



# ENG-033 - CRR - CHIT RESOLUTION REPORT

## Centralized Control System Chit Resolution Report

*NSTXU\_1-7-3-8\_CRR\_101*

Work Planning #:  
Effective Date: **01/09/2020**  
Prepared By: **Benjamin Smith**

Reviewed By	Timothy N. Stevenson, Responsible Engineer	01/07/2020 15:34:45 PM
Reviewed By	Yuhu Zhai, Project Engineer	01/09/2020 09:08:39 AM
Reviewed By	Benjamin Smith, Preparer	01/07/2020 09:57:05 AM
Approved By	John Dellas, Design Review Chair	01/09/2020 13:57:52 PM



# Chit Resolution Report for *Centralized Control System*

December 31, 2019

NSTXU\_1-7-3-8\_CRR\_101

Prepared By:

\_\_\_\_\_  
B. Smith, Plant I&C Engineer

Reviewed By:

\_\_\_\_\_  
T. Stevenson, OSS RE

Reviewed By:

\_\_\_\_\_  
Y. Zhai, Project Engineer

Approved By:

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J. Dellas, DRC

Preliminary Design Review

Chit Resolution Number	Description	Chit Number	Status
CR-CCS-01	Networking & Cyber Security	CCSPDR01 CCSPDR08	Closed
CR-CCS-02	CCS Interface	CCSPDR02 CCSPDR03 CCSPDR06 CCSPDR07	Closed
CR-CCS-03	CCS Operations	CCSPDR04 CCSPDR05	Closed



# Record of Changes

Rev.	Date	Description of Changes
0	December 31, 2019	Initial Release



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Review	ID	Chit
CCS PDR	CCSPDR06	On HMI screens add two more exclusion areas 1) Cable Spread Room and 2) TCB Cage. These are lockable areas that have ACCESS and NO ACCESS states but do not have a LOCKDOWN state.

Review	ID	Chit
CCS PDR	CCSPDR07	Add CSR Secured and TCB Cage Secured to SIS to CCS interface signals.

**Closed:** The corrections detailed in CCS PDR chits 2,3, 6, and 7 have all been incorporated into the CCS design. The logic diagrams presented at FDR show the corrections related to chits 2 and 3. The HMI design will include all exclusion areas and their states as chit 6 requests. The CWD drawings show the signals described in chit 7.

### CR-CCS-03

Review	ID	Chit
CCS PDR	CCSPDR04	ECH-PI currently has -and should continue to have- Enable & Arm Permissives from the COE.

Review	ID	Chit
CCS PDR	CCSPDR05	On slide 15 of Ben's presentation, it is clear that the key turn that removes air is ineffective unless FCPC has already been disarmed. Consider the benefits and detriments of making the "remove air" command also invoke an FCPC disarm, such that the command to remove air is always effective.

**Closed:** The operational questions brought up in CCS PDR chits 4 and 5 have been addressed. The CCS will receive new unique feedback signals from ECH-PI, while sending enables and arms through the COE interface (via a networked connection to EPICS). It has been confirmed by the FCPC operations team that the 'remove air permissive' should not be sent unless the FCPC rectifiers have been positively disarmed.