P6 PVCU ACTIVATION

NOTE
The commands for step 1 must be performed before the APCU is powered. When the APCU is powered, the DCSU is powered which automatically provides the PVCU power. If step 1 is after APCU power on, initial BIT will be missed.

1. CONFIGURE NCS FOR PVCU ACTIVATION

PCS TBD

TBD

cmd TBD Pri_Power_Ena
√TBD Pri Power Ena - blank
√TBD Pri Power Init - blank

cmd NCS_PVCU_Swover_Inhib_On
√TBD PVCU Swover Inhib Stat - Inh

cmd NCS_to_PVCA_Comm_Path_4B_Pri
√TBD NCS to PVCU Comm Path Stat - 4B

MDM N1-1

√TBD NCS Ancillary Data to PVCA Inhib Stat - Inh

MDM N1-2

√TBD NCS Ancillary Data to PVCA Inhib Stat - Inh

2. ACTIVATE APCUs

Perform APCU ACTIVATION, all (SODF: TBD), then:

3. ENABLE PVCU RTs

Node 1: CDH

MDM N1-2

'Configuration'

cmd Sel_Config_4
√PPL ID - TBD

MDM N1-1

'Configuration'

cmd Sel_Config_4
√PPL ID - TBD

4. <u>CHECK PVCU BIT AND STATUS</u>

TBD

√PVCU_4B_BST_A - 0
√PVCU_4B_BST_B - 0
√PVCU_4B_State - Wait
√PVCU_4B_Frame_Count - incrementing
Record PVCU_4B Temp: _____

√PVCU_2B_BST_A - 0
√PVCU_2B_BST_B - 0
√PVCU_2B_State - Wait
√PVCU_2B_Frame_Count - incrementing
Record PVCU_2B Temp: _____

```
PCS     ********************************
        *  If no MDM data              *
        *      TBD: TBD                *
        *      TBD                     *
        *                              *
        *    √PVCU_4B_V ≤ 0 ± 2.8      *
        *    √PVCU_2B_V ≤ 0 ± 2.8      *
        *      cmd PVCU_4B_On          *
        *      cmd PVCU_2B_On          *
        ********************************
```

5. <u>SYNC PVCUs WITH NODE MDMs</u>

TBD

cmd PVCU_4B_Sync_Time
cmd PVCU_2B_Sync_Time
√PVCU_4B_Loss_of_Sync - TBD
√PVCU_2B_Loss_of_Sync - TBD

6. <u>WAIT STATE CONFIGURATION</u>
ODIN gives OK for EPS configuration/commanding.
CDH: TBD

Primary_P6_PVCA_PPL_Version_IDs

√PPL IDs - 1

Backup_P6_PVCA_PPL_Version_IDs

√PPL IDs - 1

EPS: TBD

TBD

√TBD Pri_PV_Reverse_Polarity_FI (?) - TBD (Deactivated)

√TBD Bkup_PV_Reverse_Polarity_FI (?) - TBD (Deactivated)

7. READY FOR NOMINAL OPERATION
On ODIN's go, proceed to step 8.

8. COMMAND PVCU TO AN OPERATIONAL STATE
TBD
TBD

cmd TBD PVCU_4B_to_Norm_Op_Assassin_Off
√TBD Pri_PVCU_State - Norm Op

TBD
TBD

cmd PVCU_4B_Sync_Time
√PVCU_4B_Loss_of_Sync - TBD

9. CONFIGURE CHANNEL OPERATIONAL MODES
TBD

cmd Ch_Targeted_Mode_Select
Ch - 4B
Ch_Targeted_Mode - Nonsolar Tracking
BGA_Targeted_Mode - Null
√Ch_4B_Mode - Nonsolar Tracking
√BGA_4B_Mode - Null

NOTE
The nominal Ch mode for 4A is non-solar tracking which prevents the ECU-BGA from turning to the beta angle supplied by GNC.

cmd Ch_Targeted_Mode_Select
Ch - 2B
Ch_Targeted_Mode - Nonsolar Tracking
BGA_Targeted_Mode - Null
√Ch_2B_Mode - Nonsolar Tracking
√BGA_2B_Mode - Null

10. SET ORBITAL PARAMETERS FOR APCU BATTERY CHARGING

NOTE
Obtain values for orbital parameters from **MCC-H**.

TBD
TBD

cmd TBD Pri_PV_Solar_Times
Solar_Rise_Time - _____
Solar_Set_Time - _____
√TBD - TBD

cmd TBD Pri_PV_Orbit_Duration_Time
Orbit_Duration_Time - _____
√TBD - TBD

11. <u>CONFIGURE NCS FOR PVCU SWITCHOVER</u>
TBD
TBD

cmd NCS_ECU_Mode_For_PVCU_Swover
BGA_4B_Target_Mode - Null
Ch_4B_Target_Mode - Nonsolar Tracking
BGA_2B_Target_Mode - Null
Ch_2B_Target_Mode - Nonsolar Tracking
√TBD Ch and BGA modes (?)
cmd NCS_PVCU_Swover_Inhib_Off
√TBD PVCU Swover Inhib Stat - Ena