PROCEDURE: NCSX–PROC–009 Revision 4		Page: 1 of 5
Title **NCSX Request for Deviation Process**	**Initiated by:** Bob Simmons Digitally signed by Bob Simmons DN: CN = Bob Simmons, C = US Reason: I am approving this document Date: 2005.12.23 07:57:58 -05'00' NCSX Systems Engineering Support Manager	**Effective Date:** **December 22, 2005**
Concurred by: Judith Malsbury Digitally signed by Judith Malsbury DN: CN = Judith Malsbury, C = US, O = PPPL, OU = Quality Assurance Reason: I concur with this document. Date: 2005.12.23 08:20:45 -05'00' NCSX Quality Assurance Manager	**Approved by:** Wayne Reiersen Digitally signed by Wayne Reiersen DN: CN = Wayne Reiersen, C = US, O = PPPL Reason: I am approving this document Date: 2005.12.23 08:46:17 -05'00' NCSX Engineering Manager	**Supersedes:** **Revision 1 Dated April 15, 2005**

Record of Revisions

Revision	Date	Description of Changes
0	**1/13/2005**	**Initial Issue**
1	**1/19/2005**	**Changed to a flow chart process and revised process.**
2	**3/8/2005**	**Revised RFD Form & Attachment 1 instructions**
3	**4/15/2005**	**Provided additional flexibility in process and clarified need to annotate drawings with RFD number if drawing is not revised. Added new Section B to show flow chart of incorporating RFDs into electronic drawings. Included process changes in MIT/QA Plans as part of the RFD process.**
4	**12/22/2005**	**Revised RFD form to add disposition of material approved by RFD.**

Applicability

This procedure covers the process for preparing and processing Requests for Deviation (RFDs) on the NCSX Project.

Introduction

Prior to performing a specified step in a manufacturing or fabrication process, either the Project or a supplier may identify an alternative design/method/material to the requirements or a process change that could result in cost, or schedule savings. The documentation to formally define this proposed departure from the established performance, design requirements, or processing plan is called a Request for Deviation (RFD). The RFD is a specific written request to depart from a particular requirement(s) of the item's current approved documentation (including vendor MIT/QA Plan). RFDs shall be processed and adjudicated under the Engineering Change Process (ECP) process defined in the NCSX Configuration Management Plan (NCSX-PLAN-CMP) and the accompanying NCSX Configuration Control Procedure (NCSX-PROC-002) unless a determination is made by the NCSX Engineering Manager that an ECP is not required (generally for editorial-type RFDs or process RFDs). Until the ECP associated with the RFD is approved or approval by the NCSX Engineering Manager is received to process without an ECP, the item or process may not deviate from the technical requirements. The RFD may be either a letter or tabular format and shall contain the specific required information as defined in this procedure.

A deviation is distinguished from non-conformance reports (NCRs) in that NCRs address the departure after the manufacturing step or process that incorporates the requirement (design/method/material) has begun. The processing of NCRs is addressed in PPPL Quality Assurance Procedure QA-005, "Control of Nonconformances."

The design documentation for any technical design includes a combination of the product specification (CSPEC), the electronic models and drawings, and any approved deviations. The "read me" file on the Supplier FTP site will contain a clarifying note that clearly identifies these three legs of the technical design documentation. However, rather than revise all the design documentation for every deviation, the NCSX Project has adopted a policy of minimizing the changes to the impacted design documentation. Should the deviation result in a design change, all the documentation will be updated, but for those deviations that do not result in a change in the design, the RLM will likely decide that not all of the impacted technical documentation need be updated. Nonetheless, in order to ensure a link to the approved deviation, several actions shall occur:

- The product specification Appendix B - Approved Deviations to list the approved deviations;
- The vendor MIT/QA plan shall be revised to reflect the approved deviations – annotation should be made whether the deviation is only applicable to a specific MIT/QA Plan or whether it will impact all MIT/QA Plans for the manufacture of the subject part;
- The pdf version of the impacted drawing will be annotated to reflect a note indicating both the RFD and ECN number. These pdf drawings will be identified using an alpha-numeric coding (e.g., Rev 0-A to stay in synch with the source ProE drawing). ProE drawings will not be updated immediately;
- The revised pdf drawing will be posted on the Supplier FTP site;
- After 3 RFDs are posted against a pdf drawing, the source ProE drawing will be required to be updated and the RFD and ECN notes incorporated. Should the ProE drawing need to be revised sooner, the same is true.

By these method, users will be able to identify the specific impacts of a deviation by reading the deviation posted on the NCSX Engineering Web.

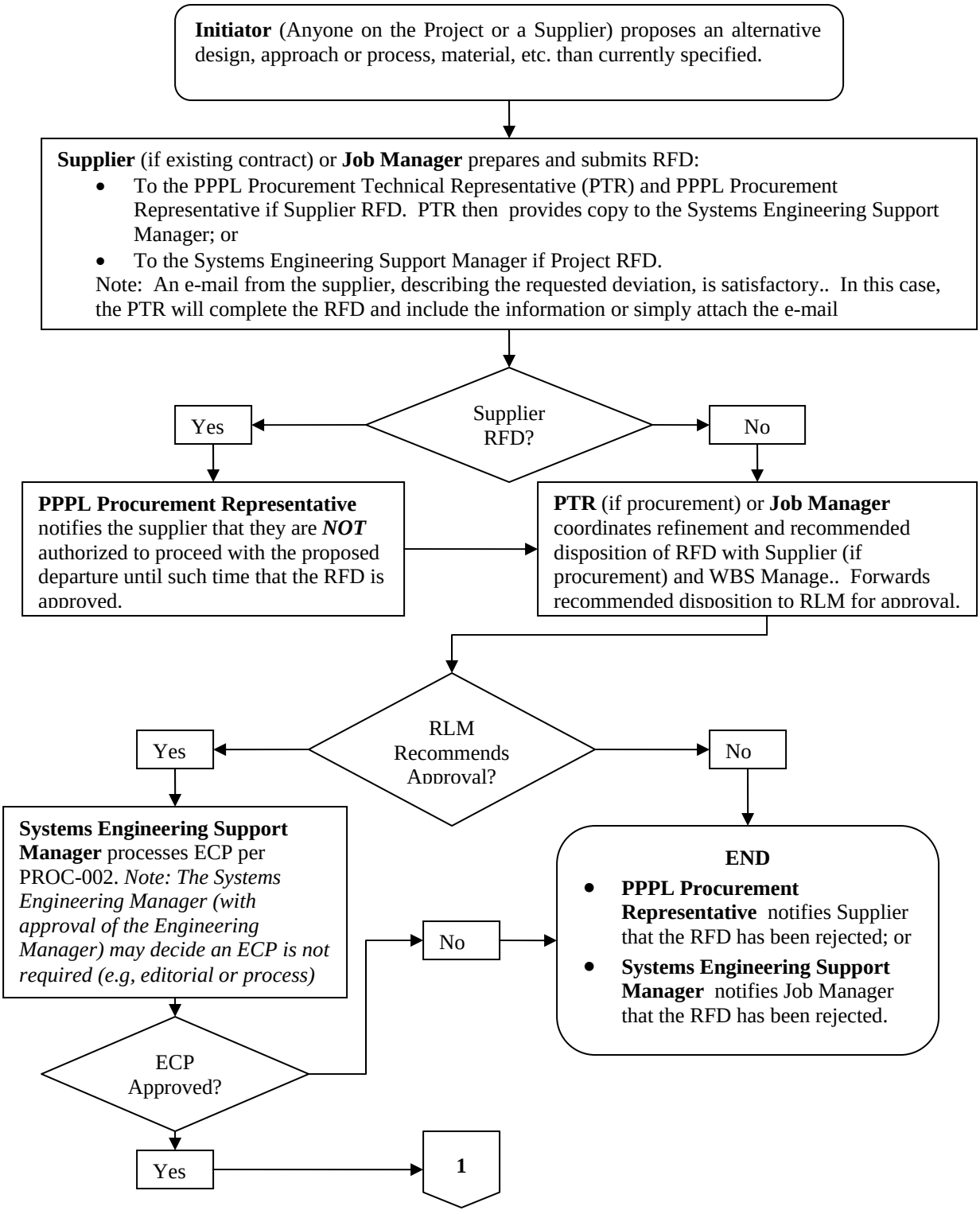
The vendor prepared and PPPL approved MIT/QA Plan addresses the specific processes to be utilized. The vendor has freedom to modify the MIT/QA Plan as long as the changes do not have the potential to impact quality or schedule. Changes with potential quality or cost impacts are documented using the RFD.

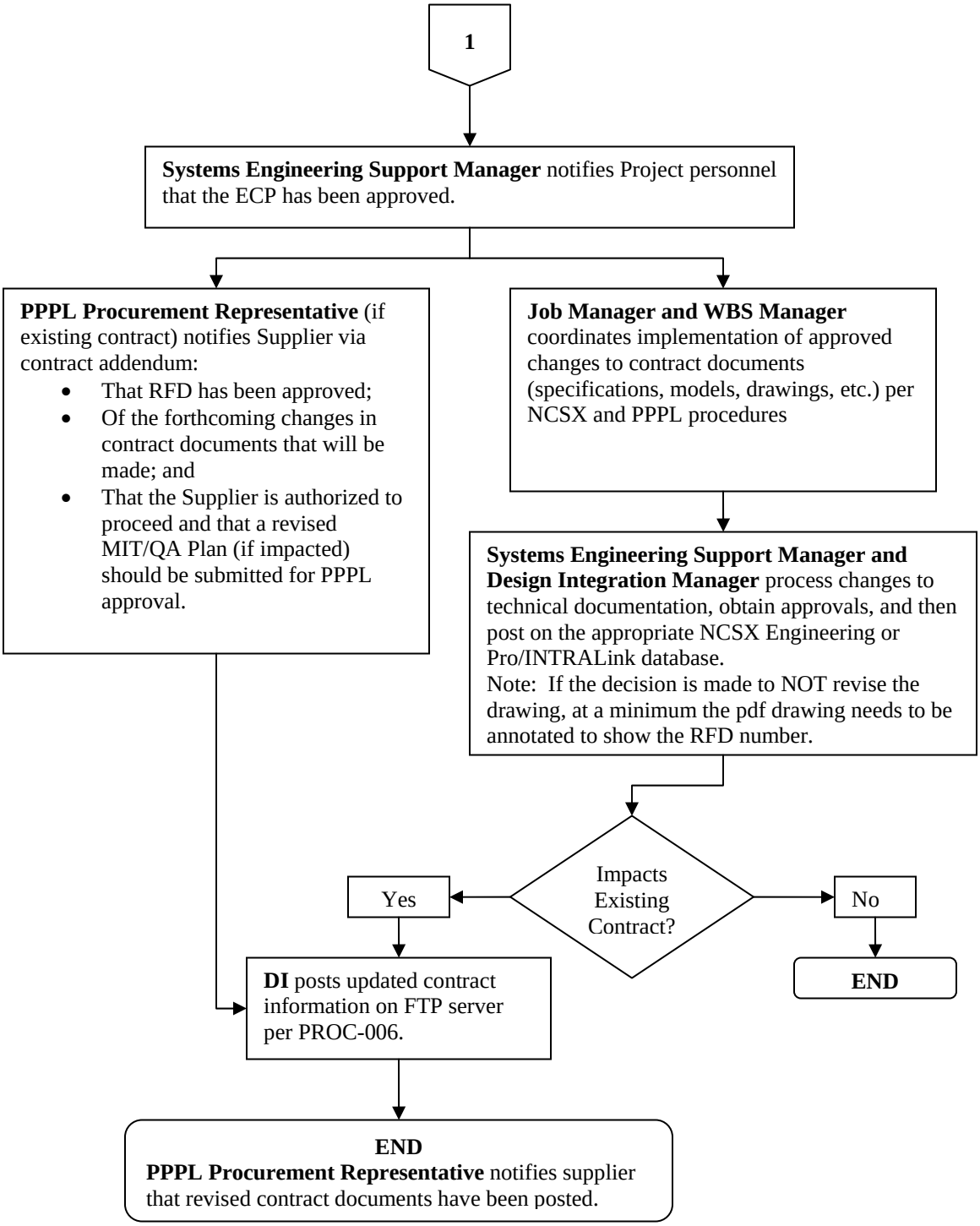
Part A of this procedure provides the general flow chart for processing and approving RFDs. Part B of this procedure provides the flow chart for incorporating RFDs into electronic drawings.

Referenced Documents

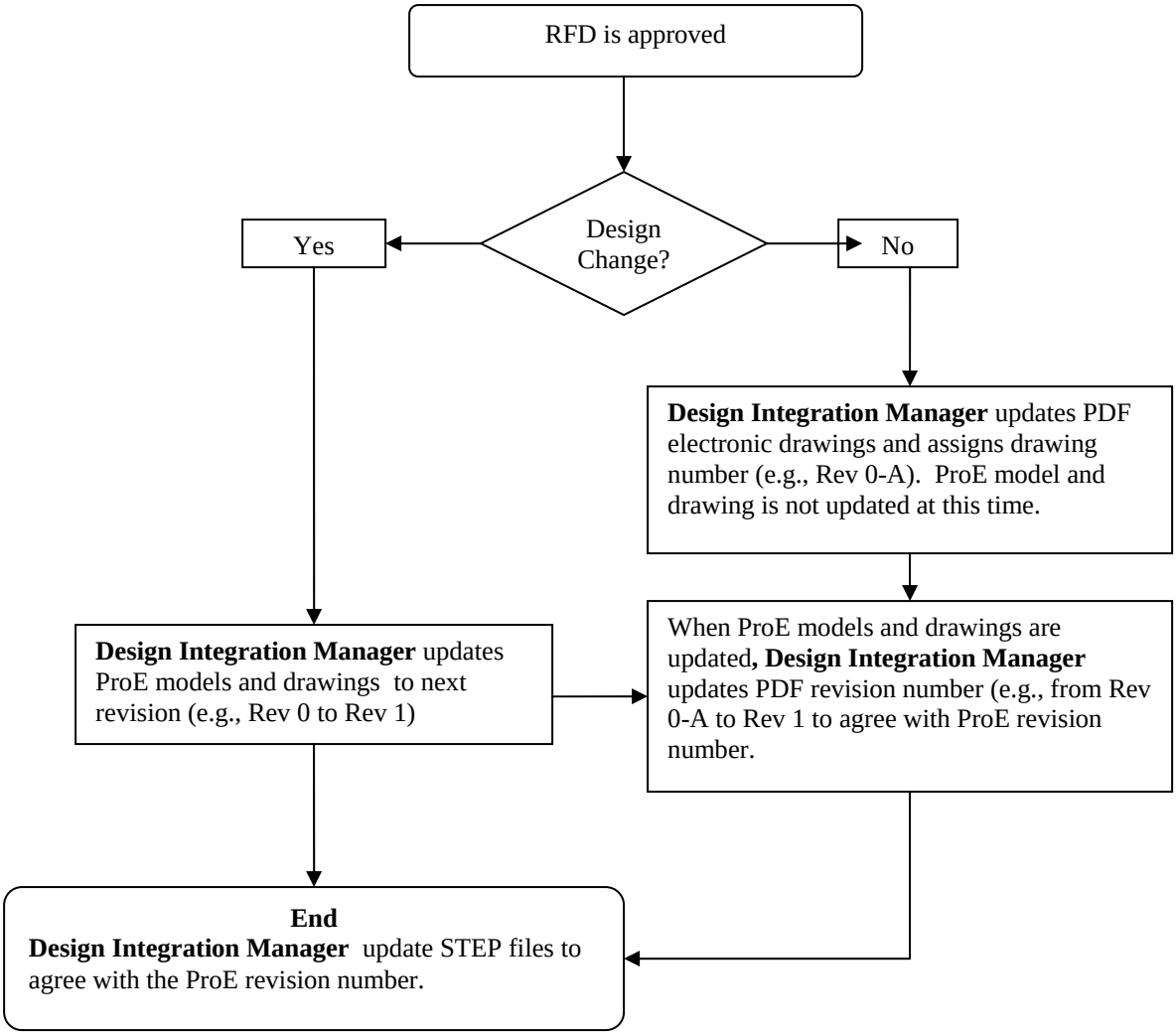
NCSX-PLAN-CMP	NCSX Configuration Management Plan
NCSX-PROC-002	NCSX Configuration Control
QA-005	Control of Non-conformances

Part A - Processing RFDs




1
Systems Engineering Support Manager notifies Project personnel that the ECP has been approved.
PPPL Procurement Representative (if existing contract) notifies Supplier via contract addendum:
That RFD has been approved;
Of the forthcoming changes in contract documents that will be made; and
That the Supplier is authorized to proceed and that a revised MIT/QA Plan (if impacted) should be submitted for PPPL approval.
Job Manager and WBS Manager coordinates implementation of approved changes to contract documents (specifications, models, drawings, etc.) per NCSX and PPPL procedures
Systems Engineering Support Manager and Design Integration Manager process changes to technical documentation, obtain approvals, and then post on the appropriate NCSX Engineering or Pro/INTRALink database.
Note: If the decision is made to NOT revise the drawing, at a minimum the pdf drawing needs to be annotated to show the RFD number.
Impacts Existing Contract?
Yes
No
END
DI posts updated contract information on FTP server per PROC-006.
END
PPPL Procurement Representative notifies supplier that revised contract documents have been posted.

Part B – Incorporating RFDs into Electronic Drawings



Attachment:
1 – Necessary Information Needed on a RFD and Forms

ATTACHMENT 1

The RFD has two parts – Part I is the initial proposal and Part II is the Project review and RLM disposition.

PART I

The RFD may be provided in any format (i.e., letter, tabular, or supplier format), but the initiator must provide at a minimum (If supplier initiated, the supplier must either submit a RFD form or request a deviation in an e-mail to the PTR, who will then complete the RFD) the following information in sufficient detail to permit NCSX Project assessment of the RFD:

- Initiator Name and Organization
- Date RFD was initiated
- RFD Title – short description of the deviation requested
- List of impacted documents (e.g., specification and sections, each model and drawing, MIT/QA Plan sections/steps, SOW sections – if the SOW has been used to convey technical information). Be as specific as possible.
- Impact on cost, schedule, and interfaces with other items – if none so state. If there are impacts, be as specific as possible.
- Full description of the deviation requested, including specific item/part impacted by this RFD and the rationale on why this deviation is needed, including the impact if not accepted - (Should provide sufficient justification to permit Project to make an informed decision). Include amplifying information that may assist in the NCSX Project's assessment of this RFD. This part should contain the specific design documentation impacted (e.g., list the changes to the specification and the specific drawings impacted).
- Attachments – to include e-mail or letter requests or sketches
- Signature of the initiator (actual or electronic or e-mail approval are all satisfactory).

PART II

Once the initiator has provided Part I of the RFD, the Procurement Technical Representative or Job Manager shall review and provide a recommended disposition proposal to the respective RLM as per the attached flow chart (assuming that the PTR concurs in the RFD). The RLM shall review the proposed RFD and provide the following disposition information on Part II:

- Impacted WBS Elements
- Whether or not he/she recommends approval
- Action items needed (e.g., whether or not the RLM deems it necessary to revise project documentation – CSPEC and drawings), including any other actions needed.

The following sections of the RFD shall be completed by the Systems Engineering Manager:

- RFD number (using format of NCSX-RFD-XX-###-RRR) where:
    - XX is the two digit WBS element identifier;

  - ### is a sequential number; and
  - RRR is the revision number of the RFD.
- ECP number to be assigned to the RFD (Coordinates with the Systems Engineering Support Manager).

Sample Part I RFD Form (Deviation Request)

NCSX RFD Part I	Number:	RFD Description:
Initiator:	**Organization:**	
List of Impacted Documents: ***(Specification, MIT/QA Plan, SOW, drawing, etc.)***		
Cost Impact: ***(If none, so state)***		
Schedule Impact: ***(If none, so state)***		
Quality Impact: ***(If none, so state)***		
State Requirement Deviation is Requested For***: (Specification, MIT/QA Plan, SOW, drawing, etc.)***		
Full Description of the Deviation Requested: ***(Use continuation pages, e-mails, letter, sketches, etc. as needed and include amplifying information as appropriate to support deviation request.)***		
Attachments:		
Initiator Signature: _____ Date: _____		

Sample Part II RFD Form (Project RLM Recommendation)

NCSX RFD Part II	**Number:**	**RFD Description:**
RLM:	**Organization:**	
Impact on Interfaces with Other WBS Elements/Items: ***(If none, so state)***		
RLM Recommendation: ☐ **Approve** ☐ **Do Not Approve** **Additional remarks:** **Does this Change Impact Material Already Procured or Parts/Assemblies Already Assembled/Manufactured using this Material:** ☐ **Yes** ☐ **No** **If "Yes", what is the recommended disposition of this material/part/assembly?**		
RLM Signature: _____		
Project Disposition: (Include ECP Number):		