

System Anomalies  
 File: H\_CRP\_SYS\_ANOM.xls  
 Author: F. Keck



## Procedure Summary

### Objectives

Run this procedure in case of Level 4 and 3 anomalies.

### Summary of Constraints

A level 4 or 3 anomaly has occurred.

### Spacecraft Configuration

#### Start of Procedure

The "No TM Procedure" and "No TC Procedure" were already executed (if required).

#### End of Procedure

Anomaly has been handled.  
 Mission continues.

### Reference File(s)

#### Input Command Sequences

#### Output Command Sequences

### Referenced Displays

ANDs      GRDs      SLDs

### Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
28/10/2008		1	Created	F. Keck	
23/12/2008		1.01	Validation : Update to generic procedure	F. Keck	
13/01/2009		1.02	Validation : Update of reference procedure calls	F. Keck	
14/01/2009		1.03	Validation : Typo correction	F. Keck	
19/01/2009	2	1.04	Validation : Updated annex flowchart	F. Keck	
04/03/2009	2.1	2	Update after SVT-2	F. Keck	
25/03/2009	2.2	2.01	Validation : Starting and deleting MTL at the begin of the recovery (MTL required by some subsystem CRPs)	F. Keck	
03/04/2009		3	Adding separate flowcharts for Recoveries in LEOP Adding more comments	F. Keck	
03/04/2009		4	Moving step CCU Monitoring to checkout procedure	F. Keck	
07/04/2009		5	Updates after industry feedback on FOP 2.2: Reload OBDB after ACMS level 3. More comments on flowcharts. Ensure that PAP6 remains disabled.	F. Keck	
15/04/2009	2.3	6	Adding ACMS LEOP recovery if in SCM without RWL Run-In. Removing PAP6 comment.	F. Keck	
11/05/2009		7	Correction of reference procedure ID in flowcharts	F. Keck	
18/07/2009		8	Adding procedure call to re-enable SPIRE Event Actions	F. Keck	
18/07/2009		9	Attachments updated	F. Keck	
21/09/2009	2.5	10	Call new procedure for rejoin instrument operations. Configure TTC chain 2 after PM reboot (call H_CRP_TTC_T2MX)	F. Keck	
18/03/2010	3	11	Updated flowcharts and comments	F. Keck	

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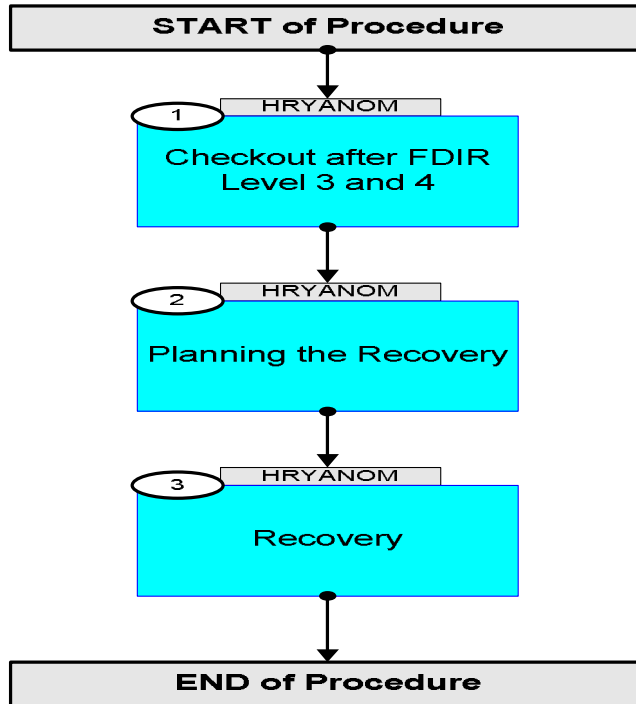


07/03/2011		12	Restart packet store OBCP after CDMU reboot. Call new procedure to update TCT after DoD.	F. Keck	
11/08/2011	3.1	13	Comment added for SOM to inform VIPs.	F. Keck	

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## Procedure Flowchart Overview



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
<b>Beginning of Procedure</b>				
<p><i>TC Seq. Name : ( )</i></p> <p><i>TimeTag Type:</i>  <i>Sub Schedule ID:</i></p> <p style="text-align: center;">□</p>				
1		Checkout after FDIR Level 3 and 4		Next Step: 2
		<p><b>LEOP:</b></p> <p>During LEOP this step starts immediately after the anomaly (and when TM is available).</p>		
		<p><b>Routine Ops:</b></p> <p>The SPACON will observe the anomaly at AOS of a DTCP (or during) and will contact the On-Call SOE immediately.</p> <p>The On-Call SOE has to ensure that the SOM is informed; either by himself or by the SPACON while the SOE is on the way to MOC.</p> <p>The On-Call SOE has to come in immediately to run the checkout procedure.</p> <p>The S/C system checkout takes place during the first DTCP when a level 3 or 4 problem was observed.</p> <p>The checkout will be run by the On-Call SOE and the SPACON.</p>		
		<p><b>S/C System Checkout</b></p> <ul style="list-style-type: none"> <li>- Increasing TM/TC rate</li> <li>- Dumping of required TM for investigation and analysis (e.g. CEL)</li> </ul>		
		<p>Execute Procedure:</p> <p><b>H_CRP_SYS_CHECK</b></p> <p><b>FDIR 3&amp;4 Anomaly Checkout</b></p>		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		<p><u>Inform SGS (SOM to call HSC On-Call person):</u>            - When did the FDIR trigger, i.e. when did the MTL stop?            - Request info from HSC when to rejoin the MTL (not before the end of the following DTCP) and if/which manual instrument procedures must be run before rejoin is possible. This request will take a while. The rejoin time is important for FD as well!</p> <p><u>Inform FDT (SOM to call FDT On-Call person):</u>            - When did the FDIR trigger. What happened, i.e. current ACMS mode? Sun or Earth pointing?            - When do we plan to rejoin the MTL (as soon as HSC input is available)</p> <p><u>Inform FCT:</u>            - SOM to ensure the FCT will be available to plan and prepare the recovery for the next DTCP</p> <p><u>Inform VIPs:</u>            - SOM to inform H/HSO-OA and H/HSO-O</p>		
2		<i>Planning the Recovery</i>		Next Step: 3
		<p><b>LEOP:</b>            In LEOP this step follows the checkout; all parties should have followed the checkout and performed some analysis before meeting in an MRB.</p>		
		<p><b>Routine Ops:</b>            During routine operations this step takes place between two DTCPs, when additional FCT support is available to analyse the situation and to decide the recovery strategy.</p> <p>Required Inputs for the Recovery:</p> <p><u>From HSC:</u>            - When to rejoin the MTL (not before the end of the following DTCP)?            - Which manual instrument procedures must be run before the rejoin?</p> <p><u>From FDT:</u>            - Provision of all TPFs, which are required to rejoin at the planned time (i.e. mode transitions, rejoin attitude at rejoin time and all "missed" (MTL off) ACMS stuff, e.g. RWL bias etc.)</p>		
		<p>Planning the recovery (units switchover, failed/unhealthy declarations etc.) according to one of the <b>attached flowcharts</b>:</p> <ol style="list-style-type: none"> <li>1) Recovery to NOM/SCM (Routine)</li> <li>2) Recovery to SAM/SAM (LEOP)</li> <li>3) Recovery to SAM/OCM or SAM/SCM (LEOP)</li> </ol>		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		<p><b>Routine Ops:</b></p> <p>Prepare the stacks with the planned recovery sequences to minimise the required time in the following DTCP.</p>		
3		<p><i>Recovery</i></p> <p><b>LEOP:</b></p> <p>During LEOP this step follows the MRB where the recovery strategy was decided.</p> <p>Perform the prepared recovery according to one of the <u>attached flowcharts</u>:</p> <ul style="list-style-type: none"> <li>- Recovery to SAM/SAM</li> <li>- Recovery to SAM/OCM or SAM/SCM</li> </ul>		Next Step: END
		<p><b>Routine Ops:</b></p> <p>During routine operations this step shall take place on the second DTCP, following the DTCP when the problem was observed.</p> <p>Perform the prepared recovery according to the <u>attached flowchart</u>:</p> <ul style="list-style-type: none"> <li>- Recovery to NOM/SCM</li> </ul>		
3.1		<p><i>Anything else?</i></p>		<input type="checkbox"/>
		<p>Are there any modifications to the standard S/C setup left?</p> <p>E.g.</p> <ul style="list-style-type: none"> <li>- non-default table configurations</li> <li>- additional OBCPs</li> <li>- additional MOT or EAT entries</li> </ul>		
3.1.1		<p><i>Packet Store OBCP</i></p>		<input type="checkbox"/>
		<p>In case of a CDMU reboot, the Packet Store OBCP has stopped. A restart is required.</p>		
		<p>Execute Procedure:  <b>H_FCP_DHS_PKST</b>  <b>OBCP for Packet Store Cat reports generation</b></p>		
3.1.2		<p><i>In-flight Thermal Control Table updates</i></p>		<input type="checkbox"/>

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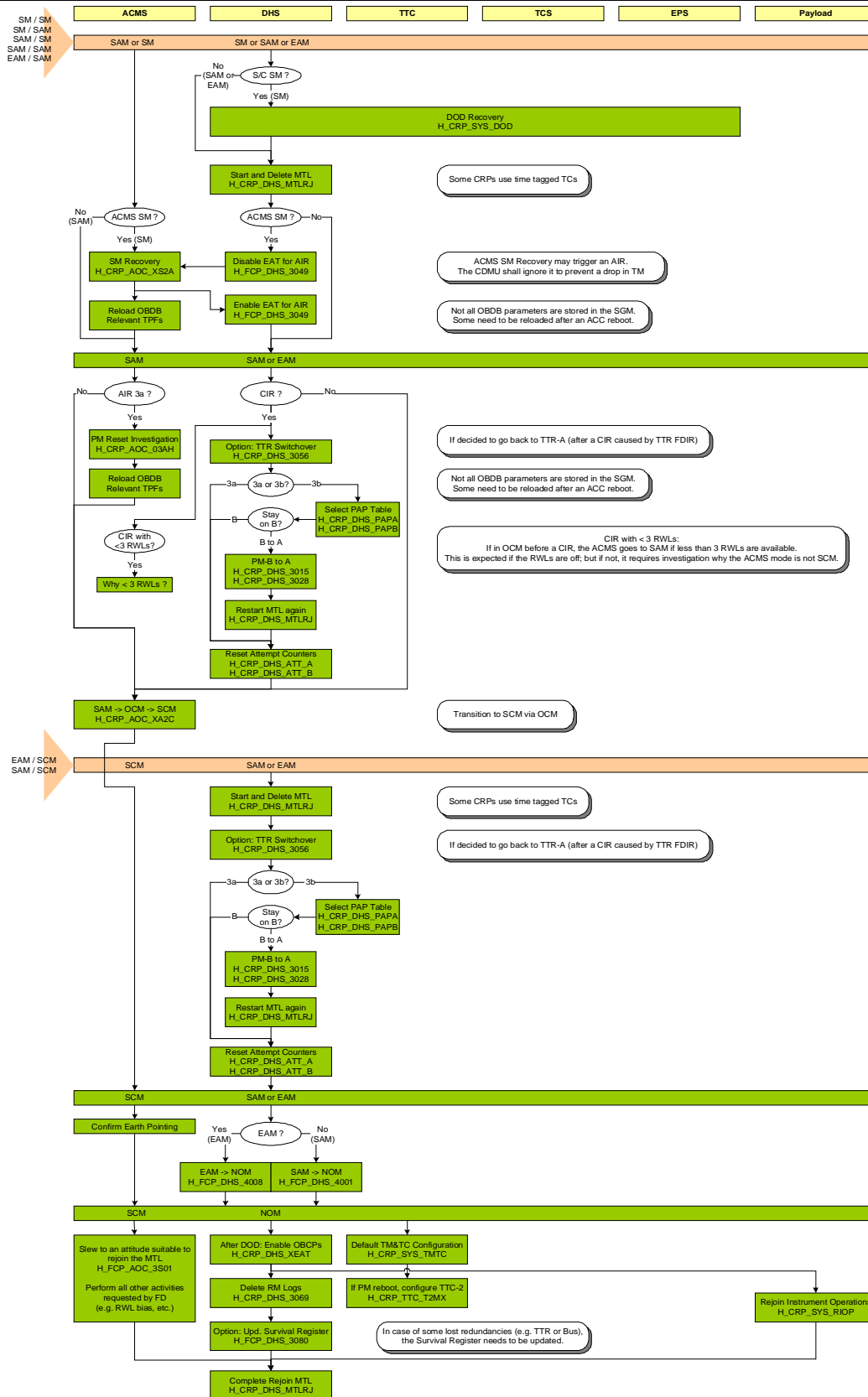


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		After a DoD recovery the default TCT is in use. Some TCT values were updated since the last CDMU software update.		
		Execute Procedure: <b>H_CRP_TCS_TCTF</b> <b>In-flight Thermal Control Table updates</b>		
<b>End of Procedure</b>				

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## Recovery to NOM/SCM (Routine)

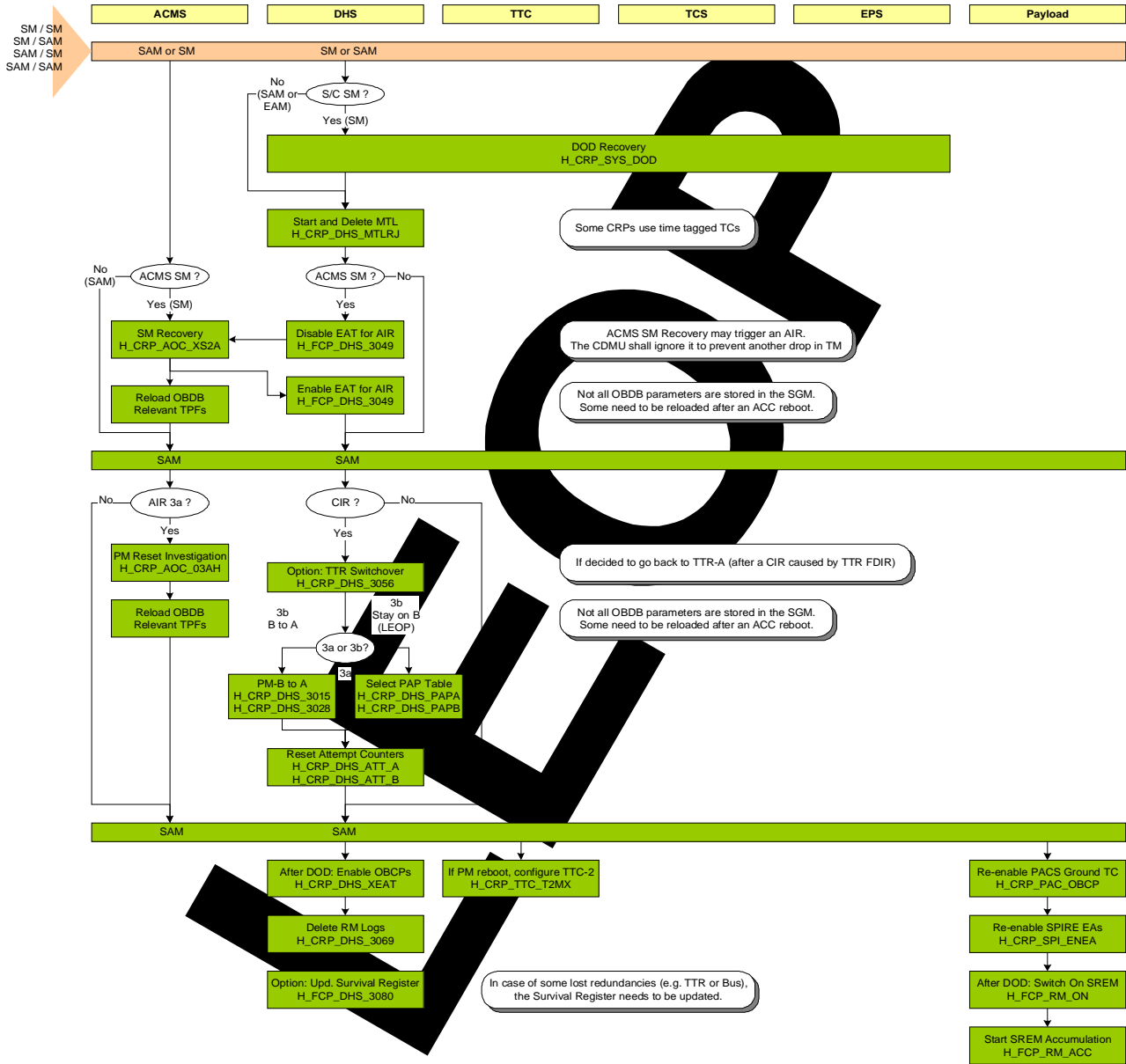




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## Recovery to SAM/SAM (LEOP)



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Recovery to SAM/OCM or SAM/SCM (LEOP)

