

PQC Notice Procedure

O.I. 450-802500-002

1. Scope: This document supplies the procedure for issue of PQC Notices.

2. Reference Documents:

- 2.1** Refer to binder #212-PQC
- 2.2** Refer to binder #220

3. Contents:

- 3.1** Scope.
- 3.2** Reference Documents
- 3.3** Table of Contents
- 3.4** Procedure

4. Procedure

- 4.1** A PQC notice will be issued in any instance where a spec has been violated.
- 4.2** Open the Excel worksheet **G: \newnotic.xls**.
- 4.3** Highlight the column A box of the next empty row.
- 4.4** Type in the next PQC Notice number sequentially, unless it is the first notice of the month. In this case, begin with the new month number plus 001.
- 4.5** The notice number consists of YYMMNNN, where Y is the year issued, M is the month, and N is the notice number. A typical number will read 9509034, meaning the 34th notice issued in September of 1995.
- 4.6** In the “Step_ID” column, enter the layer at which the problem lot is currently located and the device type (ex: AL1_4MDC).
- 4.7** In the “Problem” column type a brief description of the problem. If the notice is for an out of specification inspection then type the description in the form of Cluster Signature - highest defect density type (Example: Process Cluster Local- CL/K Part).
- 4.8** Enter the appropriate information in the “Lot #” and “Date Issued” columns.
- 4.9** Highlight the entire row you have just entered, and choose “Copy” from the Edit menu. This will be pasted into the cc:Mail. If you do not have access to cc:Mail, notify your lead after the report has been written. Save the file and exit Excel.
- 4.10** The following applies only to notices written on the PC in the PQC room.
 - 4.10.1** Using the mouse, click on the yellow smiley face icon on the toolbar in the upper right hand corner of the screen(Figure 1).



Figure 1: PQC notice icon on PQC computer.

- 4.10.2** MS Word will now load. When it is ready, you will see a green sad face button (Figure 2). Click on it, and the notice macro will begin.



Figure 2: Button to start notice.

4.10.2.1 If you do not see the sad face button, go to the menu View and choose “Toolbars”. Ensure that the box next to “Toolbar 3” is checked (Figure 3). If you still do not see the icon, report the problem to your lead.

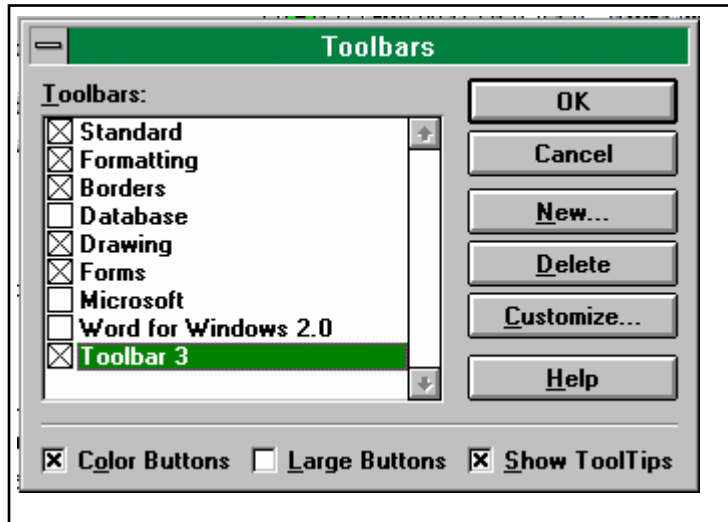


Figure 3: Notice button toolbar.

4.10.3 Help messages appear at the bottom of the screen for each field (Figure 4.). To move from field to field, use TAB, Enter, or the up and down arrow keys. Enter the necessary information, unless it is not applicable. Some fields are formatted for typed text, and some will appear with a small arrow pointing down (Figure 5.) These are menus from which you may choose the necessary information.

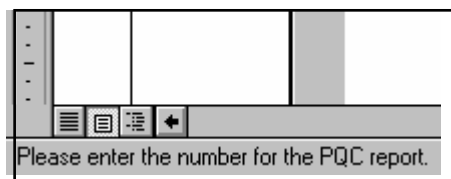


Figure 4: Example of help message located at bottom of screen.

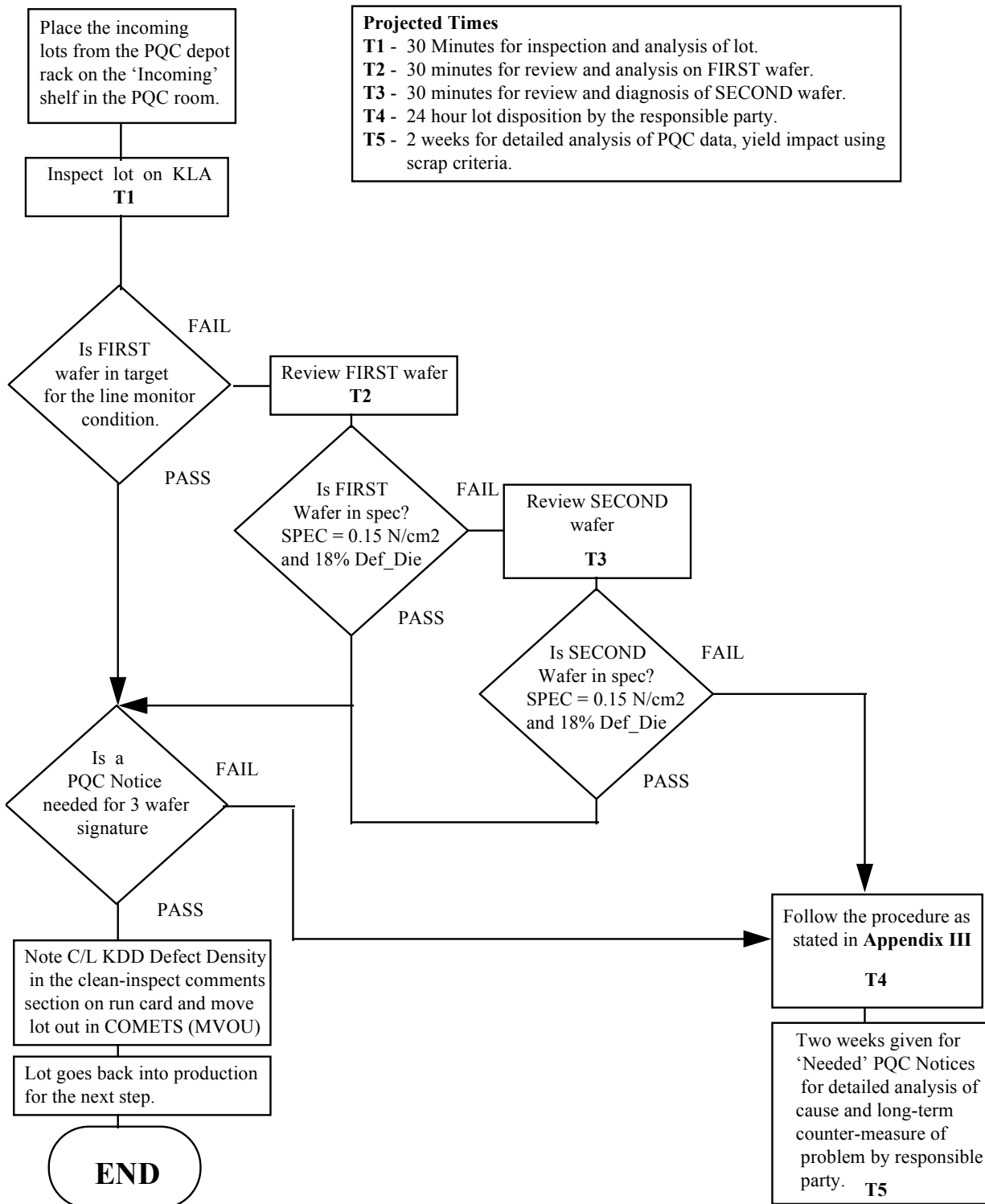


- 4.13** Check the Inspection to make sure that the Notice is in specification (reply: NOT NEEDED) or out of specification (reply: NEEDED) and follow the instructions illustrated by the flow charts in **Appendix II** for routing of data--see **Appendix III**. These flow charts are the general guidelines to follow. Check the PQC Inspection Picture Book 450-802600-001 for the cluster signature and major defect category codes for more specific instructions. These are listed under the catXXX category number in g:\pqc\systems\cat_code\catXXX.doc
- 4.14** For notices that do not require a reply (NOT NEEDED), send a cc:Mail to the PQC engineers. Attach the notice document file to the cc:Mail. If you do not have access to cc:Mail, go to your lead. When filling out the message part of the cc:mail, copy and paste the summary information from **G: \newnotic.xls**. File the notice in the appropriate "Out Of Spec" tray in the PQC room.
- 4.15** For PQC Notices that require a reply(NEEDED), the following data must be collected:
- 4.15.1** Scan the last two pages of the runcard on the HP scanner. Store the file as a bitmap image (.BMP) with the lot number as the filename in **G: \pqc\reports\runcards**. Check related equipment logbooks. If the log shows a problem with the equipment at the time the lot was run, scan the page and save it in **G: \pqc\reports\pictures** with the lot number and "-1", as in "F98105-1.bmp".
 - 4.15.2** From the RS/1 procedure CALL #SURFSCAN, get the last particle reading before the lot was run and the first reading after.
 - 4.15.3** If an unusual particle signature exists, or particles cannot be positively identified as such, take pictures by SEM. Perform EDS on particle signatures.
 - 4.15.4** Check the KLA database for lots run on the same equipment as the affected lot, as indicated by the equipment logbooks. Look for similar signatures and high defect densities.
 - 4.15.5** Create a list of possible problem lots from the equipment. List the four lots run before the affected lot, and the four lots run afterwards. Attach all information to the hard copy of the PQC notice.
 - 4.15.6** Check the KLA database for lots run at the same StepID as affected lot for the past week. **Get Data #1** then **Analysis** then **Data Summ** select **Yield_Sum** and look for similar signatures and high defect densities.
 - 4.15.7** Place the lot on hold in COMETS for the responsible party according to 450-800600-002 KLA 2551 Operation and **Appendix II**. State the notice number in the comments section of the hold screen.
 - 4.15.8** Fill out a hold tag and place the lot on the hold shelf. Place the completed PQC Notice paperwork in the appropriate "Out of Spec" tray on the table in the PQC room.
 - 4.15.9** When the notice has been prepared, send a cc:Mail to the responsible engineer and the PQC engineer according to 450-800600-002 KLA 2551 Operation and **Appendix II**. (copy and paste in the information from **G: \newnotic.xls**) and address the cc:mail according to **Appendix IV**.

- 4.15.10** Attach the PQC Notice from **G: \reports\Notice# .doc** and any other information that has been scanned into G: (e.g., runcards or equipment logbooks) then place under the lot box on the hold shelf.
- 4.16** If there has been three notices or ten lots out of specification with “needed” PQC Notices then the PQC engineer will issue a Non Conformance Report NCR with the notices (**Appendix V**). The NCR will have a KT Problem Analysis engineering sheet to be filled out jointly by PQC and the Responsible Group.

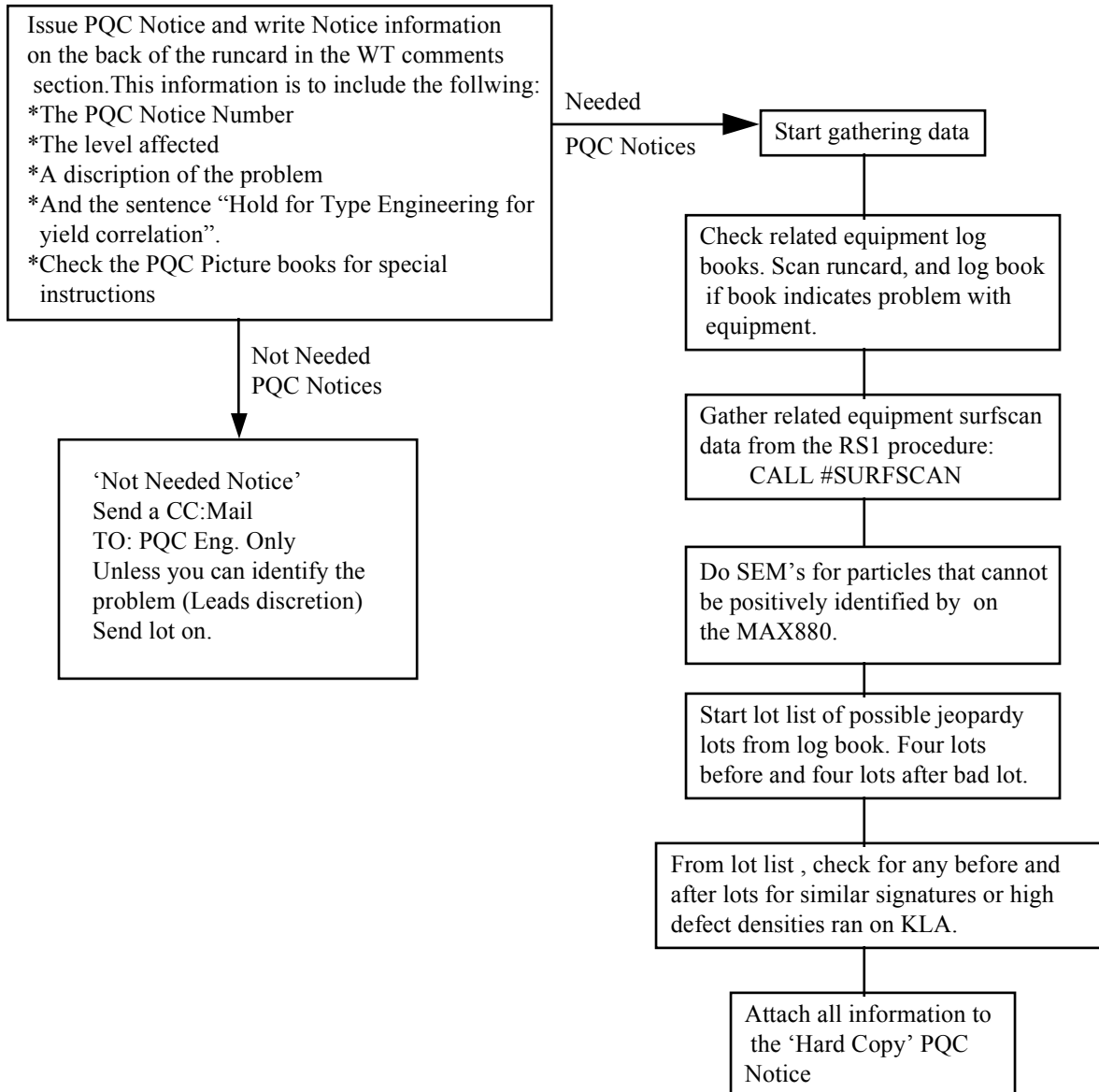
Appendix I

Production Flow For Line Monitor Of Memory Devices

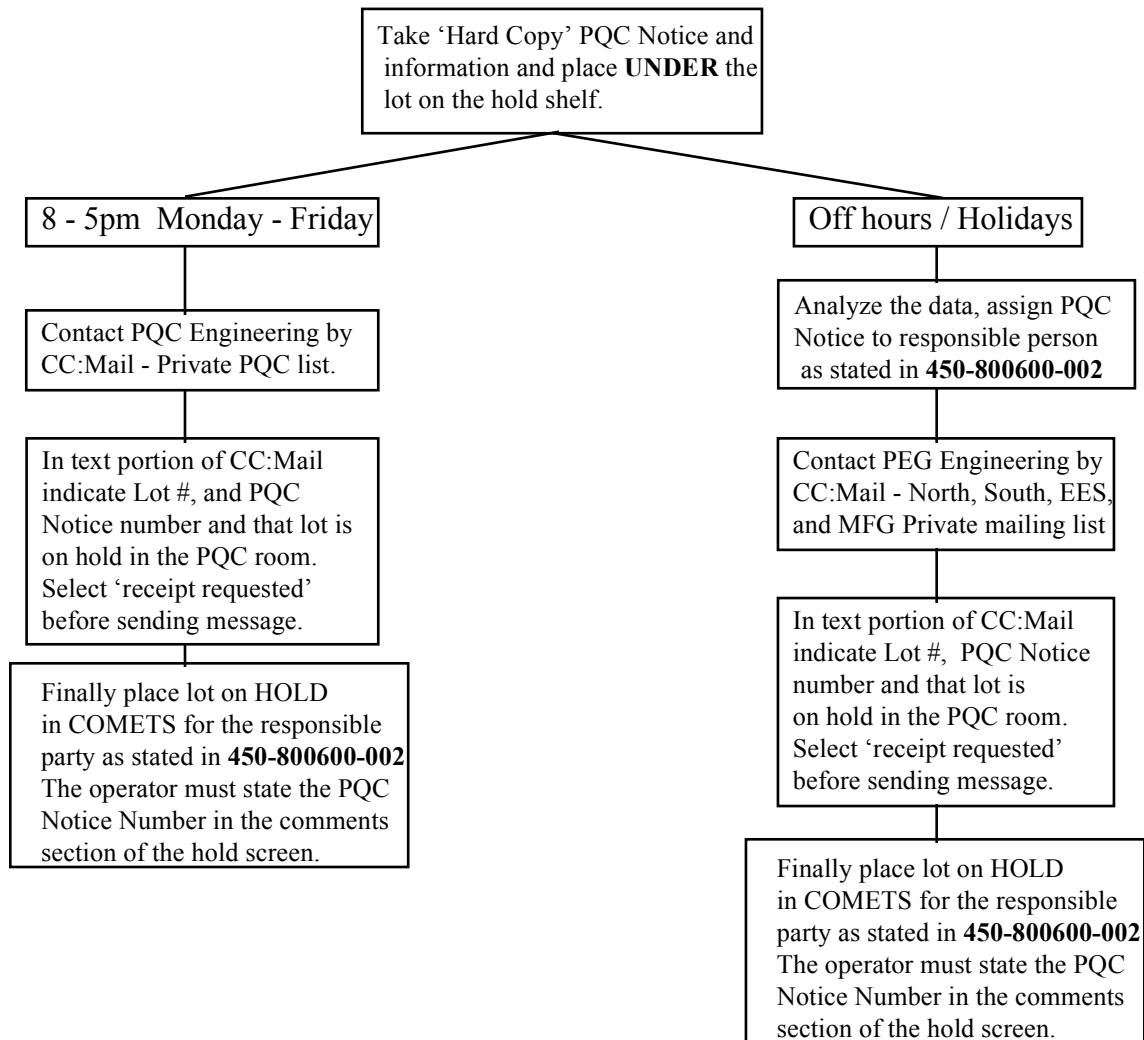


Appendix II

PQC Notice Procedure



Appendix III



Appendix IV

Using your Private Mailing list “PQC Notice”

When distributing PQC Notices that are **NEEDED** via cc:mail you should go to G:\Newnotices.xls

click on the appropriate PQC Notice # in column A and drag to column F

Then <Ctrl> C to copy

Login to cc:mail and Message --> New Message

Click on the message area and <Ctrl> Q to paste the summary from the spreadsheet.

Then type “Lot is on Hold for _____”

In the Subject box type “ PQC Notice # _____”

then click on

click on Private Mailing Lists

Click on “PQC Notice”

This will bring up the list that is contained in the G:\pqc\reports\ccmail.xls in the PQC Database. This list is maintained by a cognizant PQC Engineer. When changes are made to the G:\pqc\reports\ccmail.xls a cc:mail will be issued to the appropriate Lead Operators and other PQC staff members.

- 1) Double click on the Responsible Person (determined by Appendix II) then ADD
- 2) Click on the button to the right of TO and select CC
- 3) Single click on the top person’s name
- 4) Hold the Shift key down and single click on the last persons name
- 5) This should highlight all names then ADD then select DONE
- 6) The screen will display Duplicate addressee just select **okay**.

The judgment of who the Notice should go to during Non Office hours i.e. after business hours or the weekend, is now the Lead Operator who should have a copy of the weekend Engineer schedule. Use your judgment when you have conflicts between Cluster and Defect Category codes. If you have any questions call PQC Engineering.