

TITLE: CONFIGURATION CHANGE CONTROL

NUMBER PP-03-17
REVISION 1
PAGE 1 of 13
EFFECTIVE DATE 8-19-92
SUPERSEDES Rev/0 & PIC #1 (REWRITE)

1.0 PURPOSE

This procedure defines the process for managing changes to Raytheon Services Nevada (RSN) technical baseline elements.

2.0 APPLICABILITY

This procedure applies to RSN Yucca Mountain Site Characterization Project (YMP) design personnel when processing changes to elements in a RSN YMP baseline.

This procedure also applies to changes to RSN baseline elements that are additionally controlled by the Yucca Mountain Site Characterization Project Office (YMPO) Change Control Board (CCB). Changes to documents under YMPO Field Change Control Board (FCCB) control are processed in accordance with PP-03-23.

3.0 REFERENCES

- 3.1 YMP 88/4, Configuration Management Plan
- 3.2 AP-3.3Q, Change Control Process
- 3.3 AP-3.6Q, Configuration Management
- 3.4 PP-03-15, Configuration Identification and Documentation
- 3.5 PP-03-23, Field Change Control
- 3.6 PP-17-01, Records Management

4.0 DEFINITIONS

- 4.1 Baseline Elements - The selected technical and programmatic documents (e.g., design input, design media, schedules, deliverables lists, etc.) which have been submitted for baseline consideration, approved, and entered into the RSN YMP technical baseline.

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APPROVED BY: [Signature] 8/13/92 [Signature] 8-13-92
MANAGER, Quality Assurance, YMP Date TECHNICAL PROJECT OFFICER Date

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- 4.2 Design media is documentation which contains pictorial and/or written information describing the design of equipment, facilities, etc., from conception to operation, such as engineering drawings and material/equipment specifications.

5.0 RESPONSIBILITIES

- 5.1 The Design Change Control Board (DCCB) Chairperson is responsible for the overall change control process described in this procedure.
- 5.2 The Design Change Control Board Members, as directed, are responsible for (1) providing change impact analysis; (2) recommending change approval, disapproval, or deferral; and (3) providing change implementation direction.
- 5.3 The Systems Engineering Manager (SEM), functioning as the RSN YMP Interface Control Working Group (ICWG) Representative, is responsible for verifying the effect of the ECR on any documents under YMPO Change Control Board (CCB) control.
- 5.4 The Configuration Management Chief (CMC) is responsible for (1) the configuration management (CM) and DCCB Secretary duties associated with this procedure and (2) coordinating the change control process.
- 5.5 Design personnel are responsible for initiating requests for changes and implementing approved changes to baseline elements.

6.0 PROCEDURE

NOTE: A flowchart of the Change Control Process described in this procedure is supplied as Attachment 1.

6.1 Discussion on CONFIGURATION CHANGE CONTROL

Changes affecting the configuration of an item are to be limited to those which are necessary or offer significant benefits to the YMP. Every proposed configuration change affecting YMP interests should be evaluated on the basis of the change criteria, including not making the proposed change. The evaluation should take into consideration all aspects of the change on the products or systems with which it interfaces and other participants affected. Such aspects may include design, performance, cost, schedule, operational effectiveness, logistics support, transportability, and training.

6.2 The Design Change Control Board

- 6.2.1 The Technical Project Officer (TPO) shall establish a Design Change Control Board (DCCB) for the purpose of providing change impact analysis, recommending change disposition, and providing change implementation direction. The DCCB is (1) the focal point for change control, (2) responsible for total assessment of change impact, and (3) the authority for change implementation. The DCCB is not an engineering forum nor a voting body.

- 6.2.2 The TPO shall designate the DCCB Chairperson. DCCB membership shall consist of (1) Site Characterization Design Manager, (2) Systems Engineering Manager, (3) Field Operations Manager, (4) Project Administration Manager, (5) Configuration Management Chief as the DCCB Secretary, and (6) Manager, Quality Assurance (QA) Engineering. Additional subject specialists may be included at the discretion of the DCCB Chairperson.
- 6.2.3 Formal DCCB meetings will be held at the direction and timing established by the DCCB Chairperson.
- 6.3 Change Initiation
- 6.3.1 Any project team member may initiate a proposal for change. The proposed change shall be documented on the Engineering Change Request (ECR), Form LV-2042, Attachment 2.
- 6.3.2 The initiator shall complete Part 1 of the ECR and submit the ECR to the CM Section. In Part 1, the initiator shall:
- a. state the problem or deficiency the ECR is meant to correct in sufficient detail to permit an adequate change impact analysis
 - b. identify items or documents known to be affected by the proposed change
 - c. if applicable, identify attachments supporting the proposed change [e.g., a proposed solution or marked-up copy of the affected document(s)]
 - d. obtain immediate supervisor's concurrence
- 6.3.3 The CM Section shall assign a sequential number to the ECR and initiate change tracking in the RSN Configuration Information System (RCIS) (see PP-03-15 for description of RCIS).
- 6.3.4 The CM Section shall review the ECR and its supporting documentation (if applicable) for clarity and completeness. The CM Section may request, obtain, or provide additional information relative to the proposed change.
- 6.3.5 The CM Section shall transmit the ECR and its associated documentation along with a request for a Technical Impact Statement (TIS), Form LV-359, Attachment 3, to each of the DCCB members.
- 6.4 Change Evaluation
- 6.4.1 The DCCB members shall perform a change impact analysis in their area(s) of expertise and document the results of this analysis on the TIS. The DCCB member may delegate the task of performing this analysis to another individual but retains overall responsibility for the analysis.

6.4.2 The change impact analysis shall address the following:

- a. technical adequacy/acceptability
- b. impact of the change on previously established configuration (i.e., baseline-resident elements) and the required retrofit, if any
- c. impact of the change on the design process or procedures
- d. necessity of training in connection with the change implementation

6.4.3 The TIS shall be completed and returned by the date noted on the request for TIS. Any extension to the TIS due date shall be made to and approved by the DCCB Chairperson. Any TIS received after the TIS due date (without an approved extension) shall be submitted to and dispositioned by the DCCB Chairperson on a case by case basis.

6.4.4 The completed TIS shall be returned to the CM Section. Documentation supporting, justifying, or clarifying the TIS may be attached at the discretion of the responsible DCCB member. If supplied, this additional documentation shall become part of the TIS segment of the ECR record package (see § 6.9).

6.4.5 The CM Section shall prepare a summary of the impact analyses and present this along with the ECR and impact statements to the DCCB Chairperson for evaluation. The Chairperson shall complete ECR Part 2 indicating:

- a. approval of the ECR (go to § 6.4.5.1)
- b. disapproval of the ECR (go to § 6.4.5.2)
- c. the DCCB shall be formally convened to further evaluate the ECR or to resolve concerns identified during the impact analysis cycle (go to § 6.4.5.3).

6.4.5.1 If the ECR is approved, the Chairperson shall (1) provide the change disposition by completing ECR Part 3 and (2) assign an implementation due date and an individual or organization responsible for change implementation in ECR Part 4.

6.4.5.2 If the ECR is disapproved, the Chairperson shall provide a justification for rejection in ECR Part 3 (block 16), enter "N/A" in ECR Part 4, and close out the ECR by signing the appropriate block in ECR Part 5.

6.4.5.3 If a formal DCCB meeting is requested, the Chairperson shall indicate in the ECR Part 3. See § 6.7 for DCCB meeting.

6.5 Implementing the ECR

6.5.1 The ECR shall be returned to the CM Section. The CM Section shall update the RCIS and, depending on the ECR's disposition, coordinate subsequent action to the ECR.

- 6.5.1.1 If the ECR is approved, the CM Section will transmit the dispositioned ECR to the assigned individual or organization. (See § 6.5.2)
- 6.5.1.2 If the ECR is disapproved, the CM Section will transmit a copy of the ECR to the initiator and the DCCB members, update the RCIS, and process the ECR in accordance with § 6.9.
- 6.5.1.3 If a DCCB meeting is necessary, the DCCB Secretary will notify the DCCB membership of the meeting (see § 6.7).
- 6.5.2 The individual or organization responsible for the change implementation shall perform the necessary actions (i.e., revise or generate documents) in accordance with the appropriate, governing procedure.
- 6.5.3 After accomplishing the ECR-mandated actions, the responsible individual or organization shall indicate implementation completion in ECR Part 4 and submit the ECR to the CM Section.
- 6.6 Closing the ECR
- 6.6.1 The CM Section shall verify the ECR implementation. Verification concurrence shall be indicated in ECR Part 5.
- 6.6.2 Following implementation verification, the ECR shall be submitted to the DCCB Chairperson for closure. ECR closure shall be indicated in ECR Part 5.
- 6.6.3 The ECR shall be returned to the CM Section. The CM Section shall update the RCIS and process the ECR in accordance with § 6.9.
- 6.7 DCCB Meeting
- 6.7.1 If a formal DCCB meeting is directed, the DCCB Chairperson shall indicate in ECR Part 2 and return the ECR to the CM Section. The Chairperson may direct addition of subject specialists to the DCCB Meeting attendance roster.
- 6.7.2 The DCCB Secretary shall notify the DCCB members (and other individuals as directed by the Chairperson) of the date and time of the DCCB meeting. This notification will be accompanied by a meeting agenda and the ECR.
- 6.7.3 DCCB meeting attendance by the member or alternate is mandatory. Meeting minutes shall be prepared by the DCCB Secretary and distributed to the attendees. Based upon the DCCB decision, the CM Section shall process the ECR in accordance with the applicable direction given in § 6.5.

6.8 Processing YMPO Change Requests

If the change impacts other program participants or the Project baseline or CCB controlled documents, a YMPO Change Request shall be submitted to the YMPO CCB Secretary. For this purpose the SEM prepares the Change Request form and all associated documents and, following TPO approval, processes it according to AP-3.3Q. Further CCB Directives with regard to this Change Request shall be handled in accordance with AP-3.3Q.

6.9 Compiling the ECR Records Package

Once the ECR is closed, the CM Section shall evaluate the collected documents, compile the ECR Records Package, and process the package into the Records System. As a minimum, the ECR Records Package shall consist of the following:

- completed ECR and any associated attachments
- completed technical impact statements and any supporting documentation
- DCCB meeting agenda and minutes, if applicable

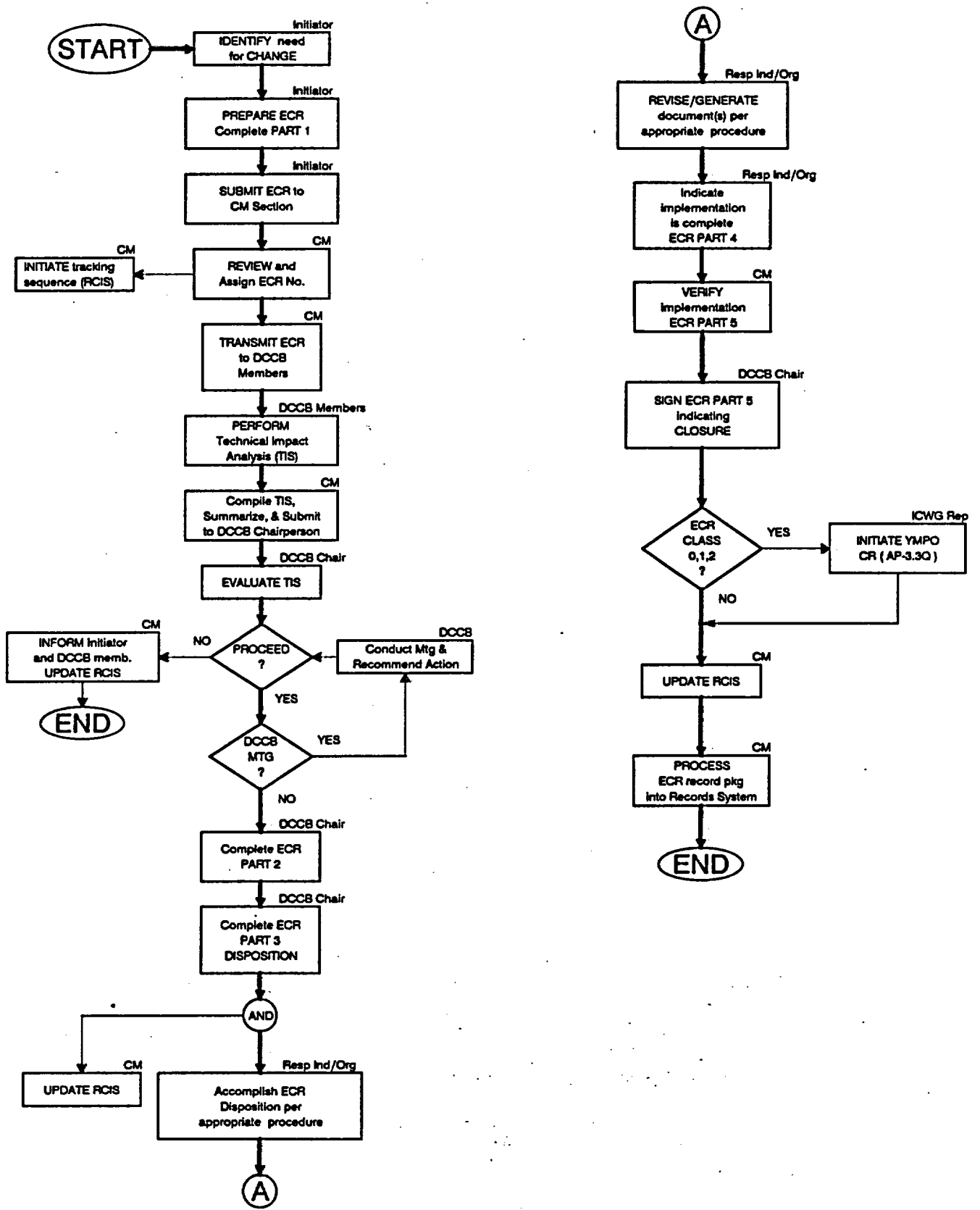
6.10 Records

All YMP records, including QA Records, generated by this procedure shall be handled in accordance with PP-17-01.

7.0 **QUALITY ASSURANCE RECORDS**

The ECR Records Package is the QA record generated by this procedure.

ATTACHMENT 1 RSN YMP Change Control Process Flowchart




ATTACHMENT 2
Engineering Change Request Page 1, Form LV-2042

YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT ENGINEERING CHANGE REQUEST (ECR)			10. ECR No. Page 1 of								
PART 1 IDENTIFICATION											
1. ECR Title:		2. NCR/CAR/DR:									
3. Document Number:	4. Rev No.	5. Document Title:									
6. Description of Change:											
<h1 style="margin: 0;">TYPICAL</h1>											
(See ECR Continuation Page)											
7. Reason/Justification for Change:											
(See ECR Continuation Page)											
8. Attachments (Title, Number, Page count)		9. Initiated By:									
		<table style="width:100%; border: none;"> <tr> <td style="border: none; width: 50%;">Name (Print) _____</td> <td style="border: none; width: 15%;">Telephone _____</td> <td style="border: none; width: 15%;">Initial _____</td> <td style="border: none; width: 10%;">Date _____</td> </tr> <tr> <td colspan="2" style="border: none;">Initiator's Supervisor Signature _____</td> <td colspan="2" style="border: none;">Date _____</td> </tr> </table>		Name (Print) _____	Telephone _____	Initial _____	Date _____	Initiator's Supervisor Signature _____		Date _____	
Name (Print) _____	Telephone _____	Initial _____	Date _____								
Initiator's Supervisor Signature _____		Date _____									
PART 2 EVALUATION											
11. DCCB Chairperson Evaluation:		12. ECR Affects Project CCB Documents?									
<input type="checkbox"/> ECR Approved - See DISPOSITION <input type="checkbox"/> ECR Disapproved - See DISPOSITION <input type="checkbox"/> DCCB MEETING (If held, Summarize Below.)		<input type="checkbox"/> YES - CR No. _____ <input type="checkbox"/> NO									
13. DCCB Meeting Summary (If Not Required, "N/A" this block.)											
14. ECR Implementation Requires Design Process / Procedure Change? <input type="checkbox"/> YES <input type="checkbox"/> NO											
15. ECR Implementation Requires Training? <input type="checkbox"/> YES <input type="checkbox"/> NO											

LV-2042 (06/92)

ATTACHMENT 2, Continued
Engineering Change Request Continuation Sheet, Form LV-2042 (Continuation)

 <p>YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT ENGINEERING CHANGE REQUEST (ECR) CONTINUATION PAGE</p>	10. ECR No. Page ____ of ____
<h1>TYPICAL</h1>	

ATTACHMENT 2, Continued
Engineering Change Request Instructions, Form LV-2042

Instructions for Preparation of
RSN Yucca Mountain Site Characterization Project
ENGINEERING CHANGE REQUEST (ECR)
Form LV-2042

The numbered steps correspond to the numbered blocks on the ECR form. If additional space is required, then use the Engineering Change Request (ECR) Continuation Page.

PART 1 IDENTIFICATION (To be completed by Initiator)

1. Enter a brief **DESCRIPTIVE TITLE** indicating the purpose of the ECR.
2. Enter associated **NCR/CAR/DR** numbers. Enter "N/A" if not applicable.
3. Enter the **NUMBER** of the document to be changed.
4. Enter the **REVISION** number of the document to be changed.
5. Enter the **TITLE** of the document to be changed.
6. **DESCRIBE** the proposed change in sufficient detail to permit identification and evaluation. Describe which part of the item or system is proposed for change and type of change proposed. Provide supplemental drawings or sketches as necessary to clearly portray the proposed change. Identify any items or documents known to be affected by the proposed change.
7. **DESCRIBE** (1) the problem the ECR corrects, or the new capability the ECR provides, and (2) the nature of the deficiency, inconsistency, etc. Substantiate the need for the change in detail. Identify and summarize any correspondence establishing requirements for the change.
8. If applicable, **LIST** attachments to the ECR by title, identifying number, and page count; otherwise enter "N/A".
9. **ENTER** Name, telephone number, and initials of Individual submitting the change and date the ECR is prepared. Obtain the dated signature of the Initiator's immediate Supervisor. Submit the ECR to the CM Section.

ECR NUMBER (To be completed by CM Section)

10. **REVIEW** the ECR and (if applicable) its supporting documentation; obtain, request, or provide additional information relative to the proposed change; paginate the ECR; and assign a number.

PART 2 EVALUATION (To be completed by DCCB Chairperson)

11. **INDICATE** applicable decision. Refer to procedure text for further direction.
12. **INDICATE** whether or not the ECR affects YMPO CCB documents. If YES, defer CR initiation until ECR Closure (Part 5).
13. **ENTER** a brief summary of DCCB meeting, if held, otherwise **ENTER** "N/A".
14. **INDICATE** the need for Design Process / Procedure Change. If YES, **ENTER** specific directions in Block 16.
15. **INDICATE** the need for Training. If YES, **ENTER** specific directions in Block 16.

ATTACHMENT 2, Continued
Engineering Change Request Instructions, Form LV-2042

Instructions for Preparation of
RSN Yucca Mountain Site Characterization Project
ENGINEERING CHANGE REQUEST (ECR)
Form LV-2042

The numbered steps correspond to the numbered blocks on the ECR form. If additional space is required, then use the Engineering Change Request (ECR) Continuation Page.

PART 3 DISPOSITION (To be completed by DCCB Chairperson)

16. ENTER specific guidance and direction to the Individual / Organization charged with implementing the change.
17. ENTER the name of the Individual / Organization responsible for Implementation of the change.
18. ENTER a date by which the change implementation should be complete.
19. ENTER required information indicating disposition approval.

PART 4 IMPLEMENTATION (To be completed by Individual charged with change implementation)

20. ENTER required information indicating implementation completion.

PART 5 CLOSURE (To be completed as Indicated on Form)

21. ENTER required information indicating implementation verification.
22. ENTER required information indicating required actions per AP-3.3Q have been initiated.
23. ENTER required information indicating concurrence on completion of ECR-required actions.

ATTACHMENT 3
Technical Impact Statement, Form LV-359

RSN YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT
TECHNICAL IMPACT STATEMENT

ECR No. _____ Impact Statement DUE DATE _____

Contributing Member:

- | | |
|---|---|
| <input type="checkbox"/> Site Characterization Design Manager | <input type="checkbox"/> Systems Engineering Manager |
| <input type="checkbox"/> Field Operations Manager | <input type="checkbox"/> Project Administration Manager |
| <input type="checkbox"/> Manager, QA Engineering | <input type="checkbox"/> Other _____ |

EVALUATION: (Answer each question)	YES	NO	N/A
Has the change been adequately described?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have adequate technical, institutional, quality, safety, cost, and schedule analyses been performed to justify the change?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have all functional and physical interfaces been considered and discrepancies resolved?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have impacts on regulatory requirements or licensing issues been adequately considered and documented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RECOMMENDATIONS: (Address each element)	YES	NO	N/A
DCCB MEETING requested?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ECR ACCEPTABLE?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ECR Approval beyond present workscope?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ECR Impacts documents* (list below)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

AFFECTED DOCUMENTS: (List by Number and Revision)

TYPICAL

(Use additional sheet if necessary)

TECHNICAL IMPACT DESCRIPTION: (Beneficial/Adverse Effects of Making/Not Making Change)

STATEMENT PREPARED BY: _____

_____ Name (Print)	_____ Signature	_____ Date
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LV-359 (7/92)