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REV	**SECTION**	**SUMMARY OF CHANGE**	**DATE**

1. OBJECTIVE

To define the process for dealing with situations where customer or internal requirements have not been met prior to shipment, including:

- Documenting short-term corrective action to achieve revenue and margin

- Documenting long-term corrective action to solve the root cause

- Documenting the process for implementing the corrective action(s)

- Shipping the system, NSO, or part with all necessary documentation and corrective action plan to bring the item into compliance

- Making timely closure of the SRD so revenue and margin can be recognized

2. SCOPE

This policy applies to all product shipments to external customers, including shipments of unreleased products (Alpha, Beta and Gamma Systems).

3. RESPONSIBILITY

3.1. Each Product Division

It is the responsibility of each product division to identify and resolve all situations that are deviations to customer and/or Applied Materials requirements.

3.2. Division Quality Assurance

The Senior TQM Manager in PVD <u>Division QA</u> is responsible for the administration of this document, including reporting closure on all committed system-specific corrective actions, long-term corrective actions, and work to be completed by the field.

3.3. Global Quality

Global Quality is responsible assigning the SRD Number and for the tracking and reporting of activity related to this policy.

3.4. Finance

Finance is responsible for reversing either revenue or margin, depending on the functionality of the SRD item, and for re-reversing same when the corrective action is complete.

3.5. Installed Base Service and Support (IBSS)

The IBSS Customer Engineer (CE) typically performs the "work to be done in the field" section of the SRD.

3.6. SRD Signers

Those who sign the SRD acknowledge that if the corrective action is in their area, they will be responsible for making sure it its done.

5. REFERENCES

5.1. Acronyms / Definitions

Acknowledge receipt: Positive feedback to the sender after receiving an item.

Functional: Capable of performing the tasks required for successful processing of product as intended by the system design and acceptable to the customer for delivery. See Appendix 7.3, Functionality Decision Flow Chart

Detector: The individual that first <u>detects</u> a potential SRD.

Initiator: The individual that <u>initiates</u> an *SRD Form*, a manager, typically a Project Manager; chairs the first SRD Meeting (if any);

Executor: The individual that <u>executes</u> the SRD's corrective action plan; responsible for correcting and preventing recurrence of the deviation and for obtaining necessary approvals for the a SRD.

Requirements: The "requirements" referred to herein include those defined in the applicable:

- Engineering Specifications

- Test Specifications

- Process Specifications

- Advertised Specifications

- Any additional requirements specified in our Sales Order and customer's Purchase Order.

   NOTE: The customer must always document changes to customer requirements. If there is a cost impact, Division Finance must approve the request *[mth3]*before the system is released for shipment.

   Typical SRD conditions include missing parts, back-orders,

Benchmarks: Specific steps that achieve an objective.

Line Relation: A relationship between a manager and a subordinate. The manager has authority over the subordinate and is "line-to" immediate subordinates.

*Reporting Loop***:** A two-way communication (acknowledgment) that occurs between two individuals; typically used when initiating or completing a transaction.

Staff Relation: A relationship between two people where neither has authority over the other, however both may be empowered to make requests of each other and exchange information with approval of their respective managers. Each is "staff-to" the other.

Strategic Work: Work performed by managers to manage their subordinates, including: organizing, planning, developing, and operating; work that cannot be delegated to subordinates.

Tactical Work: Work performed by non-managers to fulfill their accountabilities to their managers.

5.2. Reference Documents

- *Global Finance Manual*, 1.0, Revenue Recognition Policy, current revision
- *Quality System Manual*, Section 2-13, Control of Non-conforming Material/Product
- *Quality System Manual*, Section 2-14, Corrective and Preventive Action
- *Corporate Quality Procedure No. 0250-70092*, Phase Exit and Shipment Requirements for Unreleased Products, current revision
- *Shipment Requirements Deviation Forms*, current revision, for responsible product division
- *Product "SRD Signature Requirements List",* current revision, for responsible product division

5.3. Conventions

Department and Division names are underlined, such as, Marketing, Division TQM, IBSS, etc.,

6. METHODS

6.1. Flowcharts (not shown in this Acrobat file)

The following flowcharts show the SRD Business Process by department. Sometimes the charts show "wait" periods that represent delays while another department acts on their part of the SRD process. In the flow charts:

- Squares represent steps in the process.
- Circles represent data or results produced by a step in the process.
- Dashed lines show the flow of data or results from process to process.

Each flowchart shows the functions of a different "department" listed in the following order:

6.2. **General Overview (for complete instructions see :**

6.2.1. **Conditions for SRD:**

The ***Detector*** recognizes that shipping requirements (see definition above) cannot be met before product shipment to an external customer. Typically, the ***Detector*** is someone in Manufacturing, such as the Project Manager, or someone in QA.

> **NOTE:** The only time the customer is notified of an SRD is when it is 'visible' to the customer.

The Initiator calls Division TQM, then, if necessary, creates an SRD Meeting, then appoints the ***Executor***, who then generates the *SRD Form* and follows through to completion of the corrective action.

6.2.2. **If an SRD situation impacts the financial performance of Divisions or Regions:**

1. Refer to *Global Finance Manual*, policy 1.0, Revenue Recognition Policy, for specific financial considerations.

2. Division QA determines if the system is fully functional at the time of shipment. (See "*functional*" in the Definitions section.)

3. Determine Financial impact by *system functionality*.

6.3. **FILLING OUT THE SRD FORMS**

The SRD Corrective Action System uses the following forms:

- **Preliminary Worksheet Form**
- **Corrective Action Planning Form**
- **SRD COMPLETION FORM**

6.3.1. **Preliminary Worksheet Form**

The purpose of the Preliminary Worksheet Form is to provide:

- A preliminary problem definition
- A planning tool for discussions with <u>Division QA</u>
- A planning tool for a formal SRD Meeting, if required

Using the Preliminary Worksheet Form, perform the following benchmarks *before* calling <u>Division QA</u> or creating the SRD Meeting.

1. Develop a "preliminary" statement of the PROBLEM.

2. Adopt a "preliminary" OBJECTIVE <u>related</u> <u>to</u> <u>delivering</u> <u>the</u> <u>system</u> since you must consider other factors before your objective becomes "official" in the meeting.

3. Write down the preliminary CORRECTIVE ACTIONS <u>related</u> <u>to</u> <u>solving</u> <u>the</u> <u>problems</u> - short-term and long-term.

4. Write down your ASSUMPTIONS related to both the PROBLEM its SOLUTION(S). Whether intuitive, rational, written, or verbalized, assumptions directly impact the content of your plan.

5. Develop a preliminary FORECAST. In most cases, your assumptions should be accompanied by a financial forecast.

6. Call <u>Division QA</u>.

7. Confirm that the situation requires an SRD.

8. If so, determine if a meeting should be called and who should attend.

9. When necessary, reserve a Conference Room for the meeting and notify attendees.

6.3.2. **Corrective Action Planning Form**

The SRD **Corrective Action Planning Form** is the **central document** of the SRD System (see) that you and your team will use to:

- Orchestrate the SRD Planning Meeting.

- Document corrective action, accountabilities, and reporting loops.

- Acknowledge results along the way.

    1. Develop and write the Statement of the Problem.

    2. Develop and write the OBJECTIVE in terms of delivering the current system and preventing the problem in future systems. Use the preliminary objective to create the "official" objective - the one you and your group will strive to achieve.

    3. Develop and write the SOLUTION(S), both short-term and long-term, to achieve the OBJECTIVE.

    4. Develop and write the CORRECTIVE ACTION(S) necessary to achieve the SOLUTION(S).

    5. Develop and write the STANDARDS, as necessary, to define the requirements of people and equipment. Standards are: "declarative", "comparative", and "majoritarian" as in the following examples:

        "Declarative":

        "The chamber will be.... ." This standard <u>declares</u> - it leaves no interpretation, comparison or judgment; it is a "thou shalt" (or "thou shalt not").

        "Comparative":

        "The brand-name will be one of the top-three in (specify) ." This standard requires a <u>comparison</u> of brand-name products. It allows the subordinate some discretion; it does not demand a given brand-name, only that it be selected from the top three.

        "Majoritarian":

        "*The cabinet style will be acceptable to a majority of managers."* This standard calls for a <u>majority</u>. A poll will be taken; it is rare that a minority preference prevails. This standard allows the subordinate some discretion. (This designation is also be used when a certain percent of the managers must approve.)

INSTRUCTIONS FOR HANDLING THE SRD

1. REPORT THE PROBLEM & INITIATE SRD

1.1. Detector detects potential SRD:

1.1.1. Notify the <u>Accountable Manager</u> (*Initiator*)of the problem.

1.2. *Initiator*

The goal is to complete the *SRD Form* as far in advance of the ship date as possible. Define the problem and notify <u>Division QA</u> as follows:

1.2.1. Working with the person that discovered the problem, fill out the **Preliminary Worksheet Form** to prepare for the phone call to <u>Division QA</u>.

1.2.2. Call the <u>Division QA</u> Manager to discuss the potential SRD.

1.3. <u>Division QA</u> **Manager and** *Initiator*

1.3.1. Review the problem, corrective actions, assumptions, forecast, etc., with the *Initiator* (usually from OPP&C or Manufacturing).

1.3.2. Assist the Initiator to fill out the **Preliminary Worksheet Form**

1.3.3. Decide if the problem is an SRD.

1.3.3.1. If NO, create a plan to implement the corrective actions necessary to avoid the SRD.

1.3.3.2. If YES, discuss and confirm the preliminary corrective actions, assumptions, forecast, etc., as shown on the Form.

1.4. *Initiator*

1.4.1. Obtain the *SRD Forms* from the ___ (network).

1.4.2. Fill out the *SRD Form* based on the Preliminary Worksheet Form and the discussion with <u>Division QA</u>.

1.4.3. Decide if the SRD is a "no-brainer" - can the Corrective Action(s) be implemented easily and effectively without involving other department(s)?.

1.4.3.1. If YES, proceed to step 1.6.4 on page 3.

1.4.3.2. If NO, proceed to next step.

1.5. *Initiator* **- Pre-Meeting Planning**

1.5.1. Use the Meeting Pre-Planning form to organize a meeting to be attended by representatives from:

- Project Management
- Manufacturing
- Marketing
- QA
- Engineering
- Austin
- Japan
- Other departments (Software, Japan, etc.) depending on the nature of the SRD

1.5.2. Notify the attendees of the meeting.

1.5.3. Reserve a Conference Room.

1.6. *Initiator* - Chair the Meeting

1.6.1. Make sure to get the right people to the meeting.

1.6.2. Preside over the meeting, working with the attendees, to complete the *SRD Form* as follows:

1.6.3. Review the problem with the attendees. Verify that the situation qualifies as an SRD and document clearly.

1.6.4. Create the solutions and Corrective Action Plan.

1.6.4.1. Identify and document clearly the short-term, system-specific corrective action for shipment. What specific action is necessary for shipment?

NOTE: The "Work to be Completed by the Field" must reflect that which is similarly accomplished during product/system acceptance.

1.6.4.2. Identify and document clearly the long term corrective action to prevent future occurrence. What specific action is necessary for the long term fix?

1.6.4.3. Answer all relevant questions and document all corrective actions.

1.6.5. Appoint the *Executor*.

2. DEVELOP THE FORMAL SRD

2.1. *Executor*

The SRD *Executor* is the person responsible for correcting and preventing the recurrence of the deviation, and for obtaining the necessary approvals.

2.1.1. Review the *SRD Form*. Complete if necessary.

2.1.1.1. Complete the "Work to be Completed by the Field" section.

2.1.2. Call Marketing to see if they need to notify the customer.

2.1.2.1. If NO, proceed to step 2.3.2 on page 4.

2.1.2.2. If YES send the SRD Form to Marketing.

2.1.2.3. Wait for Marketing Response, then proceed to step 2.1 on page 3.

2.2. Marketing Manager

2.2.1. Acknowledge receipt of *SRD Form* from **Executor**.

2.2.2. Does the Customer need to be notified?

2.2.2.1. If NO, proceed to step 2.2.5.

2.2.2.2. If YES, Proceed to next step.

2.2.3. Call the Customer's <u>Sales Representative</u> to notify of the SRD situation.

2.2.4. Working with the Sales Representative, notify the Customer of the SRD.

2.2.5. Complete the "Marketing Action" section of the *SRD Form*.

2.2.6. Sign the *SRD Form* as necessary.

2.2.7. Return the SRD to the **Executor**.

2.3. *Executor*

2.3.1. Acknowledge receipt of SRD from <u>Marketing</u>.

2.3.2. Forward the SRD to <u>Division QA</u> for validation before executive sign-off.

2.4. *Executor* **and** <u>**Division QA**</u>

2.4.1. Working with **Executor**, verify that the SRD is accurate, complete, and effective, for both short- and long-term corrective actions.

2.4.2. Verify SRD Signature List on the *SRD Form*. (<u>Division TQM</u> maintains and publishes the *SRD Signature Requirements List.*)

2.4.3. Update *SRD Form* as necessary.

2.4.4. Return SRD to the **Executor**.

2.4.5. Update the SRD Log with new SRD information including: ship date, customer, short- and long-term dates, comments, open/close.

3. OBTAIN APPROVAL OF CORRECTIVE ACTION

3.1. *Executor*

3.1.1. Acknowledge receipt of SRD from Division TQM.

3.1.2. Forward the *SRD Form* to the individuals shown on the *SRD Form's* Signature List for necessary signatures and approvals. (Signers Acknowledge that if the corrective action is in their area, they will make sure it's done.)

NOTE: Approvals for all corrective action(s) must be in accordance with the current *SRD Signature Requirements List* (maintained and published by Division TQM. for the product concerned, and must include as a minimum, the signatures of:

- • Controller
- • TQM
- • Safety representatives
- • AMJ approval.for shipments to Japan,

3.1.3. Obtain the SRD Number from Global QA (after obtaining the executive signatures).

3.1.4. Send complete *SRD Form* to Division TQM for final signature.

3.1.5. (END OF SRD GENERATION)