DISK. There is no way to recover information once it
has been DELETEd.

Entry   Reports   Direct Command
***

The DELETE Command only works at the CHANGE prompt of an Entry
Screen. Entering DELETE or Control + D will cause the program
to ask you to confirm that you actually wish to delete the
record by typing DELETE a second time. When you type DELETE or
Control + D the second time, the record is permanently removed
from the disk.

> CAUTION: Unless you have entered
> something into a file that never
> should have been there in the first
> place, there is usualy no reason to
> use the DELETE Command.
>
> You can edit records rather than
> delete them.

Also see CONTROL KEY

DIR {D:}   {FILESPEC}

Used to get a Directory of a disk drive. Type DIR, a space and
the Drive Designator A: or B: or C: or D:. If you just wish to
check if a specific file exits on the designated drive, you
can also type the file name after the Drive Designator.

 Entry   Reports   Direct Command
                         ***

This Command is identical to the DOS DIR Command described in
your DOS Operating System manual. Any of the syntax including
pathnames and options which work with your DOS DIR Command
will work from within QUALITY DEFECTS ANALYSIS.

Using the Command, DIR B:/W is useful to check for available
space on your data disk in floppy disk based systems.

DONE

Used to "jump out of" a group of associated prompts and return
to the CHANGE prompt from a Multivalued Field in an entry
screen.

 Entry   Reports   Direct   Command
 ***

When in the process of entering information into prompts which
are preceded by a WHICH VALUE prompt, you may enter DONE to
skip additional related prompts and return to the CHANGE
prompt at the bottom of the entry screen.

Pressing ENTER in response to the first prompt preceded by a
number and the ")" symbol (i.e. 01)) has the same effect.

The DONE command should only be entered when working with
associated prompts.

END OR CONTROL + E

Enter END to exit whatever section of the program you are in
and return to a Menu.

Entry   Reports   Direct Command
***   ***

The END Command can be used at almost any prompt in the
program.

Entering END will cause QUALITY DEFECTS ANALYSIS to exit out
of whatever section of the program you may be in and return
you to the last Menu you made a selection from.

Regardless of what a prompt may be requesting, you may enter
END and you will be returned to a Menu.

        CAUTION: If you are in an entry
        screen into which you have entered
        information and you Enter END at
        the CHANGE prompt or any where else
        on that screen, the new information
        you entered on that screen will NOT
        be saved to disk.

        Therefore, after entering
        information into an entry screen
        and making any necessary changes,
        you should press the Enter Key at
        the CHANGE prompt. This will save
        the information you entered and
        present you with a new, cleared
        screen. When you are on the
        cleared screen, then Enter END to
        return to Menu.

Do not use END to exit a Menu or a Direct Command prompt. To
exit from a Menu simply press the F9 key. To return from the
Direct Command prompt which is one or more colons (:) Enter
the Command RETURN.

Also see the CONTROL KEY

EXECUTE

Used to execute a Direct Command or another section of the
QUALITY DEFECTS ANALYSIS program from an Entry Screen. After
an EXECUTE terminates, you are returned to the original Entry
Screen at the point where you left off. (See also PERFORM)

 Entry   Reports   Direct Command
 ***

EXECUTE allows you to execute a Direct Command or go to a
second Entry Screen from any prompt of the Entry Screen you
are in. For example, let's say you are entering a QD into the
QD Entry Screen. You come to the CODE prompt and when you
enter the information, QUALITY DEFECTS ANALYSIS tells you the
CODE doesn't exist in your QD.HIST file.

You decide, at this point, that you would like a listing of
all your QD.HISTS alphabetically by CODE. To do this you would
enter in at the CODE prompt:

        EXECUTE LIST QD.HIST BY CODE

Your screen would change and the program would then list, in
alphabetical order, all of the CODES in your QD.HIST file.
After the last CODE is listed, you are instructed to press the
Enter Key to return to your Entry Screen. Pressing the Enter
Key will return you to exactly where you left off.

You realized from your listing that the CODE was never entered
into the QD.HIST file, so you now wish to enter this CODE into
the QD.HIST file. To do this you could enter the following at
the CODE prompt.

        EXECUTE QD.HIST ENTRY PROGRAM

The appropriate Entry Screen would then come up. Control is
transfered to the program and returned to where you left off
when the program is exited.

        CAUTION: If you use EXECUTE to move
        to a second Entry Screen from the
        first, always r e t u r n to the first
        Entry Screen   before using   the
        EXECUTE Command   again.   While it is
        possible to use the EXECUTE Command

in the second Entry Screen to move
to a third Entry Screen, it is
strongly NOT recommended.

Doing so could cause your program
to stop running and you would have
to restart the program.

FILE

Only used at the CHANGE prompt in an Entry Screen. Entering
FILE at the CHANGE prompt will save the information on that
screen to disk.

Entry   Reports   Direct Command
***

It is not necessary to use the FILE Command to save records to
disk. Simply pressing the Enter Key at the CHANGE prompt will
cause QUALITY DEFECTS ANALYSIS to save the information on that
screen to disk and present you with a new cleared screen.

```
LIST [FILE NAME] {FIELD NAMES... } {WITH
CLAUSE} {BY CLAUSE} {(P)}
```

Used to list all or selected records from a file, showing
specific fields, to either the printer or the screen.

    Entry   Reports   Direct Command
                          * * *

For example, to list RPT.NOS in the QD file, Enter the
following commend from your Direct Command prompt:

        LIST QD RPT. NO

To get a LIST of CODES showing only entries matching MDR*12345
then Enter:

      LIST QD.HIST WITH CODE = "CA10"

To get a LIST of QD.HIST showing CODE sorted in alpha
numerical order of CODE Enter:

        LIST QD.HIST CODE BY CODE

To send any listing to a printer add "(P)" to the end of the
statement.

The LIST Command is useful for generating a custom report on
any data file where you need to see specific fields or have
the listing sorted in a particular order.

PERFORM

Used to select a group of related records from a file and have
them displayed one at a time on an Entry Screen.

Entry   Reports   Direct Command
***

PERFORM allows you to bring a selected group of records into
an Entry Screen one at a time. For example, let's say that for
some reason you need to find all the CODES in the QD.HIST file
that match CA10.

You would type, at any Entry Screen prompt:

        PERFORM SELECT QD. HIST WITH CODE = "CA10"

The program will now select out of the QD.HIST file all
QD.HISTS with a CODE of CA10. Once it has done this, the first
record selected will be displayed on the screen. You could now
edit this first record. Whether on not you do so, when you
press the Enter Key at the change prompt ,the next QD.HIST
that the program had selected will be displayed on the screen.

PERFORM used in conjunction with a SELECT Direct Command is a
powerful and easy way of mass updating or reviewing selected
records in a file.

NOTE: The difference between EXECUTE Command and the PERFORM
Command is: EXECUTE is used when you want to "jump" to, another
section of the program and run it independently of the Entry
Screen you jumped from. PERFORM is used when you want to run a
Direct Command and have the reslults of that Direct Commmand
"fed into" the Entry Screen you are in.

To exit a PERFORM Command before it has finished bringing up
all the records it has selected, simply Enter END at the
CHANGE prompt.

        CAUTION: When   using a   PEFORM
        SELECT {file} Command, the file you
        select from must be consistant with
        the Entry Screen you are using.

PC -> EXIT

These two commands allow you bring up DOS operating system
from within QUALITY DEFECTS ANALYSIS and then return to the
QUALITY DEFECTS ANALYSIS program.

  Entry   Reports   Direct Command
                          ***

PC

This command should be executed at the Direct Command prompt
or TCL. When this command is entered, control is turned over
to the DOS operating system.

Once in DOS you may change disks, execute any DOS command,
call up any other application program you may have on the hard
or changed disks, etc.

When you are finished using DOS, YOU SHOULD MRKE SURE THAT THE
ORIGINAL QUALITY DEFECTS ANALYSIS PROGRAM DISK YOU WERE USING
IS BACK IN ITS ORIGINAL DRIVE AND THE ACTIVE DIRECTORY IS THE
SAME AS WHEN YOU EXITED TO DOS. CAUTION: If the original
diskettes you had in the computer when you issued the PC
Direct Command are not in the same drives when you return to
QUALITY DEFECTS ANALYSIS, YOUR QURLITY DEFECTS ANALYSIS
program may stop running and you then have to restart your
computer.

To return from DOS back to QUALITY DEFECTS ANALYSIS, Enter the
Command EXIT. As soon as you do this you will see the Direct
Command prompt which is one or more colons (:).

To return to the Main Menu, Enter the Direct Command RETURN.
See RETURN.

RETURN

Used to exit from the colon prompt. You are in Direct Command
mode when your prompt is one or more colons (:).

    Entry   Reports   Direct Command
                              ***

When you are in Direct Command mode the QUALITY DEFECTS
ANALYSIS program releases control and puts you in direct
contact with the Revelation operating system.

You know you are in Direct mode when your prompt is one or
more colons (:).

To return to QUALITY DEFECTS ANALYSIS, from Direct Command
Enter:

        RETURN

You will be sent back to your QUALITY DEFECTS ANALYSIS Main
Menu.

```
SELECT [FILE NAME] {FIELD NAMES. ..}-
{WITH CLAUSE} {BY CLAUSE} {(P)}
```

Used to select all or selected records from a file. The
selected records can then be sent to a LIST command or other
system function.

```
 Entry        Reprots     Direct Command
                          ***
```

This command is similar in syntax to the LIST command. The
difference is SELECT will not automatically print the records
requested.

Instead, SELECT will select the records requested and present
you with " > " prompt. The next command you now enter will use
the records previously selected by the SELECT Command.

For example, if you had a mailing list file and YOU wanted to
print out the mailing labels only for addresses with the zip
code "92345", from your Direct Command Prompt (colons) Enter:

       SELECT ADDRESSES WITH ZIP = "92345"

Enter RETURN to go back to your Main Menu.

See the LIST Command for more details on how to construct a
SELECT Command.

SORT [FILE NAME] {FIELD NAMES. ..} {WITH
CLAUSE} {BY CLAUSE }{ (P) }

Used to sort all or selected records from a file showing
specific fields to either the printer or the screen.

Entry   Reports   Direct Command   .
                      ***

This command is very similar to the List command. The only
difference is SORT will automatically sort the requested
listing by the first field (usually the record number or ID)
of the file.

See the LIST Command in this chapter for more details on how
to construct a SORT Command.

```
SUM [FILE NAME] [FIELD NAME] {WITH
CLAUSE}
```

Used to sum the total of a specific field in a file, or if
used with a WITH Clause, will sum that field only in the
records that conform to the WITH Clause.

 Entry   Reports   Direct Command
                         ***

For example, to get a sum of a certain field in a fictitious
file, Enter the following command from your Direct Command
prompt:

     SUM FILENAME FIELDNAME

The SUM Command is useful to get a quick total of one of the
numerical fields in your data files.

TOP OR CONTROL + T

Clears the present Entry Screen of previously entered
information and presents you with a clean Entry Screen.

 Entry   Reports   Direct Command
 ***

The TOP Command or Control + T may be entered in response to
any prompt in an Entry Screen. Entering TOP causes all entered
information to be removed from the screen and a fresh screen
to be displayed. Any information entered into that screen
prior to Entering TOP is discarded and not saved.

TOP is used when the information you have Entered is in error
and you wish to clear the screen and start over.

TEXT

This Command is used only in Entry Screens. When entering
lengthy multi- value fields into a file, you may use this
option.

Entry   Reports   Direct Command
***

This Command may be entered at any multi-value prompt in an
Entry Screen. Doing so will allow you to use the full screen
editing features of the Revelation system.

MULTI-VALUED KEYSTROKES/COMMANDS

The below listed commands are only valid when used at the
WHICH VALUE prompt. The multi-value prompt occurs in an Entry
Screen, when you are changing multi-values. When you change
multi-values you are prompted for a value to change at the
WHICH VALUE prompt. Any of the following commands could be
entered at that prompt.

 ADD OR CONTROL + A

This command will allow you to add multiple values to a file
at the WHICH VALUE prompt, in   an Entry Screen. When you are
prompted for a value, you can enter this command if you wish
to add valaue.

 Entry   Reports   Direct Command   .
 ***   .

When this command is entered, you are allowed to enter
additional values into multi-valued fields. You can either
type in the full word ADD, or hold down the control key and
press the A key.   .

Also see the CONTROL KEY.

CLEAR OR CONTROL + C

This command lets you clear a multi-value from a field at the
WHICH VALUE prompt, in an Entry Screen. When you are prompted
for a value, you can use this command to clear the entire
field.

 Entry   Reports   Direct Command
 ***

When this command is entered, all of the values of the current
field are cleared from the screen. You are then returned to
the WHICH VALUE prompt. You can either type in the full word
CLEAR, or just hold down the Control key and press the C key.

Also see the CONTROL KEY.

CONTROL + D OR D (followed by a number)

The DELETE or Control + D or D commands allow you to delete a
multi-value in an Entry Screen, at the WHICH VALUE prompt. You
can either use the full word DELETE or you can hold down the
Control key and press the D key, or just the D key followed by
a number.

 Entry   Reports   Direct Command
 ***

When you use the Control + D combination, you will be prompted
for the number of the value to delete. Just hit the
appropriate number key. If you just use the D key, follow it
by the number of the prompt you want deleted and press the
Enter key. The value that you specified will be deleted.

Also see the CONTROL KEY.

CONTROL + I OR I (followed by a number)

The INSERT, or the Control + I, or the I commands allow you to
insert a value between two existing multi-values at the WHICH
VALUE prompt in an Entry Screen. You can either use the full
word INSERT, or you can hold down the Control key and press
the letter I, or just hit the letter I followed by a number.

 Entry   Reports   Direct Command
 ***

When you enter the INSERT command you are prompted for a value
to insert before in a field. When you use the Control + I
combination, you will be prompted for the number of the value
to insert before. Just hit the appropriate number key. If you
just use the I key, follow it by the number of the prompt you
want to insert before, and press the Enter key. You will then
be prompted to enter the new value.

Also see the CONTROL KEY.

PAGE UP OR B

These keys can be used to display unseen multi-values when
they will not all fit in an Entry Screen. These keys will only
work when used at a WHICH VALUE prompt. The B command must be
Entered, meaning that the ENTER Key must be pressed after
typing the B key. PgUp does not need to be entered.

  Where. . . . . .The PAGE UP OR PgUp key is
            located om numeric keypad on
            the right side of the
            keyboard.

  Marking. .. The PgUp key has a 9 on the
            upper part of the key, and
            PgUp an the lower part of
            the key. To use this key
            you must be sure that the
            Numlock key has not been
            previously pressed. If it
            has then depress it once
            again.

DESCRIPTION:

When you are in an Entry Screen and the file you are in. has a
multi-valued field that is too long to be displayed on the
screen, then using these commands will alloW YOU to shift or
"window" the multi-values that are displayed.

PAGE DOWN OR F

These keys can be used to display unseen multi-vales when
they will not all fit in an Entry Screen. These keys will only
work when used at a WHICH VALUE prompt at a multi-value entry.
The F commmand must be Entered, meaning that the ENTER Key must
be pressed after typing the F key. PgDn does not need to be
entered.

  Where. . . . . . The PAGE DOWN OR PgDn Key is
              located on numeric keypad on
              the right side off the
              keyboard.

  Markings. . . The PgDn key has a 3 on the upper
              part of the key, and PgDn on
              the lower part of the key.
              To use this key you must be
              sure that the Numlock key
              has not been previously
              pressed. If it has been, then
              press it once again.

DESCRIPTION:

When you are in an Entry Screen and the file you are in has a
multi-valued field that is too long to be displayed on the
screen, then using these commands will allow you to shift or
"window" the multi-values that are displayed.

```
┌─────────────────────────────────────────────────────────┐
│            *** QUALITY DEFECTS PROGRAM -MAIN MENU ***    │
│                    03:28:09 27 OCT 1986                  │
│                                                          │
│                                                          │
│               1. ADD NEW DETAIL RECORDS                  │
│               2. CHANGE DETAIL RECORDS                   │
│               3. -- DEPARTMENT DATA UPDATE               │
│               4. -- CODE DATA UPDATE                     │
│               5. REPORT MENU                             │
│               6. RUN HISTORY UPDATE                      │
│               7.     HISTORY INQUIRY                     │
│               8. EXIT REVELATION                         │
│                                                          │
│                                                          │
│                                                          │
│                                                          │
│                                                          │
└─────────────────────────────────────────────────────────┘
```

F5=Toggle MAIN/LAST menu   Ctl-F5=TOL F9=END menu   Return=Run menu option

Menu Choice 1: THE PROGRAM ADDS NEW RECORDS FOR THE PRESENT
MONTH

Menu Choice 2: THIS PROGRAM IS USED TO "CORRECT" , PREVIOUSLY
ENTERED DATA

Menu Choice 3: USED TO UPDATE DEPARTMENTS, RATES TOTAL
HOURS

Menu Choice 4: USED TO UPDATE CODE INFORMATION

Menu Choice 5: USED TO RUN PROGRAMMED REPORTS

Menu Choice 6: USED TO TRANSFORM DETAIL RECORDS INTO HISTORY
RECORDS – SEE DOCUMENTATION After selecting this menu choice
you will be prompted to enter a password. The password is
"HIST"

Menu Choice 7: USED TO LOOK AT HISTORICAL RECORDS

Menu Choice 8: USED TO LOGOFF REVELATION

QD. ADD * * * NEW ITEM ENTRY FOR QUALITY DEFECTS * * *

01 TYPE   02 RPT.ND   03 RPT.DATE

04 DEPT   05 FUN
06 PROJ
07 HULL   08 JDB

              CODES :   {TO ADD NEW CODE TYPE — PERFORM CODES — AT PROMPT 5-1
09 DEFECT
10 CAUSE
11 DISP
12 COST

13 RESP.DEPT   14 HOURS
                        15 RATE
                        16 LAB.COST
                        17 MAT.COST

                           TOT.COST

TYPE OF REPORTING FORM ?. . . . . . .

```
                  ***  NEW  ITEM  ENTRY  FOR  QUALITY  DEFECTS  ***
```

This program adds new entries for the present month to the
basic detail level data.

01 TYPE . . . . . .

This represents the type of quality defect reporting mechanism
being utilitzed, i.e. The program in effect. At b.i.w. This
could be "MDR" (material discrepancy report), etc. But anybody
can put in thier own acronym.

This is a required entry. You must must enter something in
response to this prompt. Pressing the Enter key alone, will
cause the last answer you entered for this same prompt on the
previous screen and now displayed at the bottom of the screen
to be entered. To change information already entered, enter 1
at the CHANGE prompt and **enter the** new information for this
prompt.

There are no restrictions on the type of information which can
be entered here.

02 RPT. NO

This is the specific record number (memo #, mdr #, hpr #)
which represents a unique report.

This is a required entry. Therefore, you must enter something
in response to this prompt. To change this entry after
information has been entered into, type 2 at the CHANGE
prompt and enter the new information for this prompt.

There are no restrictions on the type of information which can
be entered here.

03 RPT.DATE MM/DD/YY

The date of the report (mdr, hpr, etc) .

This is not a required entry. You may skip it by entering
NULL. Pressing the Enter key alone, will cause the last answer

you entered for this same prompt on the previous screen and
now displayed at the bottom of the screen to be entered. To
change information already entered, enter 3 at the CHANGE
prompt and enter the new information for this prompt.

An entry conforming to the following is acceptable: A date.
The ways of entering a date are: MM/DD/YY OR MM-DD-YY OR
M/D/YY or M-D-YY or MMDDYY or MM/DD/YYYY or MM-DD-YYYY. (where
M stands for the number of the month, D for the number of the
day, and Y for the number of the year)

For example, to enter the date JANUARY 1, 1995, you may enter:

        01/01/95   (or 1995)
        01-01-95   (or 1995)
        1/1/95   (or 1995)
        1-1-95   (or 1995)
        010195   (or 1995)

Any of the above entries may be reformated by the entry screen
program after you enter the date.

04 DEPT . . . .

The department making the report.

This is a required entry. You must must enter something in
response to this prompt. Pressing the Enter key alone, will
cause the last answer you entered for this same prompt on the
previous screen and now displayed at the bottom of the screen
to be entered. To change information already entered, enter 4
at the CHANGE prompt and enter the new information for this
prompt.

There are no restrictions on the type of information which can
be entered here.

05 FUN . . . .

This is location of the job being performed where the problem
showed up.

This is not a required entry. You may skip it by entering
NULL. Pressing the Enter key alone, will cause the last answer
you entered for this same prompt on the previous screen and
now displayed at the bottom of the screen to be entered. To

change informatian already entered, enter 5 at the CHANGE
pompt and enter the new information for this prompt

There are no restrictions on the type of informatiom which can
be entered here.

06 PROJ

This field is used to identify unique project or contract
numbers.

This is not a required entry. You may skip it by entering
NULL. Pressing the Enter key alone, will cause the last answer
you entered for this same prompt on the previous screen and
now displayed at the bottom of the screen to be entered. To
change information already entered, enter 6 at the CHANGE
prompt and enter the new information for this prompt.

An entry conforming to the following is acceptable: A number
between 8000 and 9999.

07 HULL . . . .

The hull being repro-ted on.

This is not a required entry. You may skip it by entering
NULL. pressing the Enter key alone, will cause the last answer
you entered for this same prompt on the previous screen and
now displayed at the battom of the screen to be entered. To
change information already entered, enter 7 at the CHANGE
prompt and enter the new information for this prompt.

There are no rest restrictions on the type of irformation which can
be entered here.

08 JOB . . . .

Identifies the particular job being perform.

This is not a required entry. You may skip it by pressing the
Enter key. To change information already entered, enter 8 at
the CHANGE prompt and enter the new information for this
prompt.

There are no restrictions on the type of information which can
be entered here.

09 DEFECT . . . . . .

The defect code which is found on the code list which should.
be completed before entering any data. But if for any reason
it is not on the list all the user has to do is type . . perform
codes which will bring up the code update list which can then
be updated with the new Code. Then the user should press <e>
to retun the input screen where they left off.

This is a required entry. You must must enter something in
response to this prompt. Pressing the Enter key alone, will
cause the last answer you entered for this same prompt on the
previous screen and now displayed at the botttom of the screen
to be entered. To change information already entered, enter 9
at the CHANGE prompt and enter the new *information* for this
prompt.

There are no restrictions on the type of information which can
be entered here.

10 CAUSE . . . . . .

The cause defect in question. Agian, if it does not exist
follow the same instructions as for defect code.

This is a required entry. You must enter something in
response to this prompt. Pressing the Enter key alone, will
cause the last answer you entered for this same prompt on the
previous screen and now displayed at the bottom of the screen
to be entered. To change information already entered, enter 10
at the CHANGE prompt and enter the new information for this
prompt.

There are no restrictions on the type of information which can
be entered here.

11 DISP . . . . . .

The disposition code of the material in question. Agian if it

does not exist follow the same instructions as for defect
code.

This is a required entry. you must must enter something in
response to this prompt. Pressing the Enter key alone, will
cause the "QUOTES" at the bottom of the screen to be enterered.
To change information already entered, enter 11 at the CHANGE
prompt and enter the new information for this prompt.

There are no restrictions on the type of information which can
be entered here.

12 COST . . . . . .

The cost responsiblity code in question. Again if it does not
exist follow the same intructions as for defect codes.

This is a required entry. You must enter something in
response to this prompt. Presssing the Enter key alone, will.
cause the last answer you entered for this same prompt on the
previous screen and, now displayed at the bottom of the screen
to be entered. To change information already entered, enter 12 .
at the CHANGE prompt and enter the new information for this
prompt.

There are no restrictions on the type of information which can
be entered here.

13 RESP.DEPT . . . .

The department held to be responsible for the defect.

This is a required entry. Therefore, you must enter something
in response to this prompt. To change this entry after
information has been entered into it, type 13 at the CHANGE
prompt and enter the new information for this prompt.

There are no restrictions on the type of information which can
be entered here.

14 HOURS NNN. NN

The hours which needed to be expended to correct the defect.

This is not a required. You may skip it by pressing the Enter key. To change information already entered, enter 14 at the CHANGE prompt and enter the new information for this prompt.

An entry conforming to the following is acceptable: A numeric value with up to 2 decimal places allowed.

15 RATE NN. NN

The rate at which the hours are to be charged.

This is not a required entry. You may skip it by entering NULL. Pressing the Enter key alone will cause the default . infomation, displayed at the bottom of the screen, to be entered. This prompt has a program called "D. RATE" which determines the default answer. You need to check witn the programmer if how this program arrives at an answer is important to change information already entered, enter 15 at the CHANGE prompt and enter the new information for this prompt.

An entry conforming to the following is acceptable: A numeric value with up to 2 decimal places allowed.

16 LAB. COST   NNNNNNN. NN

Normally the product of hours * rate; if desired this can be overridden, or it labour hours and rates are not input, a value can be put in this field.

This is not a required entry. You may skip it by entering NULL. pressnig the Enter key alone will cause the default information, displayed at the bottom of the screen, to be entered. This prompt has a program cal led "H. DOLLARS" which determines the default answer. The hours multiplied by the rate for the responsible, department. To Change information already entered, enter is at the CHANGE prompt and enter the new information for this prompt.

An enrtry conforming to the following is acceptable: A numeric value with up to 2 decimal places allowed.

17 MAT. COST

The cost of the materials for correction of the defect.

* * * NEW ITEM ENTRY FOR QUALITY DEFECTS * * *

This **is** not a required entry. You may skip it by pressing the
Enter key. To change information already erntered, enter 17 at
the CHANGE prompt and enter the new   information for this
prompt.

An entry conforming to the following is acceptable: A numeric
value with up to 2 decimal places allowed.

TOT. Cost

The sum of materials and labor dollars.

No response is required from you at this prompt. The program
automatically "fills-in" a response. This information can only
be changed from another entry program.

CHANGE

"CHANGE" prompt. Allows the user to enter ctrl-t or "TOP" to
clear screen, ctrl-e or "END" to exit the screen with no
update, ctrl-d or "DELETE" to delete the record, "FILE" or
press (e) to file a record on disk.

If there is no need to change information on the screen, you
may press the Enter key. Doing this will file the information
on the screen to disk and present you with a clear screen.

To change information, enter the number associated with the
item you wish to change and then enter the new information for
the prompt you selected.

Entries conforming to the following are acceptable: Either any
number of numerical digits. Or, the literal "FILE". Or, the
literal "DELETE".

QD.ADD   · * * * NEW ITEM ENTRY FOR QUALITY DEFECTS * * *   (I-1)

01 TYPE   02 RPT.NO   03 RPT.DATE

04 DEPT   05 FUN
06 PROJ
07 HULL   08 JOB

                  CODES: (TO ADD NEW CODE TYPE - PERFORM CODES - AT PROMPT 9-12)
09 DEFECT
10 CAUSE
11 DISP
12 COST

13 RESP.DEPT   14 HOURS
                         15 RATE
                         16 LAB.COST
                         17 MAT.COST

                             TOT.COST
TYPE OF REPORTING FORM ? ......

This program modifys entries for a given period to the basic
detail level data.

01 TYPE ......

This represents the type of quality defect reporting mechanism
being utilitzed, i.e. The program in effect. At B.I.W. This
could be "MDR" (material discrepancy report), etc.

This is a required entry. You must must enter something in
response to this prompt. Pressing the Enter key alone, will
cause the last answer you entered for this same prompt on the
previous screen and now displayed at the bottom of the screen
to be entered. To change information already entered, enter 1
at the CHANGE prompt and enter the new information for this
prompt.

There are no restrictions on the type of information which can
be entered here.

02 RPT.NO ....

This is the specific record number (memo #, mdr #, hpr #)
which represents a unique report.

This is a required entry. Therefore, you must enter something
in response to this prompt. To change this entry after
information has been entered into it, type 2 at the CHANGE
prompt and enter the new information for this prompt.

There are no restrictions on the type of information which can
be etered here.

04 RPT.DATE MM/DD/YY

The date of the reprot (mdr, hpr, etc) .

This is not a required entry. You may skip it by entering
NULL. Pressing the Enter key alone, will cause the last answer
you entered for this same prompt on the previous screen and

VII - 1

now displayed at the bottom of the screen to be entered. To
change information already entered, enter 4. at the CHANGE
prompt and enter the new information for this prompt.

An entry conforming to the following is acceptable: A date.
The ways of entering a date are: MM/DD/YY OR MM-DD-YY OR
M/D/YY or M-D-YY or MMDDYY or MM/DD/YYYY or MM-DD-YYYY. (where
M stands for the number of the month, D for the number of the
day, and Y for the number of the year)

For example, to enter the date JANUARY 1, 1995, YOU may enter:

      01/01/95 (or 1995)
      01-01-95 (or 1995)
      1/1/95   (or 1995)
      1-1-95   (or 1995)
      010195   (or 1995)

Any of the above entries may be reformated by the entry screen
program after you enter the date.

05 DEPT ....

The department making the report. This department must be on
the department listing. If not the user must update the
department listing. By pressing 3 on the main menu Screen.

This is a required entry. You must must enter something in
response to this prompt. Pressing the Enter key alone, Will
Cause the last answer you entered for this same prompt on the
previous screen and now displayed at the bottom of the screen
to be entered. To change information already entered, enter 5
at the CHANGE prompt and enter the new information for this
prompt.

There are no restrictions on the type of information which can
be entered here.

06 FUN ....

This is the location of the job being perform where the
problem frist showed up.

This is not a required entry. You may skip it by entering
NULL. Pressing the Enter key alone, will cause the last answer
You entered for this same prompt on the previous screen and

now displayed at the bottom of the screen to be entered. To
change information already entered, enter 6 at the CHANGE
prompt and enter the new information for this prompt.

There are no restrictions on the type of information which can
be entered here.

07 HULL ....

The hull being reported on.

This is not a required entry. You may skip it by entering
NULL. Pressing the Enter key alone, will cause the last answer
you entered for this same prompt on the previous screen and
now displayed at the bottom of the screen to be entered. To
change information already entered, enter 7 at the CHANGE
prompt and enter the new information for this prompt.

There are no restrictions on the type of information which can
be entered here.

08 JOB ....

Indentifies the particul job being performed where the
defect, error showed up.

This is not a required entry. You may skip it by pressing the
Enter key. To change information already entered, enter 8 at
the CHANGE prompt and enter the new information for this
prompt.

There are no restrictions on the type of information which can
be entered here.

09 DEFECT ......

The defect code which is found on the code list which should
be completed before entering any data. But if for any reason
it is not on the list all the user has to do is type perfrom
qa. codes. add which wikk bring up the code update list which
can then be updated with the new code. Then the user *sould*
press (e) to retun the input screen where they left off.

This is a required entry. You must must enter something in response to this prompt. Pressing the Enter key alone, will cause the last answer you entered for this same prompt on the previous screen and now displayed at the bottom of the screen to be entered. To change information already entered, enter 9 at the CHANGE prompt and enter the new information for this prompt.

There are no restrictions on the type of information which can be entered here.

10 CAUSE ......

The cause defect in question. Once again if it does not exist on the code list and you want to update the list follow the same procedure explained in defect code (9).

This is a required entry. You must must enter something in response to this prompt. Pressing the Enter key alone, will cause the last answer you entered for this same prompt on the previous screen and now displayed at the bottom of the screen to be entered. To change information already entered, enter 10 at the CHANGE prompt and enter the new information for this prompt.

There are no restrictions on the type of information which can be entered here.

11 DISP ......

The disposition of the material in question. Once agian if the disp. Code does not exist on the code list and you want to update list follow the same procedure explained in defect code (9).

This is a required entry. You must must enter something in response to this prompt. Pressing the Enter key alone, will cause the last answer you entered for this same prompt on the previous screen and now displayed at the bottom of the screen to be entered. To change information already entered, enter 11 at the CHANGE prompt and enter the new information for this prompt.

There are no restrictions on the type of information which can
be entered here.

12 COST ......

The cost responsiblity in question. Once agian if cost
responsibilty code does not exist on the code list to update
that list follow the same procedure explained in defect code
(9).

This is a required entry. You must must enter something in
response to this prompt. Pressing the Enter key alone, will
cause the last answer you entered for this same prompt on the
previous screen and now displayed at the bottom of the screen
to be entered. To change information already entered, enter 12
at the CHANGE prompt and enter the new information for this
prompt.

There are no restrictions on the type of information which can
be entered here.

13 RESP. DEPT . . . .

The department held to be. responsible for the defect. This
also has to on the department listing. This is done the same
way as explained in for dept. (5) .

This is a required entry. You must must enter something in
response to this prompt. Pressing the Enter key alone, will
cause the last answer you entered for this same prompt on the
previous screen and now displayed at the bottom of the screen
to be entered. To change information already entered, enter 13
at the CHANGE prompt and enter the new information for this
prcmpt.

This are no restrictions on the type of information which can
be entered here.

14 HOURS NNN. NN

The hours which needed to be expended to a correct the defect.

This is not a required entry. You may skip it by pressing the
Enter key. To change information already entered, enter 14 at
the CHANGE prompt and enter the new information for this
prompt.

An entry conforming to the following is acceptable: A numeric
value with up to 2 decimal places allowed.

15 RATE NN. NN

The rate at which the hours are to be charged.

This is not a required entry. You may skip it by entering
NULL. Pressing the Enter key alone will cause the default
information, displayed at the bottom of the screen, to be
entered. This prompt has a program called "D. RATE" which
determines the default answer. You need to check with the
programmer if how this program arrives at an answer is
important To change information already entered, enter 15 at
the CHANGE prompt and enter the new information for this
prompt.

An entry conforming to the following is acceptable: A numeric
value with up to 2 decimal places allowed.

16 LAB. COST NNNNNNN. NN

Normally the product of hours * rate; if desired this can be
overridden, or if labor hours and rates are not input, a value
can be put in this field.

This is not a required entry. You may skip it by entering
NULL. Pressing the Enter key alone will cause the default
information, displayed at the bottom of the screen, to be
entered. This prompt has a program called "H. DOLLARS" which
determines the default answer. The hours multiplied by the
rate for the responsible department. To change information
already entered, enter 16 at the CHANGE prompt and enter the
new information for this prompt.

An entry conformation to the following is acceptable: -A numeric
value with up to 2 decimal places allolwed.

17 MAT. COST

The cost of the materials for correction of the defect.

This is not a required entry. You may skip it by pressing the

Enter key. To change information already entered, enter 17 at
the CHANGE prompt and .enter the new.information for this
prompt.

An entry conforming to the following is acceptable: A numeric
value with up to 2 decimal places allowed.

TOT. COST

The sum of materials and labor. dollars.

No response is required from you at this prompt. The program
automatically "fills-in" a response. This information can only
be changed from another entry program.

CHANGE

"CHANGE" prompt. Allows the user to enter ctrl-t or "TOP" to
clear screen, ctrl-e or "END" to exit the screen with no
update, ctrl-d or "DELETE" to delete the record, "FILE" or
press <e> to file a record on disk.

If there is no need to change information on the screen, you
may press the Enter key. Doing this will file the information
on the screen to disk and present you with a clear screen.

To change information, enter the number associated with the
item you wish to change and then enter the new information for
the prompt you selected.

Entries conforming to the following are acceptable: Either any
number of numerical digits. Or, the literal "FILE". Or, the
literal "DELETE".

QA.DEPT. ADD   * * * DEPTARTMENT DATA upDATE — QUALITY DEFECTS * *.

01   DEPT   1500   02   NAME   PIPE   SHOP
03   DEPT. GRP

04   TOT- HOURS
05   RATE   10.00

The program is used to add, change or delete department information used by the quality defect program. This information is provided by user company itself and can contain any number of departments.

01 DEPT ....

The department in question.

This is a required entry. Therefore, you must enter something in response to this prompt. To change this entry after information has been entered into it, type 1 at the CHANGE prompt and enter the new information for this prompt.

There are no restrictions on the type of information which can be entered here.

02 NAME

The name of the department.

This is not a required entry. You may skip it by pressing the Enter key. To change information already entered, enter 2 at the CHANGE prompt and enter the new information for this prompt.

There are no restrictions on the type of information which can be entered here.

03 DEPT.GRP

The group the department belongs to ... Can be any code designation desired.

This is not a required entry. You may skip it by pressing the Enter key. To change information already entered, enter 3 at the CHANGE prompt and enter the new information for this prompt.

There are no restrictions on the type of information which can

be entered here.

04 TOT.HOURS NNNNN.NN

The total hours form this department for this month.

This is not a required entry. You may skip it by pressing the
Enter key. To change information already entered, enter 4 at
the CHANGE prompt and enter the new information for this
prompt.

An entry conforming to the following is acceptable: A numeric
value with up to 2 decimal places allowed.

05 RATE

The rate at which the hours are to be charged.

This is not a required entry. You may skip it by pressing the
Enter key. To change information already entered, enter 5 at
the CHANGE prompt and enter the new information for this
prompt.

An entry conforming to the following is acceptable: A numeric
value with up to 2 decimal places allowed.

CHANGE

"CHANGE" prompt. Allows the user to enter ctrl-t or "TOP" to
clear screen, ctrl-e or "END" to exit the screen with no
update, ctrl-d or "DELETE" to delete the record, "FILE" or
press <e> to file a record on disk.

If there is no need to change information on the screen, you
may press the Enter key. Doing this will file the information
on the screen to disk and present you with a clear screen.

To change information, enter the number associated with the
item you wish to change and then enter the new information for
the prompt you selected.

QA CODE. ADD   . * * * CODE UPDATE - QUALITY DEFECTS · * * *(I-1)

01 CODE   DE10
02 NAME   LOST/STOLEN/MISSING MATERIAL
03 GRP   DE10

CHANGE ?

* * * CODE UPDATE — QUALITY DEFECTS * * *

The program is used to add, change or delete codes used by the quality defect program. This is the same as the (3)"DEPARTMENT DATA UPDATE".

01 CODE . . . . . .

This is the key to the code file — it consists of 2 alpha characters followed by up to three numeric codes. There are four types of codes 1) de — defect, 2) ca — cause, 3) di —disposition, 4) cr — cost responsibility.

This is a required entry. Therefore, you must enter something in response to this prompt. To change this entry after information has been entered into it, type 1 at the CHANGE prompt and enter the new information for this prompt.

An entry conforming to the following is acceptable: 2 alphabetical characters followed by up to 4 of any kind of alpha-numeric characters.

02 NAME . . . .

The name (description) of what the code represents.

This is not a required entry. You may skip it by pressing the Enter key. To change information already entered, enter 2 at the CHANGE prompt and enter the new information for this prompt.

There are no restrictions on the type of information which can be entered here.

03 GRP . . . . .

The group code represents the summary level of a group of codes, i.e. Defect codes 20a through 20f would all be one group, grp = de20.

This is not a required entry. You may skip it by pressing the Enter key. To change information already entered, enter 3 at the CHANGE prompt and enter the new information for this prompt.

There are no restrictions on the type of information which can
be entered here.

CHANGE

"CHANGE" prompt. Allows the user to enter ctrl-t or "TOP" to
clear screen, ctrl-e or "END" to exit the screen with no
update, ctrl-d or "DELETE" to delete the record, "FILE" or
press <e> to file a record on disk.

If there is no need to change information on the screen, you
may press the Enter key. Doing this will file the information
on the screen to disk and present you with a clear screen.

To change information, enter the number associated with the
item you wish to change and then enter the new information for
the prompt you selected.

Entries conforming to the following are acceptable: *Either* any
number of numerical digits. Or, the literal "FILE". or, **the**
literal "DELETE".

```
* * * QUALITY DEFECTS - REPORTS SUBMENU * * *          SYSPROG
                 14:00:13   11 APR 1986
       1.  LISTING OF CODES BY CODE GROUP
       2.  LISTING OF DEPARTMENTAL DATA BY DEPARTMENT
       3.  LISTING OF ERRORS BY-TYPE OF REPORT
```

F5-Toggle= MAIN/LAST menu   Ctl-F5=TCL   F9.END menu   Retrn=Run menu option

REPORTS Q.A.

This is a program that is generated by the user. By that, we mean the user is able to create their own programs to generate other monthly reports besides the History update reports.

Listing of Codes by Code Group

Listing of Departmental Data by Department

These are just examples of a few that can be done. In order to create your own program, the user must first become familiar with Bid. Menu command, which is discussed in Run-time Revelation manual.

1. ADD NEW DETAIL RECORDS
2. CHANGE DETAIL RECORDS
3. ⁻ ⁻ DEPARTMENT DATE UPDATED
4.   CODE DATE UPDATE
5. REPORT MENU
6. RUN HISTORY UPDATE
7.   HISTORY INQUIRY
8. EXIT REVALLATION

Enter password

Q.A. HISTORY CREATE

This is menu choice 6 and should only be selected when you are ready to run a month's worth of data through the program. To use this program, it asks you for a password which is "HIST"; after that it will prompt you for the beginning month's date and also the ending month's date; then the machine is off and running. So make sure of the dates that you are entering because there is no stopping the process once you begin it for that month. Once the program has finished it will prompt you for a drive (e.g. A, B, C) to store that month's date on. This will enable you to save the month's worth data for future reference.. But you are not able to update a filed month's data and then run it through the history update program again, because the program would treat it as a new month which it is not.

```
01  RANK     CARANK
02  MM-YY    12-85


03  RANKS            04  MATERIAL        05  LABOR           06  TOTAL
    01) CA90          01)    2,614.81     01)         .00      01)    2,614.81
    02) CA20          02)    1,845.00     02)         .00      02)    1,845.00
    03) CA20N         03)      658.40     03)         .00      03)      658.40
    04) CA40F         04)      282.58     04)         .00      04)      282.58
```

This program keeps a histnry of the fouu highest de-rank and
ca—rank by month. Enables the user to quickly research any
past history by simply typing in the correct data.

01 RANK . . . . .

At this prompt enter either derank or carank.

This is a required entry. Therefore, you must enter something
in response to this prompt. To change this entry after
information has been entered into it, type 1 at the CHANGE
prompt and enter the new information for this prompt.

There are no restrictions on the type of information which can
be entered here.

02 MM—YY MM—YY

Enter the month and year that you are interseted in looking
at.

This is a required entry. Therefore, you must enter something
in response to this prompt. To change this entry after
information has been entered into it, type 2 at the CHANGE
prompt and enter the new information for this prompt.

An entry conforming to the following is acceptable: 2
numerical digits followed by the pattern code: —2N.

WHICH ERR. 1 VALUE

Enter WHICH ERR. 1 VALUE you wish to change.

This is not a required entry. Pressing the enter key returns
you to the change prompt.

To change an entry, enter the number of the line or column you
wish to change at the WHICH ERR.1 VALUE prompt. The number you
are looking to enter should be followed by a ")" on the
screen. For example:

 01> DATE ENTRY 02> DATE ENTRY

(OR)

01)   DATA ENTRY
02)   DATA ENTRY
03)   DATA ENTRY

You will have to re-enter the information for any prompt
preceeding the entry you wish to change (or just press the
enter key if the preceeding prompts have defaults the same as
the entries displayed on the screen). When you are prompted at
the bottom of the screen for the entry you wish to change,
enter the new information.

The "WHICH VALUE" prompt also allows you to enter "ADD" to add
values; "I" (for Insert) followed by the number of the value
you wish to insert before; or "D" (for Delete) followed by the
number of the value you wish to delete; or "DONE" to return to
the change prompt; or "CLEAR" to wipe out ALL existing values
listed after the prompt.

If you are changing already existing information, you will
have to enter the number of the row or column of information
you wish to change at the "WHICH VALUE" PROMPT. The number you
are looking to enter should be followed by a ">" on the
screen. See WHICH VALUE prompt.

When you are prompted at the bottom of the screen for WHICH
ERR.1 VALUE, enter the new information.

Entries conforming to the following are acceptable: Either a
number between 1 and 9999. Or, the literal "ADD". Or, the
literal: "I" followed by any number of numerical digits. Or,
the literal: "D" followed by any number of numerical digits.
Or, the literal "CLEAR". Or, the literal "DONE". Or, the
literal "F". Or, the literal "B".

03 RANKS . . .

This is not a required entry. You may skip it by pressing the
Enter key. To change information already entered, enter 3 at
the CHANGE prompt and enter the new information for this
prompt.

If you are changing already existing information, you will
have to enter the number of the row or column of information

you wish to change at the " WHICH VALUE " PROMPT. The number you
are looking to enter should be followed by a ">" on the
screen. See WHICH VALUE prompt.

When you are prompted at the bottom of the screen for 03
RANKS, enter the new information.

There are no restrictions on the type of information which can
be entered here.

WHICH ERR. 2 VALUE

Enter WHICH ERR. 2 VALUE you wish to change.

This is not a required entry. Pressing the enter key returns
you to the change prompt.

To change an entry, enter the number of the line or column you
wish to change at the WHICH ERR.2 VALUE prompt. The number you
are looking to enter should be followed by a ")" on the
screen. For example:

  01)   DATA ENTRY 02)   DATA ENTRY

        (OR)

  01)   DATA ENTRY
  02)   DATA ENTRY
  03)   DATA ENTRY

You will have to re-enter the information for any prompt
preceeding the entry you wish to change (or just press the
enter key if the preceeding prompts have defaults the same as
the entries displayed on the screen). When you are prompted at
the bottom of the screen for the entry you wish to change,
enter the new information.

The "WHICH VALUE" prompt also allows you to enter "ADD" to add
values; "I" (for Insert) followed by the number of the value
you wish to insert before; or "D" (for Delete) followed by the
number of the value you wish to delete; or "DONE" to return to
the change prompt; or "CLEAR" to wipe out ALL existing values
listed after the prompt.

If you are changing already existing information, you will
have to enter the number of the row or column of information

you wish to change at the "WHICH VALUE" PROMPT. The number you
are looking to enter should be followed by a ")" on the
screen. See WHICH VALUE prompt.

When you are prompted at the bottom of the screen for WHICH
ERR.2 VALUE, enter the new information.

Entries conforminng to the Following are acceptable: Either a
number between 1 and 9999. Or, the literal "ADD". Or the
literal: " I" followed by any number of numerical digits. Or,
the literal : "D" followed by any number of numberical digits.
or, the literal "CLEAR". Or, the literal "DONE" Or the
literal "F". Or, the literal "B".

04 MATERIAL

This is not a required entry. You may skip it by pressing the
Enter key. To change information already entered, enter 4 at
the CHANGE prompt and enter the new information for this
prompt.

If you are changing already existing information, you will
have to enter the number of the row or column of information
you wish to change at the "WHICH VALUE" PROMPT. The number you
are looking to enter should be followed by a ")" on the
screen. See WHICH VALUE prompt.

When you are prompted at the bottom of the screen for 04
MATERIAL, enter the new information.

An entry conforming to the following is acceptable: A numeric
value with up to 2 decimal places allowed.

WHICH ERR. 3 VALUE

Enter WHICH ERR.3 VALUE you wish to change.

This is not a required entry. Pressing the enter key returns
you to the change prompt.

To change an entry, enter the number of the line or column you
wish to change at the WHICH ERR.3 VALUE prompt. The number you
are looking to enter should be followed by a ")" on the
screen. For example:

 01> DATA ENTRY 02> DATA ENTRY

(OR)

01>   DATA ENTRY
02>   DATA ENTRY
03>   DATA ENTRY

You will have to re-enter the information for any prompt
preceeding the entry you wish to change (or just press the
enter key if the preceeding prompts have defaults the same as
the entries displayed on the screen). When you are prompted at
the bottom of the screen for the entry you wish to change,
enter the new information.

The "WHICH VALUE" prompt also allows you to enter "ADD" to add
values; "I" (for Insert) followed by the number of the value
you wish to insert before; or "D" (for Delete) followed by the
number of the value you wish to delete; or "DONE" to return to
the change prompt; or "CLEAR" to wipe out ALL existing values
listed after the prompt.

If you are changing already existing information, you will
have to enter the number of the row or column of information
you wish to change at the "WHICH VALUE" PROMPT. The number you
are looking to enter should be followed by a ")" on the
screen. See WHICH VALUE prompt.

When you are prompted at the bottom of the screen for WHICH
ERR.3 VALUE, enter the new information.

Entries conforming to the following are acceptable: Either a
number between 1 and 9999. Or, the literal "ADD". Or, the
literal: "I" followed by any number of numerical digits. Or,
the literal: "D" followed by any number of numerical digits.
Or, the literal "CLEAR". Or, the literal "DONE". Or, the
literal "F". Or, the literal "B".

05 LABOR

This is not a required entry. You may skip it by pressing the
Enter key. To change information already entered, enter 5 at
the CHANGE prompt and enter the new information for this
prompt.

If you are changing already existing information, you will
have to enter the number of the row or column of information

you wish to change at the "WHICH VALUE" PROMPT. The number you
are looking to enter should be followed by a ">" on the
screen. See WHICH VALUE prompt.

When you are prompted at the bottom of the screen for 05
LABOR, enter the new information.

An entry conforming to the following is acceptable: A numberic
value with up to 2 decimal places allowed.

WHICH ERR. 4 VALUE

Enter WHICH ERR. 4 VALUE you wish to change.

This is not a required entry. Pressing the enter key returns
you to the change prompt.

To change an entry, enter the number of the line or colum you
wish to change at the WHICH ERR. 4 VALUE prompt. The number you
are looking to enter should be followed by a ">" on the
screen. For example:

 01>   DATA ENTRY 02>   DATA ENTRY

        (OR)

 01>   DATA ENTRY
 02>   DATA ENTRY
 03>   DATA ENTRY

You will have to re-enter the information for any prompt
preceeding the entry you wish to change (or just press the
enter key if the preceeding prompts have defaults the same as
the entries displayed on the screen). When you are prompted at
the bottom of the screen for the entry you wish to change,
enter the new information.

The "WHICH VALUE" prompt also allows you to enter "ADD" to add
values; "I" (for Insert) followed by the number of the value
you wish to insert before; or "D" (for Delete) followed by the
number of the value you wish to delete; or "DONE" to return to
the change prompt; or "CLEAR" to wipe out ALL existing values
listed after the prompt.

If you are changing already existing information, you will
have to enter the number of the row or column of information
you wish to change at the "WHICH VALUE" PROMPT. The number you
are looking to enter should be followed by a ">" on the

screen. See WHICH VALUE protmpt.

When you are prompted at the bottom of the screen for WHICH
ERR. 4 VALUE, enter the new information.

Entries conformating to the following are acceptable: Either a
number between 1 and 9999. Or, the literal "ADD". Or, the
literal: "I" followed by any any number of numercial digits. Or,
the literal : "D" followed by any number of numberical digits.
Or, the literal "CLEAR". Or, the literal "DONE". Or, the
literal "F". Or, the literal "B".

06 TOTAL

.

This is not a required eNTRY. You may skip it by pressing the
Enter key. To change information already ertered, enter G at
the CHANGE prompt and enter the new information for this
prompt. .

If you are changing already existing information, you will
have to enter the number of the row or column of information
you wish to change at the "WHICH VALUE" PROMPT. The number you
are looking to enter should be followed by a ")" on the
screen. See WHICH VALUE prompt.

When you are prompted at the bottom of the screen for 06
TOTAL, enter the new information.

An entry conforming to the following is acceptable: A numercial
value with up to 2 decimal places allowed.

CHANGE

" CHANGE" prompt. Allows the user to enter ctrl-t or "TOp" to
clear screen, Ctrl—e or "END" to exit the screeen with no
update, ctrl-d or "DELETE" to be delete the recotrd, "FILE" or
press <e> to file a recodrd on disk.

If there is no need to change information on the screen, you
may press the Enter key. Doing this will file the information
on the screen to disk and present you with a clear screen.

To change information, enter the number associated with the
item you wish to change and then enter the new information for
the prompt you selected.

Entries conforming to the following are acceptable: Either the
literal "FILE". Or, the literal "DELETE".

Menu choice 8 is very self-explanatory. It will log you off the program. If it is hit accidently, don't worry about the information because it is automatically saved.

BENEFITS/FUTURE USE

When this project was undertaken in February 1985, we did not
realize the task relating to documentation of savings from
corrective actions would require more time than the length of this
project. The problem we have is with the recurrence of like jobs.
It is usually several months between like jobs, which extends the
time to see if corrective action on a particular problem was in fact
correct.

Therefore we have opted to exclude that particular task from
this final report. We will include some anticipated benefits along
with some future applications from both Marinette Marine and Bath
Iron Works.

BENEFITS

The benefits listed below are only anticipated ones from BIW and
Marinette Marine:

   o   The ability to see an.error and its associated costs for
          any given period.

   o   Used as a tool in correcting defects. Also to see if
          corrective action taken was indeed effective.

   o   Provide users with the ability to spot trends for future
          planning.

   o   Aid production supervisors in spotting problem areas of
          work.

   o   Increase defect awareness.

   o   Reduce rework hours.

   o   Help reduce costly errors.

APPLICATIONS :

During this project we used a pilot department on which the data
was collected. Of the data collected, it represented only a small
portion of the total data available from that department. What we
found from such a small sample has been encouraging, as far as trend
analysis and also the highlighting of costly errors. This is just
the start of the application possibilities for just using a small
subset of a pilot department. A large or small shipyard may wish to
use this program on a department basis or on a yard-wide basis all
depending on how they want to see the information broken down.