DISTRIBUTION SHEET

To	From	Page 1 of 1
DISTRIBUTION	G.J. Gauck	Date February 21, 1995
Project Title/Work Order		EDT No. 610852
CLOSED OUT TANK 241-SY-101 DACS SYSTEM CHANGE REQUESTS #301-400.		ECN No.

Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
Central Files (2)	L8-04	X			
O.S.T.I. (2)	L8-07	X			
R.E. Bauer	L6-37				X
G.T. Bear	R1-51				X
V. Braddy	S1-57				X
A.M. Ermi	L6-39	X			
D.C. Larsen	R1-51				X
J.W. Lentsch	S7-15				X
M.L. McElroy	S1-57				X
D.R. Nunamaker (2)	T4-08	X			X
R.W. Reed	R1-51				X
S.H. Rifaey	T4-07				X
R.W. Truitt	L6-37	X			
Waste Tank Operations Shift Office	T4-01	X			
G.J. Gauck	T4-07	X			

DISCLAIMER

DISCLAIMER

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5 dto 4

MAR 14 1995

ENGINEERING DATA TRANSMITTAL

1. EDT № 610852

2. To: (Receiving Organization)	3. From: (Originating Organization)	4. Related EDT No.:
S.H. Rifaey, Waste Tank Farm Plant Engineering H1720	G.J. Gauck, Test Engineering 7CH40	
5. Proj./Prog./Dept./Div.: SY-101 Mitigation	**6. Cog. Engr.:** G.J. Gauck	**7. Purchase Order No.:** N/A
8. Originator Remarks: N/A		**9. Equip./Component No.:** N/A
		10. System/Bldg./Facility:
11. Receiver Remarks:		**12. Major Assm. Dwg. No.:** N/A
		13. Permit/Permit Application No.: N/A
		14. Required Response Date: N/A

15. DATA TRANSMITTED

(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	(F) Approval Designator	(G) Reason for Transmittal	(H) Originator Disposition	(I) Receiver Disposition
1	WHC-SD-WM-CMD-004		0	Closed out Tank 241-SY-101 DACS System Change Requests #301 - 400.	Q	1	1	

16. KEY

Approval Designator (F)	Reason for Transmittal (G)	Disposition (H) & (I)
E, S, Q, D or N/A (see WHC-CM-3-5, Sec.12.7)	1. Approval 4. Review 2. Release 5. Post-Review 3. Information 6. Dist. (Receipt Acknow. Required)	1. Approved 4. Reviewed no/comment 2. Approved w/comment 5. Reviewed w/comment 3. Disapproved w/comment 6. Receipt acknowledged

17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)

(G) Reason	(H) Disp.	(J) Name (K) Signature (L) Date (M) MSIN	(J) Name (K) Signature (L) Date (M) MSIN	(G) Reason	(H) Disp.
1	1	Cog.Eng. G.J. Gauck A.J. Gauck 3-2-95 T4-07			
1	1	Cog. Mgr. G.T. Bear G.T. Bear 3-2-95 R1-51			
1	1	QA M.L. McElroy M.L. McElroy 3-2-95 S1-57			
		Safety			
		Env.			
3		R.W. Truitt			
3		A.M. Ermi			

18.	19.	20.	21. DOE APPROVAL (if required) Ctrl. No.
G.J. Gauck A.J. Gauck 3-2-95 Signature of EDT Originator — Date	Authorized Representative for Receiving Organization — Date	G.T. Bear G.T. Bear 3-2-95 Cognizant Manager — Date	[] Approved [] Approved w/comments [] Disapproved w/comments

BD-7400-172-2 (04/94) GEF097

RELEASE AUTHORIZATION

Document Number:	WHC-SD-WM-CMD-004, REV 0
Document Title:	CLOSED OUT TANK 241-SY-101 DACS SYSTEM CHANGE REQUEST #301-400
Release Date:	3/14/95

This document was reviewed following the procedures described in WHC-CM-3-4 and is:

APPROVED FOR PUBLIC RELEASE

WHC Information Release Administration Specialist:

Kara M. Broz — March 14, 1995

Kara M. Broz

SUPPORTING DOCUMENT

1. Total Pages 205

2. Title	3. Number	4. Rev No.
CLOSED OUT TANK 241-SY-101 DACS SYSTEM CHANGE REQUEST #301-400.	WHC-SD-WM-CMD-004	0

5. Key Words	6. Author
MIXING PUMP, DACS, SYSTEM CHANGE REQUEST, ACCEPTANCE TEST PROCEDURE.	Name: G.J. Gauck Signature: G. J. Gauck Organization/Charge Code 7CH40/N2B2H

7. Abstract

This document provides a record closed out System Change Request #301-400 used during the development of the 241-SY-101 Hydrogen Mitigation Project Data Acquisition Control System.

8. RELEASE STAMP

OFFICIAL RELEASE BY WHC
DATE MAR 14 1995
Sta. 4
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HYDROGEN MITIGATION TEST PROJECT
System Change Request Status

DATE: 01-31-95

C	SCR	TITLE	DISPOSITION				CHANGE INSTALLED	CHANGE VERIFIED	ATP REQUIRED/ COMPLETE
			APPROVE	REJECT	DEFER	CANCEL			
C	301	Upgrade Modsoft (Version 1.12 to 2.01)	2-8-94				4-6-94	4-6-94	N
C	302	Erroneous Motor Strategy Connections	2-8-94				3-9-94	3-9-94	N
C	303	Erroneous Block Scan Times	2-8-94				3-9-94	3-9-94	N
C	304	Remove Redundant Motor Tags	2-8-94				4-20-94	4-20-94	N
C	305	Remove Redundant Motor Strategy Logic Original with software custodian	2-8-94				2-22-94	2-22-94	N
C	306	Password Change	2-8-94				3-9-94	3-9-94	N
C	307	Simplify Phase B, 30 second Alarm	2-9-94				2-22-94	2-22-94	N
C	308	Directional motor automatic startup	2-22-94				3-9-94	3-9-94	N
C	309	Insufficient memory to load TEST strategy.	2-22-94				5-5-94	5-5-94	N
C	310	Remove vestigial RPS code Original with software custodian	2-22-94				2-22-94	2-22-94	N
C	311	Remove open T/C circuitry from the tank bottom T/C modules. See SCR #213 (similar to SCR 289)	2-22-94				2-28-94	3-14-94	Y ATP-069 C
C	312	Provide 0.1 °F resolution for tank bottom T/C's.			~~2-22-94~~	3-8-94			Y Canceled
C	313	Change VSD parameters to support 5 hp rotation drive	2-22-94				2-22-94	2-22-94	N
C	314	Reallocate Bernoulli drives	3-8-94						N
C	315	72-Hour History improvement	3-8-94				3-9-94	3-9-94	N
C	316	MIT 17B Thermocouple/Acromag Changes., See SCR #238 and #279	3-8-94				3-25-94	3-25-94	N

HYDROGEN MITIGATION TEST PROJECT
System Change Request Status

DATE: 01-31-95

C	SCR	TITLE	DISPOSITION				CHANGE INSTALLED	CHANGE VERIFIED	ATP REQUIRED/ COMPLETE
			APPROVE	REJECT	DEFER	CANCEL			
C	317	Riser 17C T/C elevation correction	3-8-94				3-16-94	3-16-94	N
C	318	VDTT 1B Strain Signal Inversion Drawings changed under Phase 2 Patch Panel	3-8-94				4-14-94	4-14-94	N
C	319	Test / DACS Phase Current Reading Change	3-8-94				3-16-94	3-16-94	N
C	320	OLD72HR display time span (extend to display six hours of data across defined screen)	3-15-94				3-16-94	3-16-94	N
C	321	Cleanup all DACS computer disk files	3-15-94				5-3-94	5-4-94	N
C	322	Obsolete user task files	3-22-94				3-29-94	3-30-94	N
C	323	Remove Unused Computer Cards (Station 1, slot 10 and Station 4, slot 10)	3-22-94				3-31-94	3-31-94	N
C	324	Install/Remove temporary datalogger for tank bottom thermocouple.	3-22-94				6-1-94	6-1-94	Y ATP-069 C
C	325	Removal of CAMS unit	4-5-94		~~3-30-94~~		4-5-94	4-19-94	N
C	326	Provide key macros for Jet Penetration	3-30-94				3-30-94	3-30-94	N
C	327	Upgrade AF6000 driver	3-30-94				1-10-95	1-10-95	Y ATP-082 C
C	328	Nuisance low alarm position See SCR #344		5-3-94	~~4-12-94~~				N
C	329	Upgrade DACS to ModBus Plus	4-12-94						Y ATP-082 C
C	330	Upgrade DACS to latest proven version of Genesis	4-12-94						Y ATP-082 C

HYDROGEN MITIGATION TEST PROJECT
System Change Request Status

DATE: 01-31-95

C	SCR	TITLE	DISPOSITION				CHANGE INSTALLED	CHANGE VERIFIED	ATP REQUIRED/ COMPLETE
			APPROVE	REJECT	DEFER	CANCEL			
C	331	Upgrade to DOS 6.X and QEMM 7.X	4-12-94				5-5-94	5-5-94	N
C	332	Station #5 hardware cleanup	4-12-94				4-19-94	4-19-94	N
C	333	Correct naming of alarm.txt files	4-12-94				4-12-94	4-12-94	N
C	334	Remove Demo Mode from Sta.8 SOS SDD	4-19-94				6-1-94	6-1-94	N
C	335	Rename "SEQUENCE" directory to "MOTOR" directory	4-19-94				4-20-94	4-20-94	N
C	336	Delete unused files (includes all *.GIF exluding Test.GIF in Genesis at Sta. 7 & 8, AF5000.* files except Genesis at Sta. 7 & 8, and all MODICON.* and HELP*.GSP files expcept in Genesis directory)	5-3-94				5-5-94	5-5-94	N
C	337	Device block in motor strategy		5-3-94					N
C	338	RSS Network Configuration		5-3-94					N
C	339	Specify correct Ames datalogging variable		6-1-94	~~5-3-94~~				N
C	340	Comment ASCII Basic Programs	5-3-94				6-1-94	5-12-94	N
C	341	Remove obsolete WIR14A01, WIR14A02, and WIR14A03 tags	5-3-94						N
C	342	Remove unused inputs to composite aborts (for STRNABRT abort coil #00033)	5-3-94				12-13-94	12-13-94	Y ATP-082 C

DOS6.X is a Registered Trademark of Microsoft Corp.
QEMM 7.X is a Registered Trademark of Quarterdeck Office Systems
Genesis is a Registered Trademark of Iconics

HYDROGEN MITIGATION TEST PROJECT
System Change Request Status

DATE: 01-31-95

C	SCR	TITLE	DISPOSITION				CHANGE INSTALLED	CHANGE VERIFIED	ATP REQUIRED/ COMPLETE
			APPROVE	REJECT	DEFER	CANCEL			
C	343	NIR17B01 recorded twice (unnecessarily) in VOL.PRN archive history file		5-3-94					N
C	344	POSITION tag alarm removal (Remove high and low alarms from MOTOR stratey tag POSITION)	5-3-94			5-10-94			N
C	345	Limit switch abort coil additions	5-3-94						Y ATP-082 C
C	346	Nuisance low alarm POSITION	5-10-94				6-1-94	6-1-94	N
C	347	Device block in motor strategy	5-10-94				1-10-95	1-10-95	N
C	348	RSS network configuration	5-10-94				1-10-95	1-10-95	N
C	349	Remove PDISPLAY screen	5-10-94				1-10-95	1-10-95	N
C	350	Correct the rotation motor restart condition	5-10-94				6-1-94	6-21-94	N
C	351	Remove unused screens from Test Strategy	6-1-94				1-10-95	1-10-95	N
C	352	Remove AMES history file	~~6-1-94~~			6-21-94			N
C	353	Delete unused DACS tags associated with AMES instruments from history file.	6-21-94				11-4-94	11-4-94	N
C	354	Add RGA-5 signals to DACS (As part of DACS upgrades to replace GC-2 with new dual GC called RGA-5)	6-21-94				9-15-94	9-15-94	Y ATP-098 C

HYDROGEN MITIGATION TEST PROJECT
System Change Request Status

DATE: 01-31-95

C	SCR	TITLE	DISPOSITION				CHANGE INSTALLED	CHANGE VERIFIED	ATP REQUIRED/ COMPLETE
			APPROVE	REJECT	DEFER	CANCEL			
C	355	Add photo-acoustic infra-red ammonia instrument and DACS tag to GASSUM screen	8-11-94				9-15-94	9-15-94	Y ATP-098 C
C	356	Removed computer software associated with mass spectroscopy (MS) gas parameters	8-11-94				9-15-94	9-15-94	N
C	357	Re-address drop 17 to 13. This will affect I/O Health Status	8-11-94						Y ATP-098 C
C	358	Install double-click to stop pump	8-11-94						Y ATP-082 C
C	359	Remove reference in CSDD, ARP, I/O Channel List, and DACS software for GC3-H2 Two Hour Average	8-11-94				9-15-94	9-15-94	N
C	360	Add FTE 50003 to the archive file	8-11-94				9-15-94	9-15-94	N
C	361	Tank bottom side (TBS) thermocouples. Module Initialization	9-22-94				9-23-94	9-23-94	N
C	362	Temporary data logger for Tank bottom side (TBS) thermocouples.	9-22-94				1-10-95	1-10-95	N
C	363	Scan rate change to TEST strategy for Dome Pressure	10-25-90			4-28-95			N
C	364	Hardware averaging for vent header flowmeter signals	12-7-94				12-7-94	12-7-94	N

HYDROGEN MITIGATION TEST PROJECT ORIGINAL
System Change Request

SCR No.: 301
Sheet 1 of 2

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Modsoft (PLC)
2. VERSION/REVISION: Version 1.12
3. SCR TYPE AND REQUESTED COMPLETION DATE: [ ] Development [ ] Problem Report [X] Enhancement [ ] Other DATE:
4. SUBMITTER'S PRIORITY: [2] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: Upgrade Modsoft
6. DESCRIPTION OF CHANGE: [ ] See Attached
   Upgrade Modsoft from Version 1.12 to Version 2.01.
7. JUSTIFICATION FOR CHANGE: [X] See Attached
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [ ] ATP [X] SDD [X] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [ ] DACS Software [ ] Drawings
   [ ] Other/Name
9. ORIGINATOR: S.G. Wallace Date: 2/8/94 Phone No.: 376-9857

CCB

10. DISPOSITION:
   [X] Approve [ ] Approve/Modify
   [ ] Reject [ ] Cancel
   [ ] Defer

WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

USQ SCREEN?
[ ] Yes
[X] No

11. APPROVAL: Date: 2/8/94.
    Date: 2/8/94
    EG&G/LANL Date: 2/8/94

12. ASSIGNED TO: S.G. McNeese Phone No.: Planned Release Date: 2-22-94.

3.

13. SOLUTION COMMENTS: [ ] See Attached [X] None
14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [X] See Attached [X] None
15 COMPLETED: S.G. Smith Date: 4/6/94 Phone No. 546-5015

4.

16 VERIFIED BY: Date: 4/6/94 Phone No. 373-1779
17 RELEASE VERSION: DACS 201
18 CLOSED BY: Date: 4/12/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (1-25-94)

HYDROGEN MITIGATION TEST PROJECT
System Change Request (Continuation Sheet)

ORIGINAL:

[redacted]

[TVNIGI...

SCR No.: 301

Sheet 2 of 2

[ ] Description [X] Justification [ ] Solution Comments [ ] Software Affected

Modsft V1.12 can not be procured for the Development system. Modicon removed this version from the marketplace due to several severe bugs.

V2.01 is the current, supported version and is the version received for the Development system.

Form #: HMTP-SCRCS-1 (1-25-94)

ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 202
Sheet 1 of 1

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Motor Strategy

2. VERSION/REVISION: 2.13

3. SCR TYPE AND REQUESTED COMPLETION DATE: [ ] Development [X] Problem Report [ ] Enhancement [ ] Other DATE:____

4. SUBMITTER'S PRIORITY: [1] 1=Critical 2=High 3=Medium 4=Low

5. SYSTEM NAME/TITLE: Erroneous Motor Strategy Connections

6. DESCRIPTION OF CHANGE: [ ] See Attached

VR232030.Eval should be pump motor frequency (FREQ.PDVALUE) but it is connected to high range of FREQ variable (FREQ.hrng) not actual signal.
DLINEV.Eval should be line voltage of directional motor (LINEV.PDVALUE) but it is connected to high range of LINEV variable (LINEV.hrng) not actual signal.

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

Connections are wrong.

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED: N/A, SDD
[ ] FDC [ ] ATP [X] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [X] DACS Software [✓] Drawings if revised ~~orderternal~~
[ ] Other/Name____

9. ORIGINATOR: K. Eldridge Date: 2/7/94 Phone No.: 509-838-7517

CCB

10. DISPOSITION:
[✓] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

WHEN TO IMPLEMENT CHANGE:
[✓] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[✓] No

USQ SCREEN?
[ ] Yes
[✓] No

11. APPROVAL: [signature] Date: 2/8/94.
[signature] Date: 2/8/94
[signature] EG&G/LANL Date: 2/8/94

12. ASSIGNED TO: S G McNeece Phone No.: 376-9837 Planned Release Date: 2-22-94.

3.

13. SOLUTION COMMENTS: [ ] See Attached [X] None
Test: Visual inspection of strategy.
Connection 1) Reads VR232030.Eval ← FREQ.inp
2) Reads DLINEV.Eval ← LINEV.inp

14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [X] None
Motor Strategy.

15 COMPLETED: S G McNeece Date: 3/9/94 Phone No. 376-9837

4.

16 VERIFIED BY: [signature] Date: 3/9/94 Phone No. 373-2007

17 RELEASE VERSION: [illegible]

18 CLOSED BY: [signature] Date: 3/15/94 Phone No. 373-1779.

Form #: HMTP-SCR-1 (1-25-94)

ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 323
Sheet 1 of 2

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Motor Strategy

2. VERSION/REVISION: 2.13

3. SCR TYPE AND REQUESTED COMPLETION DATE: [ ] Development [X] Problem Report [ ] Enhancement [ ] Other DATE: 2-22-94

4. SUBMITTER'S PRIORITY: [3] 1=Critical 2=High 3=Medium 4=Low

5. SYSTEM NAME/TITLE: Erroneous Motor Block Scan Times

6. DESCRIPTION OF CHANGE: [ ] See Attached

Block ENABLE has a scan time of 10 seconds which is not a valid time. 12 secs is the valid time.

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

10 secs is not a valid scan time.

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [X] LDACS Software [ ] Drawings
[ ] Other/Name

9. ORIGINATOR: S K. Eldridge Date: 2/7/94 Phone No.: 509-838-7517

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED? [ ] Yes [X] No

USQ SCREEN? [ ] Yes [X] No

11. APPROVAL:
[signature] Date: 2/8/94
[signature] Date: 2/8/94
[signature] EG&G/LANL Date: 2/8/94

12. ASSIGNED TO: S.G. McMahon Phone No.: 376-9837 Planned Release Date: 2-22-94

3.

13. SOLUTION COMMENTS: [X] See Attached [ ] None
ENABLE scan time changed to 12 sec.
PREVABLE also was 10; changed to 12 sec

14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
Motor Strategy

15 COMPLETED: [signature] Date: 2/9/94 Phone No. 376-9837

4.

16 VERIFIED BY: [signature] Date: 3/4/94 Phone No. 373-2007

17 RELEASE VERSION: Motor 2.14

18 CLOSED BY: [signature] Date: 3/15/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (1-25-94)

SCR No.: 303

Sheet 2 of 2

[ ] Description [ ] Justification [ ] Solution Comments [ ] Software Affected

Other erroneous scan times

Tag	Was		Changed To
VR232060	4	—	6
VR232070	4		6
VR232080	4		6
VR232090	4		6
VR232100	4		6
VR232110	4		6
VR232120	4		6
VSDR5232	4		6
PRENABLE	10		12
RENABLE	10		12

Test: Call up each of above tags and verify scan times

Form #: HMTP-SCRCS-1 (1-25-94)

HYDROGEN MITIGATION TEST PROJECT
System Change Request

ORIGINAL

SCR No.: 304

Sheet 1 of 2

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: M.t.r. Strategy

2. VERSION/REVISION: 2.13

3. SCR TYPE AND REQUESTED COMPLETION DATE: [ ] Development [ ] Problem Report [X] Enhancement [ ] Other DATE: 2-22-94

4. SUBMITTER'S PRIORITY: [3] 1=Critical 2=High 3=Medium 4=Low

5. SYSTEM NAME/TITLE: Remove redundant Motor Tags

6. DESCRIPTION OF CHANGE: [ ] See Attached

VR232060 = PSETSPD
VR232050 = PSPEED
VR232120 = DSETSPD
VR232110 = DSPEED,

Delete from Strategy, displays, and Report + Recipe code (replace with VR tag)

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

Simplify Motor Strategy For easier understanding/maintenance.

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [X] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [ ] DACS Software [ ] Drawings
[ ] Other/Name

9. ORIGINATOR: K. Eldridge Date: 2/7/94 Phone No.: 509-838-7617

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

USQ SCREEN?
[ ] Yes
[X] No

11. APPROVAL:
[signature] Date: 2/8/94
[signature] Date: 2/15/94
[signature] EG&G/LANL Date: 2/8/94

12. ASSIGNED TO: S.G. McNeese Phone No.: 376-9837 Planned Release Date: 2-22-94

3.

13. SOLUTION COMMENTS: [X] See Attached [ ] None

Tested by doing a pump bump per Procedure, PhBtest, Manual Position, Manual Speed
Call up each affected screen

14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [X] See Attached [ ] None

See solution comments.

15 COMPLETED: S.G. McNeese Date: 4/20/94 Phone No. 376-9837

4.

16 VERIFIED BY: M E Eckert Date: 4/20/94 Phone No. 373-4743

17 RELEASE VERSION: 2.18

18 CLOSED BY: [signature] Date: 5/3/94 Phone No. 373-1379

Form #: HMTP-SCR-1 (1-25-94)

SCR No.: 004

Sheet 2 of 5

[ ] Description [ ] Justification [ ] Solution Comments [ ] Software Affected

Report and Recipe Code Modifications

Demoint.Rps:

PSETSPD → VR232060

DSPEED → VR232110

PSPEED → VR232050

DSETSPD → VR232120

PSTOP.RPS

PSETSPD → VR232060

~~BSTOP.RPS~~

~~PSETSPD → VR232060~~ DJM

PSTART.RPS

PSETSPD → VR232060

PBSETVAL.RPS:

PSETSPD → VR232060

DSETSPD → VR232120

PBCHKCLR.RPS

PSETSPD → VR232060

PBDEMRP.RPS

PSETSPD → VR232060

~~DSPEED → VR232110~~ DJM

PSPEED → VR232050

BUMPENAB.RPS

PSETSPD → VR232060

BUMPIT.RPS

PSETSPD → VR232060

Form #: HMTP-SCRCS-1 (1-25-94)

SCR No.: 304

Sheet 3 of 5

[ ] Description [ ] Justification [\] Solution Comments [ ] Software Affected

BSTOPIT.RPS
PSETSPD → VR232060

SETUM.RPS
PSETSPD → VR232060

PBBUTSTP.RPS
PSETSPD → VR232060

PBRUNS9.RPS
PSETSPD → VR232060

~~DEMOWIT.RPS~~
~~DSPEED → VR232110~~
~~PSPEED → VR232050~~

PBDCMPP.RPS
DSPEED → VR232110
BSETSPD → VR232120

DSTART.RPS
DSETSPD → VR232120

Deleted Strategy Blocks
PSETSPD
PSPEED
DSETSPD
DSPEED

Changed scan times

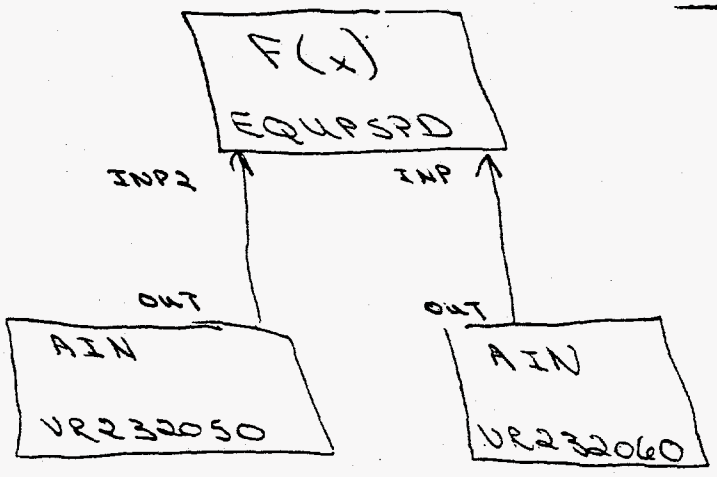
VR232050	1 → .5	VR232110	6 → .5
VR232060	6 → .5		
VR232120	6 → .5		

SCR No.: 304

Sheet 4 of 5

[ ] Description [ ] Justification [X] Solution Comments [ ] Software Affected

Reconnected Strategy Block EQUPSPD:



SCR No.: 304

Sheet 5 of 5

[ ] Description [ ] Justification [ ] Solution Comments [ ] Software Affected

Modified the following display screens:

PBTESTS.GRP

PSETSPD → VR232060 (4 places)

PSPEED → VR232050 (2 places)

DSETSPD → VR232120 (1 place)

DSPEED → VR232110 (1 place)

PDISPLAY.GRP

PSETSPD → VR232060 (1 place)

PSPEED → VR232050 (2 places)

BUMPPUMP.GRP

PSETSPD → VR232060 (1 place)

PSPEED → VR232050 (2 places)

DDISPLAY.GRP

DSPEED → VR232110 (1 place)

VR232060 H. Range From 1200 → 1020

Test:

Manual Nozzle Position - good

Manual Pump Operation - good

PumpRamp - good

Phase B Test - good

HYDROGEN MITIGATION TEST PROJECT
System Change Request

ORIGINAL

SCR No.: 305

Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Motor Strategy

2. VERSION/REVISION: 2.13

3. SCR TYPE AND REQUESTED COMPLETION DATE: [ ] Development [ ] Problem Report [X] Enhancement [ ] Other DATE: 2-22-94

4. SUBMITTER'S PRIORITY: [3] 1=Critical 2=High 3=Medium 4=Low

5. SYSTEM NAME/TITLE: Remove Redundant Motor Strategy Logic

6. DESCRIPTION OF CHANGE: [ ] See Attached

Eliminate STPDISOR and SETDISM and connect From Stop.Out to Report.DIN1

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

Simplify Motor Strategy for easier understanding/maintenance.

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [X] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [X] DACS Software [ ] Drawings
[ ] Other/Name

9. ORIGINATOR: K. Eldridge Date: 2/7/94 Phone No.: 509-838-7517

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

USQ SCREEN?
[ ] Yes
[X] No

11. APPROVAL: Date: 2/8/94
Date: 2/5/94
Date: 2/8/94

12. ASSIGNED TO: S.G. McNeil Phone No.: 376-9837 Planned Release Date: 2-22-94

3.

13. SOLUTION COMMENTS: [ ] See Attached [ ] None

Phase B Test and Pump Dump (with disconnect switches open; breakers closed) run. Verified Faults no longer exist

14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None

Motor Strategy

15 COMPLETED: S.G. McNeil Date: 2/22/94 Phone No. 376-9837

4.

16 VERIFIED BY: Linda Mondoza Date: 2/22/94 Phone No. 373-2007

17 RELEASE VERSION: Motor 2.16

18 CLOSED BY: K. Eldridge Date: 3/8/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (1-25-94)

ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 306
Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS TEST and MOTOR strategies
2. VERSION/REVISION: 2.23 / 2.13
3. SCR TYPE AND REQUESTED COMPLETION DATE: [✓] Development [ ] Problem Report [ ] Enhancement [ ] Other DATE: 2-22-94
4. SUBMITTER'S PRIORITY: [4] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: Password change
6. DESCRIPTION OF CHANGE: [ ] See Attached
   Change the Level 1,2+3 passwords in both ~~the~~ TEST and MOTOR strategies.
   (Both strategies use the same password)
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
   Need new passwords.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [X] DACS Software [ ] Drawings
   [ ] Other/Name
9. ORIGINATOR: Rube mendoza Date: 2/8/94 Phone No.: 373-2007

CCB

10. DISPOSITION:
   [✓] Approve [ ] Approve/Modify
   [ ] Reject [ ] Cancel
   [ ] Defer

WHEN TO IMPLEMENT CHANGE:
[✓] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[✓] No

USQ SCREEN?
[ ] Yes
[✓] No

11. APPROVAL: [signature] Date: 2/8/94
    [signature] for T. Bounds/EG&G Date: 2/8/94
    [signature] Date: 2/8/94
12. ASSIGNED TO: S.G. McNay Phone No.: 376-9837 Planned Release Date: 2-22-94

3.

13. SOLUTION COMMENTS: [ ] See Attached [ ] None
    All passwords changed.
14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
    Test Strategy & Motor Strategy
15. COMPLETED: [signature] Date: 3/1/94 Phone No. 376-9837

4.

16. VERIFIED BY: Rube mendoza Date: 3/9/94 Phone No. 373-2007
17. RELEASE VERSION: Test 2.25 Motor 2.17
18. CLOSED BY: [signature] Date: 3/15/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (1-25-94)

HYDROGEN MITIGATION TEST PROJECT **ORIGINAL**
System Change Request

SCR No.: 307
Sheet 1 of 3

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS Motor Strategy
2. VERSION/REVISION: 2.13
3. SCR TYPE AND REQUESTED COMPLETION DATE: [ ] Development [ ] Problem Report [X] Enhancement [ ] Other DATE: 2-14-94
4. SUBMITTER'S PRIORITY: [3] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: Simplify PhaseB 30 Sec Alarm
6. DESCRIPTION OF CHANGE: [ ] See Attached
Implemat 30 sec alarm for PhaseB the same as for Pump Bump, eliminating Report + Recipe Code.
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
Simplify logic for ease of understanding/maintenance.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [X] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [X] DACS Software [ ] Drawings
[ ] Other/Name
9. ORIGINATOR: S.G. McNeese Date: 2/8/94 Phone No.: 376-9837

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

USQ SCREEN?
[ ] Yes
[X] No

11. APPROVAL: Date: 2/8/94
For [illegible] Date: 2/8/94
EG&G/LANL Date: 2/8/94

12. ASSIGNED TO: S.G. McNeese Phone No.: 376-9837 Planned Release Date: 2-14-94

3.

13. SOLUTION COMMENTS: [X] See Attached [ ] None
Test: D.2 PB Tests

14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
Motor Strategy
PBRUN59.RB3

15 COMPLETED: S.G. McNeese Date: 2/22/94 Phone No. 376-9837

4.

16 VERIFIED BY: Ruben Mendoza Date: 2/22/94 Phone No. 373-2007

17 RELEASE VERSION: Motor 2.16

18 CLOSED BY: [signature] Date: 3/5/94 Phone No.

Form #: HMTP-SCR-1 (1-25-94)

Original

HYDROGEN MITIGATION TEST PROJECT

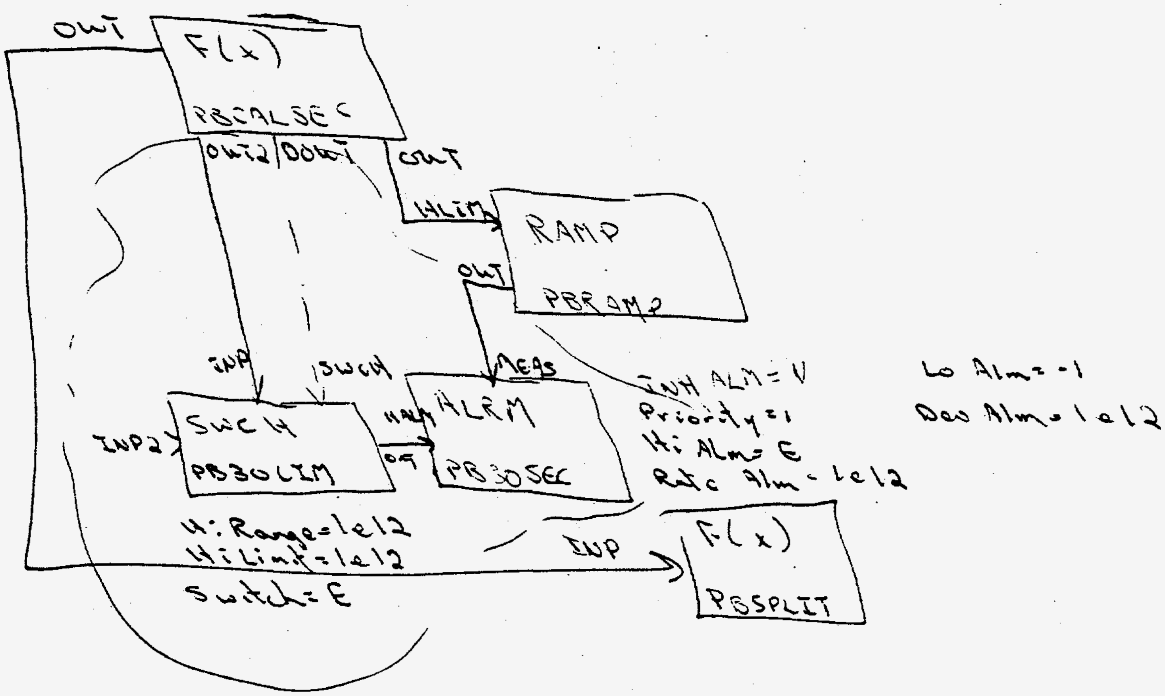
Change Request (Continuation Sheet)

CR No.: 307

Sheet 2 of 3

[ ] Description [ ] Justification [ ] Change Comments

Added the following strategy blocks:



~~F(x) PBCALSEC calc added:~~

~~AO12 = AIN1-((AIN1>=30)*30)~~

~~DOT1 = AR1 <= 0~~

~~and set~~

~~Hi RNG2 = [illegible] 86518~~

Deleted strategy blocks ALXMON, 30SECSAT, STDSQALM, TURNOFF.

Signature: Date: / /

Form #: HMTP-CRCS-2 (3-18-93)

original

SCR No.: 307

Sheet 3 of 3

[ ] Description [ ] Justification [ ] Solution Comments [ ] Software Affected

F(X) PBCAL SEC changed to:

AR1 = AIN1 @ 60 + AIN2
AOT1 = AR1
AOT2 = AR1 - ((AR1 >= 30) * 30)
DOT1 = AR1 <= 0

HI RNG2 = 86518

original

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 308
Sheet 1 of 5

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Motor Strategy
2. VERSION/REVISION: 2.13
3. SCR TYPE AND REQUESTED COMPLETION DATE: [ ] Development [X] Problem Report [ ] Enhancement [ ] Other DATE:
4. SUBMITTER'S PRIORITY: [1] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: Directional Motor Restarts Automatically
6. DESCRIPTION OF CHANGE: [ ] See Attached

If start the directional motor but then press the "StopTest" button before the desired position is reached, the motor stops but then automatically restarts.

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

Correct erroneous behavior.

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [X] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [X] DACS Software [ ] Drawings
[ ] Other/Name

9. ORIGINATOR: Ruben Mendoza Date: 2/15/94 Phone No.: 373-2007

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

USQ SCREEN?
[ ] Yes
[ ] No

11. APPROVAL: [signature] Date: 2/22/94
[signature] Date: 2/22/94
[signature] EG&G/LANL Date: 2/22/94

12. ASSIGNED TO: S. Pittiece S.O.S. Phone No.: 376-9837 Planned Release Date: March 8, 1994

3.

13. SOLUTION COMMENTS: [X] See Attached [ ] None

Ran Phase B test rotation and stopped rotation motor with STOP TEST soft button - No restart.

14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None

PBBUTSTP.RFS

15 COMPLETED: [signature] Date: 3/9/94 Phone No. 546-5015

4.

16 VERIFIED BY: Ruben Mendoza Date: 3/9/94 Phone No. 373-2007

17 RELEASE VERSION: Motor 2.17

18 CLOSED BY: [signature] Date: 3/15/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (1-25-94)

SCR No. 308
Sheet 2 of 3
Solution Comments

Eldridge Engineering Inc.

W. 111 29th - Spokane, Wa 99203
Office (509) 838-7517 - Fax (509) 838-7037 - Cellular (509) 993-4568

Facsimile Cover Sheet

To: Gayle McNeece & Sam Smith
Company: Westinghouse Hanford, EG&G
Phone: (509) 376 - 9837
Fax #: (509) 376 - 4945

From: Ken Eldridge
Company: Eldridge Engineering
Phone: (509) 838-7517
Fax #: (509) 838-7037

Date: 3/7/94

Pages including this cover page: 2

Gayle and Sam,

Good work Sam, you have confirmed my suspicion about the Report and Recipe code DISMOVE.RPS not being executed in time to disable another start. Your timing diagram definitely confirms this.

The tries to stop the test by setting PBBUTSTP.OUT high from the PBTESTS display to execute PBBUTSTP.RPS. In PBBUTSTP.RPS the pump motor and position motor are issued to stop by setting STOPPUL.OUT and BUTPULSE.OUT high. STOPPUL.OUT stops the pump motor if it is running, which we know it is not when the position motor is running, and calls to execute PSTOP.RPS. BUTPULSE.OUT stops the position motor and calls to execute DISMOVE.RPS. Here is where the problem lies in that PBBUTSTP.RPS is still executing, PSTOP.RPS may be called to execute before DISMOVE.RPS and DISMOVE.OUT may not be set high for some period of time as shown by Sam's timing diagram.

SCR No. 308
Sheet 3 of 5
Solution Comments

If the position motor is stopped FORWARD.OUT goes low from NOTRUN going low when the position motor is running. When the position motor stops, NOTRUN goes high and causes FORWARD to go high again which would be prevented if DISMOVE.OUT was set high. FORWARD stays high for more than 6 seconds and FSTRTDEL times out which starts the motor again before DISMOVE.OUT is set high.

The safest and easiest solution to this problem is to set DISMOVE.OUT in the RR code PBBUTSTP.RPS when the position motor is called to stop. This code is definitely called if the position motor is stopped from the selection by the operator of the STOP TEST button. I suggest to make the logic solid at a later date with algorithm blocks when we all can get together to address the other functions that I have called out as potential problems.

Following is the addition that should be made to the RR code PBBUTSTP.RPS.

```
; Code:          "PBBUTSTP.RPS"

@IF(DEMO.OUT==1)           ; Check if in demo mode.
  @SET(PSETSPD.OUT,0)      ; Set desired speed feedback for pump to 0.
  @SET(PBDEMRP.OUT,1)      ; Execute RR code PBDEMRP.RPS which simulates
                           ; ramping the pump.
@ELSE                      ; Check if not in demo mode.
  @SET(DISMOVE.OUT,1)      ; Addition to code to  prevent position motor from
                           ;restarting.
  @SET(STOPPUL.OUT,1)      ; Stop the pump motor.
  @SET(BUTPULSE.OUT,1)     ; Stop the position motor.
@ENDIF                     ; End of check for demo mode.
```

Thanks you,

Ken Eldridge

SCR No. 308
Sheet 4 of 9
Solution Comments


```
;_____________________________________________________________________
;              "PBBUTSTP.RPS"
;
; Purpose:     This code is used to stop a phase B test and halt operation of
;              both the position and pump motors.  This code is executed by
;              operator request to stop a phase B test.
;
; Related task: Test Operation, Position Control Stop, Pump Control Stop, Demo
;
; Revision date:12/17/93
;              1/23/94
;
; Author:      Darrel Holt
; Modifications:Ken Eldridge    1/23/94
;                      To provide additional comments to code.
;              S.G. McNeece    3/08/94
;                      Corrected restart of position motor after operator requested stop
;
; This code is executed by:
;              PBBUTSTP.DOUT which is set high by the operator to stop a phase
;              B test.
;
; Reference:   PBRPORT2.SOURCE_FILE4
;_____________________________________________________________________

@IF(DEMO.OUT==1)            ; Check if in demo mode.
   @SET(PSETSPD.OUT,0)      ; Set desired speed feedback for pump to 0.
   @SET(PBDEMRP.OUT,1)      ; Execute RR code PBDEMRP.RPS which simulates
                            ; ramping the pump.
@ELSE                       ; Check if not in demo mode.
  [ @SET(DISMOVE.OUT,1)     ; Prevent position motor from restarting
      @SET(STOPPUL.OUT,1)   ; Stop the pump motor.
      @SET(BUTPULSE.OUT,1)  ; Stop the position motor.
@ENDIF                      ; End of check for demo mode.

@SET(ENABLPB1.AM,1)         ; Set automatic test stop to manual.
@SET(ENABLPB1.OUT,0)        ; Set automatic test stop low.

@SET(ENABLPB2.AM,1)         ; Set scanning report enable to manual.
@SET(ENABLPB2.OUT,0)        ; Disable scanning report PBRUN59.RPS

@SET(PBDNTM.AM,1)           ; Set pump operation elapsed time reached bit to
                            ; manual.
@SET(DNTMPB.AM,1)           ; Set test elapsed time reached bit to manual.

@SET(PBDNTM.OUT,1)          ; Force pump operation time reached bit high to stop
                            ; pump operation timer.
@SET(DNTMPB.OUT,1)          ; Force test time reached bit high to stop test
                            ; timer.

@IF((PBTESTNO.OUT >= 16) AND (PBANGIND.EVAL <> 6))  ; Check if test has several
                                                    ; positions and pump is not
                                                    ; at last position.
   @SET(HOLDPB.OUT,1)       ; Hold elapsed test time.
@ENDIF                      ; End of check for not at last position.

@IF((PBTESTNO.OUT >= 16) AND (PBANGIND.EVAL == 6))  ; Check if test has several
                                                    ; positions and pump is
                                                    ; at last position.
   @SET(HRPB.OUT,0)         ; Set desired test time in hours to 0.
     @T(MINPB.OUT,0)        ; Set desired test time in minutes to 0.
      @(SECPB.OUT,0)        ; Set desired test time in seconds to 0.
@E                          ; End of check for last position.

@IF(PBTESTNO.OUT < 16)      ; Check if test has only one position.
   @SET(RESETPB.OUT,1)      ; Reset elasped test timer.
@ENDIF                      ; End of check for only one position in test.
@SET(PBRESET.OUT,1)         ; Reset pump operation elapsed timer.
```

Added for CR 308

SCR No. 304
Sheet 5 of 5
Solution Comments


```
@      )                ; Wait 0.5 second.

@SET(PBDNTM.AM,0)       ; Set pump operation elapsed time reached bit to
                        ; automatic.
@SET(DNTMPB.AM,0)       ; Set test elapsed time reached bit to automatic.

@SET(PBMIN.OUT,0)       ; Set desired pump operation time in minutes to 0.
@SET(PBSEC.OUT,0)       ; Set desired pump operation time in seconds to 0.

@IF(PBTESTNO.OUT < 16)  ; Check if test selected does not have additional
                        ; positions.
   @SET(HRPB.OUT,0)     ; Set desired test time in hours to 0.
   @SET(MINPB.OUT,0)    ; Set desired test time in minutes to 0.
   @SET(SECPB.OUT,0)    ; Set desired test time in seconds to 0.
@ENDIF                  ; End of check on test selection with additional
                        ; positions.

@SET(COLORGN.DO1,0)     ; Set pump position within limits indication low.
@SET(COLORYW.DO1,0)     ; Set pump position out of limits indication low.
@SET(COLORGN.DO2,0)     ; Set pump speed within limits indication low.
@SET(COLORYW.DO2,0)     ; Set pump speed out of limits indication low.
@SET(COLORGN.DO3,0)     ; Set pump acceleration rate within limits
                        ; indication low.
@SET(COLORYW.DO3,0)     ; Set pump acceleration rate out of limits
                        ; indication low.
@SET(COLORGN.DO4,0)     ; Set pump deceleration rate within limits
                        ; indication low.
@SET(COLORYW.DO4,0)     ; Set pump deceleration rate out of limits
                        ; indication low.
@SE[illegible]OLORGN.DO5,0)  ; Set pump maximum speed is within limits indication
                        ; low.
@[illegible]ORYW.DO5,0)      ; Set pump maximum speed is out of limits indication
                        ; low.
@SET(COLORGN.DO6,0)     ; Set pump speed alarm value is within limits
                        ; indication low.
@SET(COLORYW.DO6,0)     ; Set pump speed alarm value is out of limits
                        ; indication low.
@SET(COLORGN.DO7,0)     ; Set pump speed limit is within range indication
                        ; low.
@SET(COLORYW.DO7,0)     ; Set pump speed limit is out of range indication
                        ; low.
@SET(COLORGN.DO9,0)     ; Set pump ready to run indication low.
@SET(COLORYW.DO9,0)     ; Set pump is running indication low.

@SET(PBENABLE.OUT,0)    ; Disable phase B test operation.
@SET(ST5PBENA.OUT,0)    ; Disable phase B test operation through PLC.

@SET(TSTRUNNG.OUT,0)    ; Set test in operation indication low.
@SET(VALSET.OUT,0)      ; Set indication for test parameters set low.
```

original

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 309
Sheet 1 of 84

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Test Strategy

2. VERSION/REVISION: 2.24

3. SCR TYPE AND REQUESTED COMPLETION DATE: [ ] Development [✓] Problem Report [ ] Enhancement [ ] Other DATE:____

4. SUBMITTER'S PRIORITY: [1] 1=Critical 2=High 3=Medium 4=Low

5. SYSTEM NAME/TITLE: Insufficient Memory to Load Test Strategy

6. DESCRIPTION OF CHANGE: [ ] See Attached
When tried to install Test 2.24 (on 2-14-94), were unable to - Genesis responded "Insufficient Memory" and quit. Need to resolve insufficient memory problem.
[illegible]

7. JUSTIFICATION FOR CHANGE: [ ] See Attached
in SDD. [illegible]
Need to be able to load new versions of Test

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [X] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [X] DACS Software [ ] Drawings
[ ] Other/Name____

9. ORIGINATOR: S.G. McNeece Date: 2/17/94 Phone No.: 6-9837

CCB

10. DISPOSITION:
[ ] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[✓] No

USQ SCREEN?
[ ] Yes
[ ] No

11. APPROVAL: [signature] Date: 2/22/94
[signature] Date: 2/22/94
[signature] EG&G/LANL Date: 2/22/94

12. ASSIGNED TO: S.G. McNeece [illegible] Phone No.: 376-9837 Planned Release Date: March 8, 1994

3.

13. SOLUTION COMMENTS: [X] See Attached [ ] None

14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
DOS, Memory Manager (QEMM → Helroom3), Config.sys

15 COMPLETED: [signature] Date: 5/5/94 Phone No. 509 838-7517

4.

16 VERIFIED BY: [signature] Date: 5/5/94 Phone No. 376-9837

17 RELEASE VERSION: N/A

18 CLOSED BY: [signature] Date: 5/11/94 Phone No. 376-2590

Form #: HMTP-SCR-1 (1-25-94)

SCR No.: 309

Sheet 24

[ ] Description [ ] Justification [ ] Solution Comments [ ] Software Affected

2/14 Ran out of Memory
1) Called Iconics (1-508-543-8600) Talked to Amy Bennett
When locked at memory usage Test 2.13,
low = 23xxx Hi = 2400
She said change autoexec.bat:
c:\qemm\loadhi c:\mouse

config.sys
buffers = 15 (were 20)

Test 2.24 came up
Low = 22528 Hi = 16

Restored everything back & termination testing
(Jeff Martin had no suggestions)

2) Talked to Ken Eldridge
He agreed with Amy but continued noted to make sure all screens come up on RSS station works
Advised real solution is Network 3 or QEMM 7.03

3) Talked to Leonard
No to all until can reproduce at LANL

2/24 Per R.A. Williams research (see attached) removed the exclusion area B000 - BFFF from the QCAM line in config.sys and added STACKS = 0,0 in config.sys
This resulted in enough memory on Station 5 for the new Test strategy. All other stations okay.

Form #: HMTP-SCRCS-1 (1-25-94)

SCR No. 301
Sheet 3 of 4
Solution Comments

- autoexec
- config.sys
- Genesis Loading verbage
- MFT

[13] From: raw2@lanl.gov at -SMTPlink 2/23/94 3:30PM (4204 bytes: 77 ln)
To: S G (Gayle) McNeece at ~WHC251
Subject: Memory allocation notes
---------- Message Contents ----------

The following comments are an accumulation of talks with Ken and Jeff and my own observations. The addresses below are all hex addresses with the final zero omitted. (I.e., "100" is really 1000.) In this notation, 80 hex = 2K bytes, 100 = 4K, 400 = 16K, and 1000 = 64K.

1. Exclusion areas on the "DEVICE=...QEMM386.SYS X=..." CONFIG.SYS line can be drastically reduced. Specifically, the B000-BFFF (64K!) (Station 5 only) is probably a result of a previous test configuration and can be eliminated completely. The other area (all stations) is for the ARCnet card. Ken said that this need only be 8K in size, but our (my and Jeffs's) reading of the manual is that 16K is required. This exclusiopn area must agree with the actual switch settings on the card. (Currently, Station 6 excludes CC00-CFFF (16K) and the others exclude C800-CFFF (32K).) See item 4 also.

2. All the network cards should be set the same, both for starting address and buffer size. This means that all machines should be opened and examined. You should at this time document what board is in what slot, the board's function, its manufacturer, the rev. level of the board (if obtainable) and the settings of any DIP switches on the board (if any). In addition, the settings of the ARCnet cards and video boards should be made identical. By the way, in the Genesis configuration, the I/O port address should be 2E0 and the interrupt whould be INT 5 (= IRQ5).

3. Video boards need have no exclusion areas set for them. The board may have switches to determine what address the ROM starts. These switches sh[illegible]d be the same on all machines. There may be a more subtle c[illegible]ration of fragmentation that may dictate a "best" setting. (Incidentally, are there manuals for the video cards in the trailer?)

no switches — Not so

4. Today's excursions into high memory mapping included looking ahead to the use of Modbus Plus, which will require an additional 2K of exclusion. Without including video RAM in our calculations, we decided to try using the Modbus Plus "Device 2" (DD80-DDFF) and setting the ARCnet card to have its 16K space just below that (D980-DD7F). This leaves a single 8K hole below the page frame at E000. (Other solutions would have left two 4K holes.) Caveat: we may want to change the video board to make things even less fragmented.

5. It looks like Genesis can make use of small holes in upper memory (one I saw was only 144 bytes!).

6. It seems that the default for DOS is "STACKS=9,128". This amounts to 1.8K which (Ken claims) Genesis does not use. This space can be freed up by adding the statement "STACKS=0,0" to CONFIG.SYS.

7. My experiments at DACSDF show that versions 2.23 and 2.24 of the TEST strategy differ in their use of high memory only 7,654 bytes. I saw this coming entirely out of high memory, but this is probably due to my configuration; I suspect that any memory would do.

8. Bringing up displays will change the amount of free memory reported by Genesis. If memory is limited, you may get a "display too big" error message. (Jeff says that the biggest display is "I/O Status", due to its use of State Fields, which take up a lot of memory.)

9 [illegible] plans to obtain more details on how Genesis uses high and low memory
1 [illegible]onics (Mat Michaels) and he will ask Mat to fax information to both hi[illegible]d me. (Ken's modus operandi is to load things high where possible. Both Jeff and I have seen indications that this causes problems, but we may have been fooled by fragmentation effects.

[<>] [<>] [<>] [<>] [<>] [<>] [<>] [<>] [<>] [<>] [<>] [<>] [<>] [<>] [<>]

SCR No.: 309

Sheet 34 of 34

[ ] Description [ ] Justification [X] Solution Comments [ ] Software Affected

Ugrade to DOS 6.0 and Netroom 3 expanded memory manager to provide more useable EMS for Genesis Runtime system.

The exclusion region for the expanded memory manager in the Device statement in the CONFIG.SYS was optimized to only exclude the memory buffer address region. This also allows more accessable memory for Genesis.

Customize utility of Netroom 3 was used to optimize memory assignment.

Form #: HMTP-SCRCS-1 (1-25-94)

HYDROGEN MITIGATION TEST PROJECT
System Change Request

original

SCR No.: 310

Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Motor Strategy

2. VERSION/REVISION: 2.14

3. SCR TYPE AND REQUESTED COMPLETION DATE: [ ] Development [ ] Problem Report [X] Enhancement [ ] Other DATE:

4. SUBMITTER'S PRIORITY: [3] 1 = Critical 2 = High 3 = Medium 4 = Low

5. SYSTEM NAME/TITLE: Remove Vestigial RPS code.

6. DESCRIPTION OF CHANGE: [X] See Attached

In documenting the Motor Strategy's Report a Recipe code, KenCharge identified some vestigial functions (see attached). They should be removed.

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

Clean up code for ease of understanding.

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [X] DACS Software [ ] Drawings
[ ] Other/Name

9. ORIGINATOR: S.G. McNeece Date: 2/16/94 Phone No.: 376-9837

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

USQ SCREEN?
[ ] Yes
[X] No

11. APPROVAL: Date: 2/22/94

Date: 2/22/94

EG&G/LANL Date: 2/22/94

12. ASSIGNED TO: SG McNeece SQS Phone No.: 376-9837 Planned Release Date: 2-22-94

3.

13. SOLUTION COMMENTS: [ ] See Attached [ ] None

Remove lines

14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [X] See Attached [ ] None

15 COMPLETED: Date: 2/22/94 Phone No. 376-9837

4.

16 VERIFIED BY: Date: 2/22/94 Phone No. 373-2007

17 RELEASE VERSION: 2.16

18 CLOSED BY: Date: 3/5/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (1-25-94)

original.

SCR No.: 310

Sheet 2 of 2

[N] Description [ ] Justification [ ] Solution Comments [ ] Software Affected

```
File PBBUTSTP.RPS:
@SET(COLORGN.DO8,0)        ; Vestigial function, serves no purpose.
@SET(COLORYW.DO8,0)        ; Vestigial function, serves no purpose.
File PBSTOPIT.RPS:
@SET(COLORGN.DO8,0)        ; Vestigial function, serves no purpose.
@SET(COLORYW.DO8,0)        ; Vestigial function, serves no purpose.
File PBSETVAL.RPS:
; Related task: Test Operation, Demo, Vestigial Function
@SET(COLORGN.DO8,0)        ; Vestigial function, serves no purpose.
@SET(COLORYW.DO8,0)        ; Vestigial function, serves no purpose.
        @SET(HDH.OUT,15)                ; Vestigial Function.
```

Tested by visual examination

Form #: HMTP-SCRCS-1 (1-25-94)

HYDROGEN MITIGATION TEST PROJECT
System Change Request

original.
SCR No.: 311
Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: B883 Tank-Bottom T/C modules

2. VERSION/REVISION: N/A

3. SCR TYPE AND REQUESTED COMPLETION DATE: [ ] Development [X] Problem Report [X] Enhancement [ ] Other DATE:

4. SUBMITTER'S PRIORITY: [1] 1=Critical 2=High 3=Medium 4=Low

5. SYSTEM NAME/TITLE: Remove open thermocouple circuitry from tank-bottom T/C modules

6. DESCRIPTION OF CHANGE: [ ] See Attached
The open-thermocouple detection circuitry on the B883-22C modules applies a current through the thermocouple loop. This introduces an offset error when large resistances are involved. This circuitry is not currently utilized for open thermocouple detection. This is an identical change to CR# 289; see the documentation attached to that CR.

7. JUSTIFICATION FOR CHANGE: [ ] See Attached
Eliminates any potential offset errors in temperature measurement.

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [ ] DACS Software [X] Drawings (W. H-2-[illegible])
[ ] Other/Name

9. ORIGINATOR: Russ W Truitt Date: 2/17/94 Phone No.: 376-2510

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[X] Yes
[ ] No
ATP dev

USQ SCREEN?
[ ] Yes
[X] No

11. APPROVAL:
Robert Pendergast Date: 2/22/94
[illegible] Date: 2/22/94
[illegible] EG&G/LANL Date: 2/22/94

12. ASSIGNED TO: K. Rench Phone No.: 373-1779 Planned Release Date:

3.

13. SOLUTION COMMENTS: [ ] See Attached [ ] None
Hardware modified as described per this SCR and SCR 289. W. file updated to reflect changes per Ron Bates

14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None

15 COMPLETED: ~~2/28/94~~ [illegible] Date: 2/28/94 Phone No. 376-8885

4.

16 VERIFIED BY: [illegible] Date: 3/14/94 Phone No. 376-8885

17 RELEASE VERSION:

18 CLOSED BY: [illegible] 3-29-94 Date: ~~3/22/94~~ Phone No. 3-3416
5/3/94 6-2-94

Form #: HMTP-SCR-1 (1-25-94)

HYDROGEN MITIGATION TEST PROJECT
System Change Request

original.

SCR No.: 312

Sheet 1 of

CANCELED.

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS Software Modicon/Genesis

2. VERSION/REVISION: HFR39 / Test 223

3. SCR TYPE AND REQUESTED COMPLETION DATE: [ ] Development [ ] Problem Report [X] Enhancement [ ] Other DATE:

4. SUBMITTER'S PRIORITY: [2] 1=Critical 2=High 3=Medium 4=Low

5. SYSTEM NAME/TITLE: Tenth degree resolution for tank bottom thermocouples

6. DESCRIPTION OF CHANGE: [ ] See Attached

Change Modicon and Genesis software to display and archive all tank bottom thermocouples in 1/10 degree F increments. The current resolution is 1 degree F. The tank bottom thermocouples are located in drop 17, rack 1, slots 4, 5, and 6.

See CR 296

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

Instruments are capable of this resolution, and is critical to determine jet penetration.

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [X] SDD [ ] Test Procedure [ ] AOP [ ] ARP [X] I/O Channel List [X] DACS Software [ ] Drawings
[ ] Other/Name

9. ORIGINATOR: Ross Terrill Date: 2/17/94 Phone No.: 376-2510

CCB

10. DISPOSITION:
[ ] Approve [ ] Approve/Modify
[ ] Reject [X] Cancel 3-8-94
[X] Defer
2-22-94.

WHEN TO IMPLEMENT CHANGE:
[ ] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[ ] No

USQ SCREEN?
[ ] Yes
[ ] No

11. APPROVAL: _____ Date: __/__/__

_____ Date: __/__/__

_____ Date: __/__/__

12. ASSIGNED TO: S.G. McNeese Phone No.: 373-1779 Planned Release Date:

3.

13. SOLUTION COMMENTS: [X] See Attached [ ] None

14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None

15 COMPLETED: Date: / / Phone No.

4.

16 VERIFIED BY: Date: / / Phone No.

17 RELEASE VERSION:

18 CLOSED BY: Date: / / Phone No.

Form #: HMTP-SCR-1 (1-25-94)

SCR: 312
Solution comments: continuation.

[13] From: Ross W Truitt at ~WHC211 2/23/94 2:23PM (2519 bytes: 31 ln)
To: Roger E Bauer at ~WHC76, Guy T Bear at ~WHC340, James R (Randy) Bunch at ~WHC340, Ronald R Bafus at ~WHC339, Russell O Carter at ~WHC211, Guy B Crystal at ~WHC211, Gregory J Gauck at ~WHC340, S G (Gayle) McNeece at ~WHC251, Thomas Pounds at ~WHC207, Douglas C (Doug) Larsen at ~WHC340, Ruben E Mendoza at ~WHC340, Samuel O (Sam) Smith at ~WHC76, George F Jr Vargo at ~WHC35
cc: Carl E Hanson at ~WHC207, Charles W Stewart at ~PNL53, Jack W Lentsch at ~WHC129, James R Frederickson at ~WHC211, ~Data Acqisition Control Sys-1 at ~WHC266, Michael L McElroy at ~WHC235
Subject: .1 Degree F Resolution for Modicon B883-200 Modules
---------- Message Contents ----------

It has been decided at the TRG meeting this afternoon that the "value added" for implementing the software change for increasing the resolution for the Modicon B883-200 modules to .1 degree F. is not sufficient enough to warrant the change. This affects both MIT-17C and the tank bottom thermocouples, and eventually the MIT-17B thermocouples.

As most of you are already aware, this would have been a significant software change. The resolution of the modules would become .1 degree F., but the stated repeatability is only .5 degree F. The data would be misinterpreted as accurate and repeatable to .1 degrees F., and would be very misleading. The Modicon modules are intended for industrial PLC use, not for laboratory data. We are also looking into a potential third-party source for thermocouple multiplexers for Modicon PLCs.

At the data management meeting this morning, I suggested the use of a dedicated datalogger on the farm for the jet penetration tests. Chuck Stewart brought this up at the TRG meeting, and it was decided (by Jack Lentsch) to "make it so".

I will be needing assistance from some of you to make this happen. I will take the lead on providing the datalogger and associated hardware, but I will need help on the logistics for this, and to ensure that this system is useable and acceptable for the intended need.

Ross Truitt

Unclassified

original

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 313

Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: AF5000 VSD (5Hp)

2. VERSION/REVISION: N/A

3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem Report [X] Enhancement [ ] Other DATE:____

4. SUBMITTER'S PRIORITY: [ ] 1=Critical 2=High 3=Medium 4=Low

5. SYSTEM NAME/TITLE: 5Hp VSD power increase

6. DESCRIPTION OF CHANGE: [ ] See Attached
Change the following VSD parameters:

Voltage Boost from: 5V to: 15V
Full Load Maximum current from: 2A to: 2.2A

on the 5Hp rotational motor VSD Keypad.

7. JUSTIFICATION FOR CHANGE: [ ] See Attached
Increase available power for the rotation motor to eliminate "sticking" problem.

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [ ] DACS Software [ ] Drawings
[ ] Other/Name ~~VSD Keypad~~ WHC-SD-WM-OTR-154

9. ORIGINATOR: Ray Merriman Date: 2/10/94 Phone No.: 372-0514

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

USQ SCREEN?
[ ] Yes
[X] No

11. APPROVAL: Ruben Mendoza Date: 2/22/94
EG&G/LANL Date: 2/22/94
Date: 2/22/94

12. ASSIGNED TO: D.C. Larsen Phone No.: 373-5995 Planned Release Date:

13. SOLUTION COMMENTS: [ ] See Attached [X] None

14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [X] None

15 READY TO TEST: Date: 2/22/94 Phone No. 373-1779

16 VERIFIED BY: Ruben Mendoza Date: ~~2/15/94~~ 2-22-94 Phone No. 373-2007

17 RELEASE VERSION: N/A

18 CLOSED BY: Ruben Mendoza Date: 2/22/94 Phone No. 373-2007

Form #: HMTP-SCR-1 (2-10-94)

SCR No. 313
Sheet 2 of —
Description Cont.

DON'T SAY IT --- *Write It!*

DATE: Feb. 14, 1994

TO: GT Bear, R1-51

FROM: RE Merriman L4-90

Telephone: 372-0514

cc: DC Larsen, R1-51
GJ Gauck, R1-51
RE Mendoza, R1-51
JJ Klos, T4-07
AE Wilder, R1-51
JW Lentsch, R2-78
CE Hanson, H5-09
GF Vargo, H5-09

SUBJECT: 101-SY Rotation Motor - Failure to operate

Per Doug Larsen's CC:Mail on 2/11/94, Trouble-shooting of Rotation Motor.

On two recent occasions, the 241-SY-101 Rotation (Directional) Motor has not responded to commands from the DACS control station to run. Each time the motor was requested to run, it was for the purpose of rotating the mixer pump nozzles to a new position.

The Rotation Motor is 1 HP, 1140 RPM, 460 V, 3 phase, induction; it is controlled from a 5 HP Variable Speed Drive (VSD) that adjust both the motor frequency and voltage to control the speed and torque respectively. The motor drives a oil filled gear reducer which in turn drives a large gear on the pump unit. The motor and gear reducer are located at the top of the mixer pump exposed to the outside air temperatures and conditions.

Field inspections of the installation and testing of the motor circuitry found no damage or abnormal test results. On each occasion the motor was rotated by hand; it initially was difficult to turn, but on following attempts turned much easier. Subsequent commands to run were successful following both occasions. Both occurrences were at around 4 am on cold winter days with numerous normal operations before and between the two occurrences.

The motor speed is limited to 100 RPM operation, which is only 9% of it's rated speed. This restricted speed and voltage severely reduce the motors breakaway torque for starting.

The analysis of the problem indicates that at low temperature the gear box oil, and various seals and bearings stiffen up and require a larger torque for starting.

The Eaton instruction manual (Vol. 2, Setup Adjustments) for the VSD makes the following statements concerning Voltage Boost: "If the voltage boost is not set high enough, the motor may not develop enough torque to start the load", the available voltage boost range in the VSD is 0-50 V, it is currently set at 5 V. The distributor VSD engineer suggested we try higher voltage boost settings, he recommended trying 15 V and working up from there if necessary. He warned that higher values would increase the motor heating if the motor is

run for long periods of time, but even 50 V's would not be a problem for the short period we run this motor.

A second contributor is that the motor amperage set in the VSD is the National Electrical Code estimated value of 1.8 Amps., the actual motor nameplate is 2.2 Amps. and this higher amperage would also give a higher starting torque. The distributor VSD engineer recommended that we set 2.2 Amps in the VSD Full Load Mtr Amp register. I concur with these recommendations.

Both of these settings are normal adjustments set via the VSD Touchpad located in the DACS trailer. The recommendations are limited to the Rotation Motor only.

Summary: The motor voltage boost should be raised to 15 V and the Motor amps should be raised to 2.2 Amps. Both of these actions will tend to increase the starting torque without damage to the motor.

Unclassified

ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 514
Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Bernoulli Drives - Rm 1 & Rm 3
2. VERSION/REVISION: N/A
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem ~~Report~~ [X] Enhancement [ ] Other DATE: 3-31-94
4. SUBMITTER'S PRIORITY: [3] 1 = Critical 2 = High 3 = Medium 4 = Low
5. SYSTEM NAME/TITLE: Reallocate Bernoulli Drives
6. DESCRIPTION OF CHANGE: [ ] See Attached
Remove Bernoulli drives, interface cards, and software from Remote 1 and Remote 3. Reinstall one on Station 4 and one on Leslie Tuler's computer. Switch between Station 3 and Station 4 so can share drive.
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
Don't need drives where they currently are installed.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [ ] DACS Software [X] Drawings
[X] Other/Name Autoexec.bat & Config.sys
9. ORIGINATOR: Ruben Mendoza Date: 3/8/94 Phone No.: 373-2007

CCB

10. DISPOSITION:
[Y] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

WHEN TO IMPLEMENT CHANGE:
[Y] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[Y] No

USQ SCREEN?
[ ] Yes
[Y] No

11. APPROVAL: [signature] EG&G/LANL [signature]
Date: 3/8/94
Date: 3/8/94
Date: 3/8/94

12. ASSIGNED TO: A. Villalobos Phone No.: 376-5014 Planned Release Date: 3-15-94

13. SOLUTION COMMENTS: [ ] See Attached [ ] None

14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None

15 CHANGE INSTALLED: Art Villalobos Date: 4/12/94 Phone No. 373-4733

16 VERIFIED BY: [signature] Date: 4/12/94 Phone No. 376-9837

17 RELEASE VERSION: N/A

18 CLOSED BY: [signature] Date: 4/12/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (2-28-94)

HYDROGEN MITIGATION TEST PROJECT
System Change Request

ORIGINAL

SCR No.: 315

Sheet 1 of 84

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Test Strategy

2. VERSION/REVISION: 2.24

3. SCR TYPE AND REQUESTED COMPLETION DATE: [ ] Development [ ] Problem ~~Report~~ [X] Enhancement [ ] Other DATE: 3-3-94

4. SUBMITTER'S PRIORITY: [2] 1=Critical 2=High 3=Medium 4=Low

5. SYSTEM NAME/TITLE: 72 Hour History Improvements

6. DESCRIPTION OF CHANGE: [ ] See Attached

Several improvements are desired in the 72 Hour History recording

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

Improves 72 Hour Functionality

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [X] DACS Software [ ] Drawings
[ ] Other/Name

9. ORIGINATOR: SG McLaren / R. Mendoza Date: 2/24/94 Phone No.: 376-9837

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

USQ SCREEN?
[ ] Yes
[ ] No

11. APPROVAL: [signature] Date: 3/8/94
[signature] EG&G/LANL Date: 3/8/94
[signature] Date: 3/8/94

12. ASSIGNED TO: [signature] Phone No.: Planned Release Date: 3-31-94

3.

13. SOLUTION COMMENTS: [ ] See Attached [ ] None
Test. Verify all items listed in Description complete.

14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
Test Strategy NEW72.GRP RENAME.RAT STORES12.EQ1
ASMAIN.GRP OLD72.GRP STSBCKUP.RAT

15 COMPLETED: [signature] Date: 3/9/94 Phone No. 376-9837

4.

16 VERIFIED BY: [signature] Date: 3/9/94 Phone No. 373-2007

17 RELEASE VERSION: Test 2.24

18 CLOSED BY: [signature] Date: 3/15/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (1-25-94)

Change Request (Continuation Sheet)

SCR No.: 315

Sheet 2 of 84

[X] Description [ ] Justification [ ] Change Comments

1. 72 Hour screens are only available on Status 5 when called up on any other status, a screen like the one displayed on the RSS stations for reports should be displayed.

2. The ASTAND screen should say display is only available on Status 5 rather than the DACS trailer.

3. A batch file needs to be developed to allow manual copying of NEW72.PRN to OLD72.PRN. ~~72HR.BAT~~. PERIAMC72.BAT:

DEL OLD72.PRN

REN NEW72.PRN OLD72.PRN

(ST53BCKUP.BAT and ST5RESTR.BAT need to to be modified to save/restore this file)

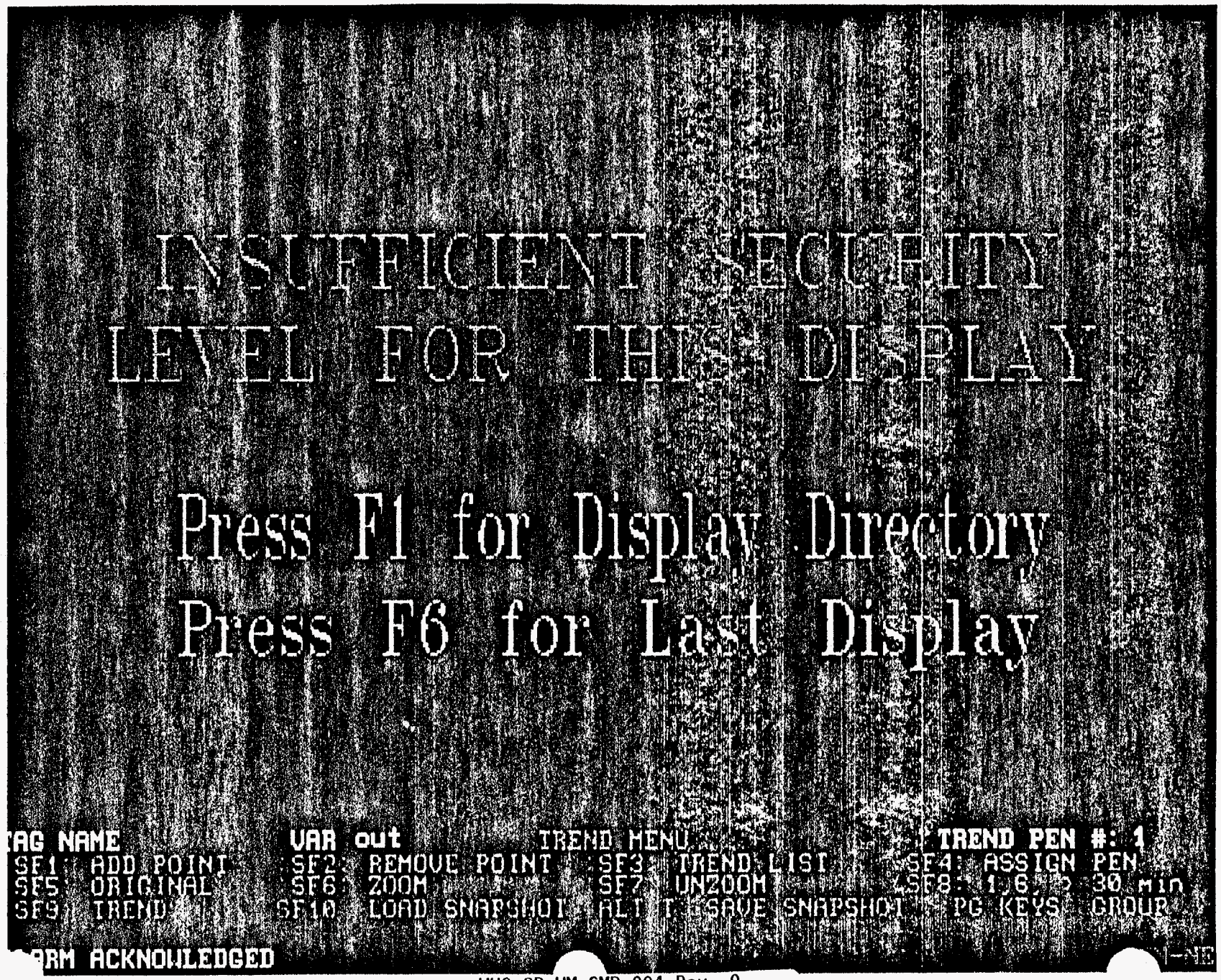
4. Change 1 Hour display to 16hr. display

5. On the New72HR and OLD72HR screens, state: "Data Only Available on Status 5"

1. Make both Old72hr and New72hr screens password protected requiring the level 3 password.

Signature: Date: / /

Form #: HMTP-CRCS-1 (3-18-93)


INSUFFICIENT SECURITY
LEVEL FOR THIS DISPLAY
Press F1 for Display Directory
Press F6 for Last Display
TAG NAME
VAR out
TREND MENU
TREND PEN #: 1
SF1: ADD POINT
SF2: REMOVE POINT
SF3: TREND LIST
SF4: ASSIGN PEN
SF5: ORIGINAL
SF6: ZOOM
SF7: UNZOOM
SF8: 1,6,12,30 min
SF9: TREND
SF10: LOAD SNAPSHOT
ALT: SAVE SNAPSHOT
PG KEYS: GROUP
ARM ACKNOWLEDGED

HYDROGEN MITIGATION TEST PROJECT
System Change Request (Continuation Sheet)

SCR No.: 315

Sheet 4 of 4

[ ] Description [ ] Justification [X] Solution Comments [ ] Software Affected

OLD 72 HR Display is displaying all data in a 2" area - rather than be bound per screen. A change request will be generated to address this problem.

example: Begin Date/Time = 3/7/94 20:54:40
End Date/Time = 3/9/94 10:08:03

All in a 2" region.

Form #: HMTP-SCRCS-1 (1-25-94)

HYDROGEN MITIGATION TEST PROJECT
System Change Request

ORIGINAL

SCR No.: 316
Sheet 1 of 1

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: MIT-173 Accuracy Modules
2. VERSION/REVISION: N/A
3. SCR TYPE AND REQUESTED COMPLETION DATE: [ ] Development [✓] Problem Report [ ] Enhancement [ ] Other DATE: April
4. SUBMITTER'S PRIORITY: [2] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: MIT-173 Thermocouples / Accuracy changes
6. DESCRIPTION OF CHANGE: [ ] See Attached
The Accuracy thermocouple transmitters utilize an open-thermocouple detection circuit that induces a small temperature offset. This change authorizes the removal of that circuitry per the manufacturer's instructions. Following the circuit removal, the modules shall be recalibrated.
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
The open-thermocouple detection circuitry causes a small temperature offset error. This change should bring the DACS readings closer to the manual readings.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [✓] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [ ] DACS Software [✓] Drawings
[ ] Other/Name
9. ORIGINATOR: P.M. TRUITT Date: 3/7/94 Phone No.: 376-2510

CCB

10. DISPOSITION:
[✓] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

WHEN TO IMPLEMENT CHANGE:
[✓] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[✓] No

USQ SCREEN?
[ ] Yes
[ ] No

11. APPROVAL:
[signature] Date: 3/8/94
[signature] EG&G/LANL Date: 3/8/94
[signature] Date: 3/8/94
12. ASSIGNED TO: T. Founds Phone No.: 376-5555 Planned Release Date: 3-8-94

3.

13. SOLUTION COMMENTS: [ ] See Attached [ ] None
The Accuracy modules were modified and calibrated on 3/25/94 by the Standards Laboratory per EDT # 606969. No drawings were affected, but the VI file was updated.
14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
15 COMPLETED: [signature] Date: 3/25/94 Phone No. 376-2510

4.

16 VERIFIED BY: per telecon with MF Erhart [signature] Date: 4/5/94 Phone No. 373-1779
17 RELEASE VERSION: N.A.
18 CLOSED BY: [signature] Date: 4/5/94 Phone No. 373-1779.

Form #: HMTP-SCR-1 (1-25-94)

From: Ross W Truitt at ^WHC211 3/9/94 4:45PM (2227 bytes: 34 ln)
Thomas Pounds at ^WHC207
Donald R Bafus at ^WHC339, Roger E Bauer at ^WHC76, Guy T Bear at ^WHC340,
James R (Randy) Bunch at ^WHC340, Russell O Carter at ^WHC211,
Jeremy B Crystal at ^WHC211, Gregory J Gauck at ^WHC340,
Douglas C (Doug) Larsen at ^WHC340, S G (Gayle) McNeece at ^WHC251,
George F Jr Vargo at ^WHC35
Subject: MIT17B Acromag mods.

---------- Message Contents ----------

Tom -

Ultimately, I feel that it is MY responsibility to ensure that the appropriate documentation gets updated, modified, or generated. If anyone disagrees, please let me know. I may not PERSONALLY be the one performing the work, but it should be up to me to ensure that it does get completed. Good point, and thanks for bringing it up.

- Ross

All,

Change request #316 has been approved, to remove the break-detection circuits from the Acromag modules on the 17B thermocouples, and to calibrate said modules. Several meetings have been convened to discuss the physical aspects of this work (i.e calibration schedule, field work, who will perform the mods., etc). We have a plan, and this is good.

BUT... what about the documentation side of this change? Who will be responsible for documenting the fact that these modules are modified, and how will this documentation manifest itself? Will there be an EDT to the Acromag VI file? Will there be an ECN to a drawing (with the modifications shown, or noted)? Who will write these ECNs and EDTs? Enquiring minds want to know!

Someone (a WHC employee) should take the action and responsibility to make sure this gets properly documented.

Tom Pounds
6-8885

ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 317
Sheet 1 of 3

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS TEST strategy

2. VERSION/REVISION:

3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [X] Problem ~~Report~~ [ ] Enhancement [ ] Other DATE: 3/4/94

4. SUBMITTER'S PRIORITY: [3] 1=Critical 2=High 3=Medium 4=Low

5. SYSTEM NAME/TITLE: 17C T/C elevation correction

6. DESCRIPTION OF CHANGE: [ ] See Attached
Change tag descriptions for tags T1R17C16 and T1R17C17 to reflect ~~T1R17C~~ correct elevations as follows:
T1R17C16 292"
T1R17C17 316"
TANKTEMP RISER 17C-316": TAG DESCRIPTION
TANKTEMP RISER 17C-292": TAG DESCRIPTION:

7. JUSTIFICATION FOR CHANGE: [ ] See Attached
Elevations are currently incorrect.

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [ ] SDD [X] Test Procedure [ ] AOP [ ] ARP [X] I/O Channel List [X] DACS Software [X] Drawings
[ ] Other/Name

9. ORIGINATOR: Ruben mendoza Date: 3/8/94 Phone No.: 373-2007

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

USQ SCREEN?
[ ] Yes
[ ] No

11. APPROVAL: Ruben mendoza Date: 3/8/94
[illegible] EG&G/LANL Date: 3/8/94
[illegible] Date: 3/8/94

12. ASSIGNED TO: S.L. McLaughlin Phone No.: 376-9837 Planned Release Date: 3-9-94

13. SOLUTION COMMENTS: [ ] See Attached [ ] None
Also changed related screens.
Test Call up tags & screens

14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
Test Strategy, MIT17C.GRP, TEMPRFL.GRP

15 CHANGE INSTALLED: S.L. McLaughlin Date: 3/16/94 Phone No. 376-9837

16 VERIFIED BY: [signature] Date: 3/16/94 Phone No. 373-1979

17 RELEASE VERSION: Test 2.26

18 CLOSED BY: Ruben mendoza Date: 3/29/94 Phone No. 373-2007

Form #: RMTP-SCR-1 (2-28-94)

SCR No. 317
Continuation
Description
Page 2 of 3

[61] From: William B Gregory at ~PNL55 3/7/94 9:40AM (3494 bytes: 1 ln)
To: Ruben E Mendoza at ~WHC340
Subject: MIT 17C Thermocouple Levels
---------- Forwarded with Changes ----------
From: Jeanne A Lechelt at ~WHC140 3/7/94 8:59AM (2814 bytes: 40 ln)
To: Frank E Panisko at ~PNL56, Lawrence A Schienbein at ~PNL14,
Charles W Stewart at ~PNL53, Zenen I Antoniak at -SMTPLink, William B Gregory at ~PNL55, Barry M Wise at ~PNL51, John D Hudson at ~PNL53, Michael J Packer at ~WHC47, Justin G Fadeff at ~WHC71, John J Irwin at ~WHC244,
Larry E Efferding at ~WHC244, Nicholas W (Nick) Kirch
cc: Nancy E Wilkins, Richard Clinton, Leslie A Tusler, Jeanne A Lechelt
Subject: MIT 17C Thermocouple Levels
---------- Message Contents ----------

Ruben,

This note from Jeanne Lechelt explains the difference in TC locations as noted in the Data Management Meeting minutes.

Barry 5-6568

---------- Forward Header ----------
Subject: MIT 17C Thermocouple Levels
Author: Jeanne A Lechelt at ~WHC140
Date: 3/7/94 8:59 AM

This information is a from a message sent to me by Leslie Tusler. Note that the elevations of thermocouples 16 and 17 are changed from those we have previously used. We are updating all of our files to reflect this change (MIT 17C profiles and average temperature plots). These changes will be reflected in the weekly plots starting today. If you are using any plots showing MIT 17C temperatures in the A-B report or for any other purpose, please notify us ASAP so they can be updated. Jeanne

> I just got off the phone with Ron Bafus. He told me the correct levels of the MIT 17C thermocouples. He is going to send me an explanation of what happened. I will forward that to you.
>
> Here are the readings:

T/C #	Before	Now
1	4	4
2	16	16
3	28	28
4	52	52
5	76	76
6	100	100
7	112	112
8	124	124
9	148	148
10	172	172
11	196	196
12	208	208
13	220	220
14	232	232
15	244	244

SCR No: 317
Continuation
Description
Page 3 of 3

16	268	292 <-----
17	292	316 <-----
18	340	340
19	364	364
20	392	392
21	402	402
22	426	426

Leslie

Unclassified

ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 318

Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS patch panel
2. VERSION/REVISION: Hardware
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [✓] ~~Problem Report~~ [ ] Enhancement [ ] Other DATE: 3-31-94
4. SUBMITTER'S PRIORITY: [2] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: VDTT 1B strain signal inversion
6. DESCRIPTION OF CHANGE: [ ] See Attached
   Invert the signals for tags WIR1BA01, WIR1BA02, and WIR1BA03 so that the sign (+ or -) is reversed.
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
   Make VDTT 1B strains consistent with others so that a positive value represents tension and a negative display represents compression.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [ ] DACS Software [✓] Drawings
   [ ] Other/Name DACS patch panel, WHC Drawing
9. ORIGINATOR: Ruben Mendoza Date: 3/8/94 Phone No.: 373-2007

CCB

10. DISPOSITION:
    [✓] Approve [ ] Approve/Modify
    [ ] Reject [ ] Cancel
    [ ] Defer

    WHEN TO IMPLEMENT CHANGE:
    [✓] Upon completion of change
    [ ] Prepare change and wait for approval
    [ ] At next mandatory change

    ATP REQUIRED?
    [ ] Yes
    [✓] No

    USQ SCREEN?
    [ ] Yes
    [ ] No

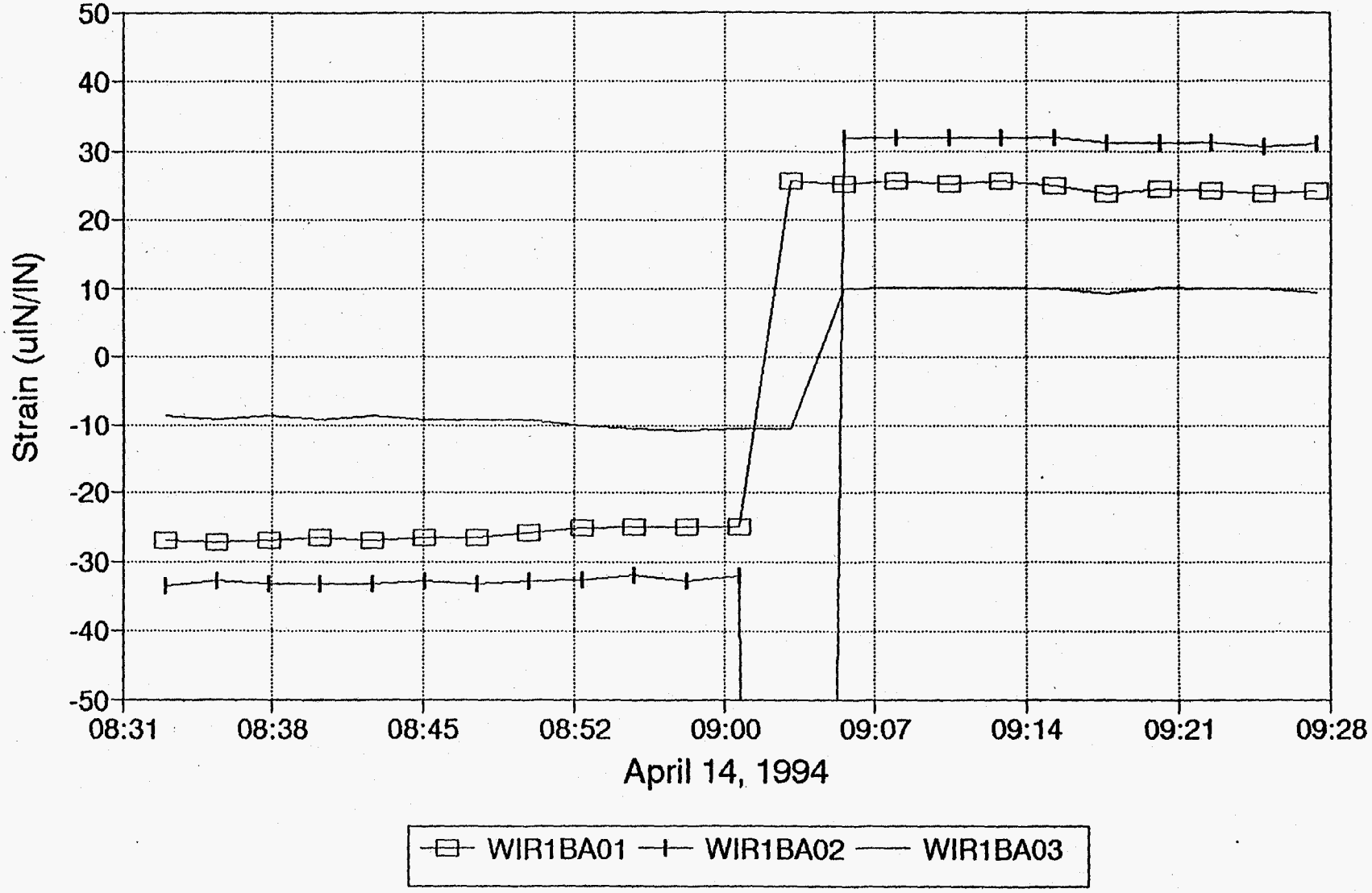
11. APPROVAL: Ruben Mendoza Date: 3/8/94
    [signature] for [signature] Date: 3/8/94
    [signature] EG&G/LANL Date: 3/8/94
12. ASSIGNED TO: A. Villalobos Phone No.: ~~373-4733~~ (202) 245-2015 Planned Release Date: 3-9-94

13. SOLUTION COMMENTS: [X] See Attached [ ] None
    Leads were switched at DACS patch panel resulting in change of sign (+/-). See attached.
    To be performed as part Phase II for Patch Panel Drawings.
14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
15. CHANGE INSTALLED: Art Villalobos Date: 4/14/94 Phone No.
16. VERIFIED BY: Ruben Mendoza Date: 4/14/94 Phone No. 373-2007
17. RELEASE VERSION: N/A
18. CLOSED BY: [signature] Date: 1/30/95 Phone No. 373-1779

Form #: HMTP-SCR-1 (2-28-94)

Tag	WIR1BA01	WIR1BA02	WIR1BA03
Var	OUT	OUT	OUT
EU	uIN/IN	uIN/IN	uIN/IN
Low	-684	-684	-684
High	684	684	684
or 14/94			
8:00:42	-26.558	-32.905	-8.519
08:03:12	-26.224	-32.905	-8.519
08:05:42	-25.556	-32.237	-8.185
08:08:12	-25.89	-32.905	-8.519
08:10:42	-25.89	-32.237	-8.853
08:13:12	-26.224	-32.237	-8.853
08:15:42	-27.56	-32.571	-9.187
08:18:12	-27.895	-32.571	-8.853
08:20:42	-27.226	-33.24	-8.853
08:23:12	-28.229	-33.908	-8.519
08:25:42	-27.56	-33.574	-8.853
08:28:12	-27.226	-33.574	-9.187
08:30:42	-27.226	-33.908	-8.853
08:33:12	-26.892	-33.574	-8.853
08:35:42	-27.226	-32.905	-9.187
08:38:12	-26.892	-33.24	-8.853
08:40:42	-26.558	-33.24	-9.187
08:43:12	-26.892	-33.24	-8.853
08:45:42	-26.558	-32.905	-9.187
08:48:12	-26.558	-33.24	-9.187
08:50:42	-25.89	-32.905	-9.187
08:53:12	-25.222	-32.571	-10.189
08:55:42	-24.888	-31.903	-10.523
08:58:12	-24.888	-32.905	-10.857
09:00:42	-24.888	-32.237	-10.523
9:03:12	25.556	-684	-10.523
9:05:42	25.222	31.903	9.855
09:08:12	25.556	31.903	10.189
09:10:42	25.222	31.903	10.189
09:13:12	25.556	31.903	10.189
09:15:42	24.888	31.903	9.855
09:18:12	23.886	31.235	9.187
09:20:42	24.554	31.235	10.189
09:23:12	24.22	31.235	9.855
09:25:42	23.886	30.567	9.855
09:28:12	24.22	30.901	9.521
09:30:42	23.218	30.901	9.187
09:33:12	23.218	29.899	8.519
09:35:42	22.884	30.567	9.187
09:38:12	23.552	30.901	8.853
09:40:42	23.218	30.233	9.187
9:43:12	23.218	30.901	9.521
09:45:42	21.881	29.899	8.185
09:48:12	21.547	30.233	8.185
09:50:42	21.881	29.899	8.185
09:53:12	21.547	29.899	8.853

Tank 241-SY-101
Strain Gauges



ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 319
Sheet 1 of 3

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS Software.
2. VERSION/REVISION: V.2.24 Test Strategy.
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [✓] Problem ~~Report~~ [ ] Enhancement [ ] Other DATE: 3-25-94
4. SUBMITTER'S PRIORITY: [4] 1 = Critical 2 = High 3 = Medium 4 = Low
5. SYSTEM NAME/TITLE: Test / DACS Phase Current Reading change
6. DESCRIPTION OF CHANGE: [X] See Attached
   Current monitors for ~~Individual~~ phases in The DACS Trailer. Need TO convert Voltage reading ~~[redacted]~~ for each phase to relate to actual current. lines read 0-100 Amps/Ø equal to 0-5V which needs to be converted To current for Display. $\frac{5V}{.9} = \frac{100A}{X}$ Needs change on channel list also. DACS SCREEN
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
   Reading displays are currently wrong.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [✓] I/O Channel List [ ] DACS Software [ ] Drawings
   [ ] Other/Name
9. ORIGINATOR: Art Villalobos Date: 3/8/94 Phone No.: 373-4733

CCB

10. DISPOSITION:
    [✓] Approve [ ] Approve/Modify
    [ ] Reject [ ] Cancel
    [ ] Defer

WHEN TO IMPLEMENT CHANGE:
[✓] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[✓] No

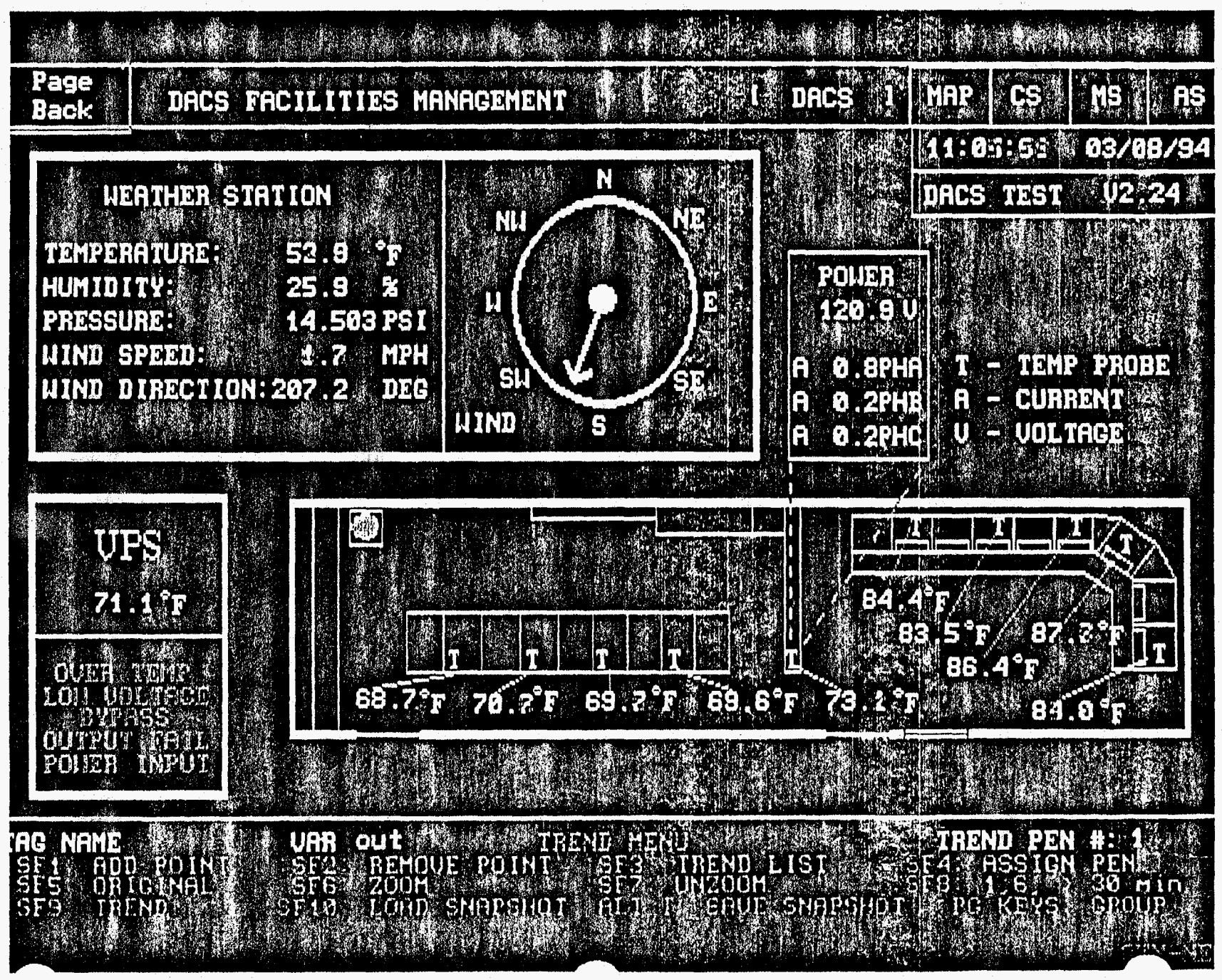
USQ SCREEN?
[ ] Yes
[✓] No

11. APPROVAL: Ruben Mendoza — EG&G/LANL — Date: 3/8/94
    Date: 3/8/94
    Date: 3/8/94

12. ASSIGNED TO: S.G McMinn SDS Phone No.: 376-9837 Planned Release Date: March 14, 1994

13. SOLUTION COMMENTS: [X] See Attached [ ] None
    Tags TRAIA, TRAIB, TRAIC's HI RANGE changed from 5 to 100. DACS.GRP changed to allow xxx.x to be displayed.
14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
    Test Strategy DACS.GRP changed.
15. CHANGE INSTALLED: [redacted] Date: 3/16/94 Phone No. 376-9837
16. VERIFIED BY: [redacted] Date: 3/16/94 Phone No. 373-1779
17. RELEASE VERSION: TeA 2.26
18. CLOSED BY: Ruben Mendoza Date: 3/22/94 Phone No. 373-2007

Form 7: HMTP-SCR-1 (2-28-94)


Page Back
DACS FACILITIES MANAGEMENT
DACS 1
MAP
CS
MS
AS
11:05:53 03/08/94
DACS TEST V2.24
WEATHER STATION
TEMPERATURE: 53.9 °F
HUMIDITY: 25.9 %
PRESSURE: 14.503 PSI
WIND SPEED: 1.7 MPH
WIND DIRECTION: 207.2 DEG
N
NW
NE
W
E
SW
SE
S
WIND
POWER
120.9 V
A 0.8PHA
A 0.2PHB
A 0.2PHC
T - TEMP PROBE
A - CURRENT
V - VOLTAGE
UPS
71.1°F
OVER TEMP
LOW VOLTAGE
BYPASS
OUTPUT FAIL
POWER INPUT
84.4°F
83.5°F
87.3°F
86.4°F
68.7°F
70.2°F
69.2°F
69.6°F
73.1°F
84.8°F
TAG NAME
VAR out
TREND MENU
TREND PEN #: 1
SF1: ADD POINT
SF2: REMOVE POINT
SF3: TREND LIST
SF4: ASSIGN PEN
SF5: ORIGINAL
SF6: ZOOM
SF7: UNZOOM
SF8: 1 6 > 30 min
SF9: TREND
SF10: LOAD SNAPSHOT
ALT F: SAVE SNAPSHOT
PG KEYS: GROUP

ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
System Change Request (Continuation Sheet)

SCR No.: 319

Sheet 3 of 3

[ ] Description [ ] Justification [X] Solution Comments [ ] Software Affected

Changed G2C6
HRNG1 = 100
HRNG2 = 100
HRNG3 = 100

Test:

	Displayed Amps	Volts (Measured)
TR21A	~~4~~ 15.9	.79
TR21B	4.7	.227
TR21C	5.9	.281

$\frac{x \text{ amps}}{.79 \text{ volts}} = \frac{100 \text{ amps}}{5 \text{ volts}}$ $x = \frac{100}{5} * .79 = 15.8$

$\frac{x \text{ amps}}{.227 \text{ volts}} = \frac{100 \text{ amps}}{5 \text{ volts}}$ $x = \frac{100}{5} * .227 = 4.54$

$\frac{x \text{ amps}}{.281 \text{ volts}} = \frac{100 \text{ amps}}{5 \text{ volts}}$ $x = \frac{100 \text{ amps}}{5 \text{ V}} * .281 = 5.6$

Within measured accuracy

Form #: HMTP-SCRCS-1 (1-25-94)

HYDROGEN MITIGATION TEST PROJECT
System Change Request

ORIGINAL

SCR No.: 320
Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Test 2.25

2. VERSION/REVISION: 2.25

3. SCR TYPE AND REQUESTED COMPLETION DATE: [ ] Development [X] Problem Report [ ] Enhancement [ ] Other DATE: 3-22-94

4. SUBMITTER'S PRIORITY: [3] 1 = Critical 2 = High 3 = Medium 4 = Low

5. SYSTEM NAME/TITLE: OLD72HR Display Time Span

6. DESCRIPTION OF CHANGE: [ ] See Attached
The OLD72HR display is displaying all data in a 2" area rather than in 6 hour increments per screen.

7. JUSTIFICATION FOR CHANGE: [ ] See Attached
OLD72HR screen is in error. Data is displayed as though taken every 12 seconds rather than every 5 minutes. Resolution is decreased.

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [X] DACS Software [ ] Drawings
[ ] Other/Name

9. ORIGINATOR: S.G. McNeece Date: 3 / 9 / 94 Phone No.: 376-9837

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

USQ SCREEN?
[ ] Yes
[X] No

11. APPROVAL:
[signature] Date: 3/15/94
[signature] Date: 3/15/94
[signature] for Tom Pounds Date: 3/15/94

12. ASSIGNED TO: S.G. McNeece Phone No.: 376-9837 Planned Release Date: 3-22-94.

3.

13. SOLUTION COMMENTS: [ ] See Attached [ ] None
History Block OLD72HR Rev. 0 changed from 12 to 300.

14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
Test Strategy

15 COMPLETED: [signature] Date: 3/16/94 Phone No. 376-9837

4.

16 VERIFIED BY: [signature] Date: 3/16/94 Phone No. 373-1779

17 RELEASE VERSION: Test 2.26

18 CLOSED BY: [signature] Date: 3/16/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (1-25-94)

ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 320

Sheet 1 of 7

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS Computers

2. VERSION/REVISION: N/A

3. SCR TYPE AND REQUESTED COMPLETION DATE: [ ] Development [X] Problem Report [ ] Enhancement [ ] Other DATE: 3/11/94

4. SUBMITTER'S PRIORITY: [2] 1=Critical 2=High 3=Medium 4=Low

5. SYSTEM NAME/TITLE: Clean up All DACS Computer Disk Files

6. DESCRIPTION OF CHANGE: [X] See Attached

All DACS computers need to have their file systems cleaned up, getting rid of obsolete, unused, and/or unlicensed files.

This SCR is submitted because the file cleanup will be extensive. Normal good housekeeping will not require

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

Need to get disk files under control.

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [ ] DACS Software [ ] Drawings
[X] Other/Name All computer disk drives

9. ORIGINATOR: S.G. Meece Date: 3/11/94 Phone No.: 376-7837

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

USQ SCREEN?
[ ] Yes
[X] No

11. APPROVAL: Date: 3/15/94
Date: 3/15/94
Date: 3/15/94

12. ASSIGNED TO: M. Erhart Phone No.: 373-4743 Planned Release Date:

3. 13. SOLUTION COMMENTS: [X] See Attached [ ] None

All computers cleaned up. Will require constant diligence to keep machines clean.

14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None

15 COMPLETED: Date: 5/3/94 Phone No. 376-9837

4. 16 VERIFIED BY: Date: 5/4/94 Phone No. 373-4743

17 RELEASE VERSION: N/A

18 CLOSED BY: Date: 5/4/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (1-25-94)

HYDROGEN MITIGATION TEST PROJECT

Change Request (Continuation Sheet) ORIGINAL

CR No.: 321

Sheet 2 of 7

[ ] Description [ ] Justification [ ] Change Comments

an SCR to be submitted

Signature: Date: ___/___/___

Form #: HMTP-CRCS-1 (3-18-93)

SCR No. 321
Sheet 3 of 7
Change Connects

Station 1 (Modsoft)

AUTOEXEC	BAT	94	03-16-94	8:24a
COMMAND	COM	47845	05-08-91	12:00p
CONFIG	SYS	104	03-16-94	8:35a
DOS		<DIR>	07-09-92	10:12a
HANFORD		233	02-15-94	3:03p
HPFAX		<DIR>	07-23-92	8:45a
MODSOFT		<DIR>	04-06-94	5:10p
MODSOFT	ENV	205	04-07-94	9:13a
MOUSE		<DIR>	07-09-92	11:37a
QAPLUS		<DIR>	07-09-92	11:04a
QEMM		<DIR>	07-09-92	1:19p
README	H1	866	09-12-92	12:02p
TRAKKER		<DIR>	03-18-94	8:15a
WP51		<DIR>	09-09-92	11:23a
WPDATA		<DIR>	04-12-94	1:01p

Station 3 (HLAN; general use)

ACTIVITY		<DIR>	08-19-93	1:38p
AUTOEXEC	BAT	866	06-18-93	7:35a
AUTOSET	BAT	326	11-18-93	1:35p
BASPROG		<DIR>	12-16-93	11:53a
BAT		<DIR>	02-11-93	8:26a
BTDOSM	SYS	13826	03-30-92	3:34p
COMMAND	COM	47845	11-11-91	5:00a
CONFIG	SYS	231	11-19-93	2:35a
DOS		<DIR>	07-15-92	3:46p
EXCEL		<DIR>	02-11-94	10:01a
GREG		<DIR>	08-04-93	6:47a
JETFORM		<DIR>	03-09-93	7:19a
LM		<DIR>	01-28-93	1:22p
LOOKUP		<DIR>	02-11-93	8:24a
MENU		174	06-25-92	5:33p
MIKE		<DIR>	06-23-93	10:37a
MOUSE		<DIR>	07-15-92	4:13p
NETWORK		<DIR>	01-28-93	2:14p
NO-NET	BAT	110	12-12-91	3:06p
OADDOS		<DIR>	03-29-94	10:50a
PKUNZIP	EXE	21504	05-12-93	5:21p
PKZIP	EXE	31488	05-12-93	5:16p
QAPLUS		<DIR>	08-31-92	9:07a
QEMM		<DIR>	01-28-93	2:12p
QUERY	EXE	768	03-21-84	1:01p
README	H3	616	08-18-92	10:05a
REM		<DIR>	10-21-93	1:12p
STANDARD	HLS	1908	06-17-92	3:54a
TCL_LOG		<DIR>	07-25-93	6:45a
TRAKKER		<DIR>	03-21-94	7:38a
UPDATE	NET	625	09-02-93	5:30a
WINA20	386	9349	06-29-93	12:00p
WINDOWS		<DIR>	01-14-94	7:57a
WPDATA		<DIR>	07-25-93	6:59a

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change Comments

Station 4 (Nicolet)

AT-GPIBW		<DIR>	07-28-92	11:05a
AUTOEXEC	BAT	202	03-29-94	10:53a
BAT		<DIR>	09-11-92	5:11p
COMMAND	COM	47845	05-08-91	12:00p
CONFIG	SYS	219	03-29-94	10:53a
DOS		<DIR>	07-10-92	11:12a
MOUSE		<DIR>	07-10-92	11:21a
OADDOS		<DIR>	03-29-94	10:50a
PKZIP	EXE	34296	03-15-90	1:10a
QAPLUS		<DIR>	07-10-92	11:44a
QEMM		<DIR>	08-03-92	1:12p
README	H4	800	01-26-93	3:06p
TMP		<DIR>	02-14-94	7:11a
TRAKKER		<DIR>	03-18-94	9:49a
WINA20	386	9349	05-08-91	12:00p
WINDOWS		<DIR>	07-22-92	12:55p

Station 5 (Test Strategy)

ALMCOPY	BAT	87	03-17-94	9:27a
AUTOEXEC	BAT	74	06-23-93	3:41p
COMMAND	COM	47845	04-09-91	5:00a
CONFIG	SYS	85	02-24-94	12:52p
DBTODBF		<DIR>	02-16-93	4:01p
DOS		<DIR>	05-05-92	4:12p
GENESIS		<DIR>	05-26-92	9:52a
HIST		<DIR>	01-30-93	7:57p
HIST2		<DIR>	02-17-93	9:06p
MOUSE	COM	28314	07-31-90	4:00p
MOUSE	SYS	31701	06-18-90	12:00p
NORTON		<DIR>	03-17-94	10:48a
QEMM		<DIR>	05-26-92	9:55a
ST5BCKUP	BAT	2622	03-08-94	1:38p
ST5RESTR	BAT	2321	03-08-94	1:37p
TEST		<DIR>	03-09-94	9:39a
TRAKKER		<DIR>	03-21-94	7:38a

Station 6 (Test RSS Strategy)

AUTOEXEC	BAT	153	06-04-93	5:28p
COMMAND	COM	47845	05-08-91	12:00p
CONFIG	SYS	135	06-04-93	5:26p
DOS		<DIR>	02-02-93	4:42p
GENESIS		<DIR>	02-03-93	1:15p
MOUSE	COM	28314	07-31-90	4:00p
NORTON		<DIR>	12-11-93	10:44a
QEMM		<DIR>	02-03-93	1:15p
SETUP6	BAT	31	06-18-93	4:39p
ST5BCKUP	BAT	2622	03-08-94	1:38p
ST5RESTR	BAT	2321	03-08-94	1:37p
TEST		<DIR>	12-07-93	2:14p
TRAKKER		<DIR>	12-12-93	9:28a

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Change Comments

Station 7 (Test RSS Strategy; Motor Backup)

ALMCOPY	BAT	87	01-09-94	5:25p
AUTOEXEC	BAT	73	06-20-93	3:40p
COMMAND	COM	47845	05-08-91	12:00p
CONFIG	SYS	73	05-19-93	9:05p
DOS	<DIR>		10-05-93	9:47a
GENESIS	<DIR>		10-05-93	9:50a
MOUSE	COM	28314	07-31-90	4:00p
MOUSE	SYS	31701	06-18-90	12:00p
NORTON	<DIR>		01-11-94	10:37a
QAPLUS	<DIR>		01-07-94	2:10p
QEMM	<DIR>		10-05-93	9:58a
RUNTIME	<DIR>		10-05-93	10:00a
SEQUENCE	<DIR>		10-05-93	9:58a
SETUP7	BAT	123	06-19-93	5:08p
ST5BCKUP	BAT	2622	03-08-94	1:38p
ST5RESTR	BAT	2321	03-08-94	1:37p
ST8BCKUP	BAT	1949	01-13-94	10:05a
ST8RESTR	BAT	1953	01-13-94	10:24a
TEST	<DIR>		10-05-93	9:56a
TRAKKER	<DIR>		03-21-94	7:38a

Station 8 (Motor Strategy)

AUTOEXEC	BAT	62	05-19-93	9:18p
COMMAND	COM	47845	04-09-91	5:00a
CONFIG	SYS	73	05-19-93	9:05p
DOS	<DIR>		05-06-92	3:50p
GENESIS	<DIR>		05-06-92	3:39p
MOUSE	COM	28314	07-31-90	4:00p
MOUSE	SYS	31701	06-18-90	12:00p
NORTON	<DIR>		03-17-94	9:34a
QAPLUS	<DIR>		03-02-94	1:06p
QEMM	<DIR>		05-06-92	3:43p
SEQUENCE	<DIR>		03-16-94	9:33a
ST8BCKUP	BAT	1949	01-13-94	10:05a
ST8RESTR	BAT	1953	01-13-94	10:24a
TRAKKER	<DIR>		03-21-94	7:38a

Station 9 (DACS->HLAN Station)

AUTOEXEC	BAT	546	03-16-94	10:15a
BAT	<DIR>		02-03-93	3:44p
COMMAND	COM	47845	05-08-91	12:00p
CONFIG	SYS	159	03-16-94	10:17a
DOS	<DIR>		02-02-93	4:56p
GENESIS	<DIR>		02-03-93	3:43p
LM	<DIR>		02-03-93	3:44p
MOUSE	<DIR>		02-03-93	3:42p
OADDOS	<DIR>		02-03-93	3:33p
PKUNZIP	EXE	22022	10-01-89	1:02a
PKZIP	EXE	31408	10-01-89	1:02a

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Change Comments

```
QAPLUS       <DIR>      02-03-93   3:42p
QEMM         <DIR>      02-03-93   3:43p
README   H9         779 08-17-92   4:19p
TRAKKER      <DIR>      03-21-94   7:38a
```

Station 10 (EG&G Techs)

```
AUTOEXEC BAT         94 03-16-94   8:24a
COMMAND  COM      47845 05-08-91  12:00p
CONFIG   SYS        104 03-16-94   8:35a
DOS          <DIR>      07-09-92  10:12a
MOUSE        <DIR>      07-09-92  11:37a
QEMM         <DIR>      07-09-92   1:19p
README   H10        866 09-12-92  12:02p
TRAKKER      <DIR>      03-18-94   8:15a
WP51         <DIR>      09-09-92  11:23a
WPDATA       <DIR>      04-12-94   1:01p
```

Station 11 (Evaporator Test RSS--not yet installed)

```
ANYKEY       <DIR>      11-23-92   3:19p
AUTOEXEC BAT        102 03-16-94   9:19a
COMMAND  COM      48624 11-11-91   5:00a
CONFIG   SYS        187 03-16-94   9:18a
DOS          <DIR>      11-23-92   3:15p
GENESIS      <DIR>      02-12-93   1:06p
HIST         <DIR>      02-12-93   1:06p
IO       SYS      33430 11-11-91   5:00a
MACH32       <DIR>      11-23-92   3:18p
MOUSE        <DIR>      02-12-93   1:06p
MSDOS    SYS      37394 11-11-91   5:00a
PCPLUS       <DIR>      02-12-93   1:23p
QAPLUS       <DIR>      11-23-92   3:15p
QEMM         <DIR>      02-12-93   1:47p
SETUP11  BAT         41 06-11-93   7:57a
ST5BCKUP BAT       1529 07-07-93   5:46p
ST5RESTR BAT       1652 07-07-93   5:47p
TEST         <DIR>      02-12-93   1:06p
TRAKKER      <DIR>      03-21-94   7:38a
```

Remote 1 (2750E RSS Test)

```
ALMCOPY  BAT         87 02-07-94   2:17p
AUTOEXEC BAT        213 02-07-94   2:14p
CHECKIT      <DIR>      12-11-92   5:32p
COMMAND  COM      47845 04-09-91   5:00a
CONFIG   SYS        135 02-07-94   2:13p
CPTOOLS      <DIR>      11-23-92   7:05a
DATAMON  EXE     135661 10-18-91   7:10p
DATAMON  INI        518 11-03-92  11:00a
DOS          <DIR>      11-23-92   7:05a
```

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```
EXPERT          <DIR>      12-11-92   5:33p
GENESIS         <DIR>      12-11-92   5:36p
HIMEM    SYS      11304 10-31-90   3:00a
MOUSE    COM      28314 07-31-90   4:00p
MOUSE    SYS      31701 06-18-90  12:00p
NDD      EXE     117273 12-11-91   6:01a
NDD      ICO        766 12-11-91   6:01a
NDD      INI        640 09-18-91   8:25a
NORTON   INI        530 01-03-80   6:22p
QEMM            <DIR>      12-11-92   5:41p
SETUP1   BAT         41 06-11-93   7:57a
SPEEDISK EXE      81273 12-11-91   6:01a
ST5BCKUP BAT       2622 03-08-94   1:38p
ST5RESTR BAT       2321 03-08-94   1:37p
TEST            <DIR>      12-11-92   5:43p
TRAKKER         <DIR>      02-17-94   2:37p

Remote 3 (2750E RSS Test)

ALMCOPY  BAT         87 11-18-93  10:39a
ANYKEY          <DIR>      11-23-92   6:59a
AUTOEXEC BAT        201 01-13-94   2:29p
CHECKIT         <DIR>      12-11-92   9:43p
COMMAND  COM      47845 11-11-91   5:00a
CONFIG          <DIR>      12-11-92   9:48p
CONFIG   SYS        141 01-13-94   2:28p
CPTOOLS         <DIR>      11-23-92   6:55a
DOS             <DIR>      11-23-92   6:54a
EXPERT          <DIR>      12-11-92   9:48p
GENESIS         <DIR>      12-11-92   9:48p
LAN             <DIR>      12-11-92   9:51p
LATEST          <DIR>      04-16-93  10:20a
MACH32          <DIR>      11-23-92   6:57a
MOUSE    SYS      31701 06-18-90  12:00p
MSMOUSE         <DIR>      11-23-92   6:59a
NETGEN          <DIR>      12-11-92   9:51p
PCPLUS          <DIR>      12-11-92  10:02p
QEMM            <DIR>      12-11-92  10:03p
RSS             <DIR>      12-11-92  10:03p
SETUP3   BAT         41 06-16-93   8:03p
ST5BCKUP BAT       2622 03-08-94   1:38p
ST5RESTR BAT       2321 03-08-94   1:37p
TEST            <DIR>      12-30-93   9:49a
TRAKKER         <DIR>      01-23-94   2:46p
WINA20   386       9349 11-11-91   5:00a
WINDOWS         <DIR>      11-23-92   6:55a
```

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 322
Sheet 1 of 1

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Test and Mitigation Strategies
2. VERSION/REVISION: 2.21, 2.17
3. SCR TYPE AND REQUESTED COMPLETION DATE: [ ] Development [ ] Problem Report [X] Enhancement [ ] Other DATE: 3-29-94
4. SUBMITTER'S PRIORITY: [3] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: Obsolete User Task Files
6. DESCRIPTION OF CHANGE: [ ] See Attached
The subdirectories C_users5 (Test Strategy) and C_User8 (Mitigation Strategy) are ~~the delete~~ obsolete user task directories. Usertask.opt is unused executable of user task. Alexp.* are also unused files for user task. (User task used to check for tags in Manual)
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
Cleaning for better understanding/maintenance.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [X] DACS Software [ ] Drawings
[ ] Other/Name
9. ORIGINATOR: S.G. McNeese Date: 3/22/94 Phone No.: 376-9837

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

USQ SCREEN?
[ ] Yes
[X] No

11. APPROVAL: Robert Mendoza Date: 3/22/94
Technical Integration Date: 3/22/94
EG&G/LANL Date: 3/22/94
12. ASSIGNED TO: S.G. McNeese Phone No.: 6-9837 Planned Release Date: 3/29/94

3.

13. SOLUTION COMMENTS: [ ] See Attached [ ] None
Delete C_User8 and C_User5 from all DACS computers, usertask.opt, alexp.*
Modify ST8RESTR.BAT, ST5BCKUP.BAT, ST8RESTR.BAT, ST8BCKUP.BAT
14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
15 COMPLETED: S.G. McNeese Date: 3/30/94 Phone No. 376-9837

4.

16 VERIFIED BY: [signature] Date: 3/30/94 Phone No. 373-4854
17 RELEASE VERSION: N/A - Same version Test 226 Mitor 2.17
18 CLOSED BY: [signature] Date: 4/5/94 Phone No. 373-1779.

Form #: HMTP-SCR-1 (1-25-94)

ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 3223
Sheet 1 of 2

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS Computer Systems
2. VERSION/REVISION: N/A
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [X] Enhancement [ ] Other DATE: 3/31/94
4. SUBMITTER'S PRIORITY: [3] 1 = Critical 2 = High 3 = Medium 4 = Low
5. SYSTEM NAME/TITLE: Remove Unused Computer Cards
6. DESCRIPTION OF CHANGE: [X] See Attached
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
   Clean up for better maintenance/understanding.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [ ] DACS Software [X] Drawings
   [ ] Other/Name
9. ORIGINATOR: S.G. McKenzie Date: 3/21/94 Phone No.: 6-9837

CCB

10. DISPOSITION:
    [X] Approve [ ] Approve/Modify
    [ ] Reject [ ] Cancel
    [ ] Defer
11. WHEN TO IMPLEMENT CHANGE:
    [X] Upon completion of change
    [ ] Prepare change and wait for approval
    [ ] At next mandatory change
    ATP REQUIRED? [ ] Yes [X] No
12. APPROVAL: Robert Mendoza Date: 3/22/94
    [illegible] EG&G/LANL Date: 3/22/94
    Date: 3/22/94
13. ASSIGNED TO: A. Villalobos Phone No.: Planned Release Date: 3/31/94

14. SOLUTION COMMENTS: [ ] See Attached [ ] None
    Cards Removed
15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [X] None
16. CHANGE INSTALLED: Arturo Villalobos Date: 3/31/94 Phone No.
17. VERIFIED BY: [illegible] for Zeke Zwahlen per telecon Date: 3/31/94 Phone No. 373-9837
18. RELEASE VERSION: N/A
19. CLOSED BY: Guy Bunker Date: 4/5/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (2-28-94)

HYDROGEN MITIGATION TEST PROJECT
System Change Request (Continuation Sheet)

ORIGINAL

SCR No.: 323

Sheet 2 of 2

[X] Description [ ] Justification [ ] Solution Comments [ ] Software Affected

Remove the following unused cards:

Station 1
Slot 10 3Com Eth

Station 2
Slot 3 3Com Eth (Verify not jumpered/connected to slot 10 3Com Eth Card) - JSP -

Station 4
Slot 10 3Com Eth

These cards are vestigial & superfluous JSP -

Form #: HMTP-SCRCS-1 (1-25-94)

HYDROGEN MITIGATION TEST PROJECT

System Change Request

SCR No.: 324

Sheet 1 of 41

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Temporary Data Logger for Tank Bottom Thermocouples
2. VERSION/REVISION: N/A
3. SCR TYPE AND REQUESTED COMPLETION DATE: [✓] Development [ ] Problem Report [ ] Enhancement [ ] Other DATE: 4-29-94
4. SUBMITTER'S PRIORITY: [1] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: INSTALL/REMOVE TEMPORARY DATA LOGGER FOR TANK BOTTOM THERMOCOUPLES
6. DESCRIPTION OF CHANGE: [ ] See Attached

   Install a temporary data logger in the 241-SY-271 instrument building to record 15 tank bottom thermocouples (1,2,3,4,5,8,10,12,13,14,18,19,20, 23 and 24) to .01°F resolution for jet impingement tests. A computer in the DACS I trailer will be connected to the data logger via an existing coax cable. Remove all data logger hardware at the completion of the jet impingement tests.
7. JUSTIFICATION FOR CHANGE: [ ] See Attached DACS currently records the tank bottom thermocouples to only °F resolution. Jet impingement testing requires at least .1°F resolution, per PNL.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED: [ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [ ] DACS Software [✓] Drawings — No Dwgs affected 6-1-94

   [ ] Other/Name
9. ORIGINATOR: RW Truitt Date: 3/22/94 Phone No.: 376-2590

CCB

10. DISPOSITION: [✓] Approve [ ] Approve/Modify [ ] Reject [ ] Cancel [ ] Defer

    WHEN TO IMPLEMENT CHANGE: [✓] Upon completion of change [ ] Prepare change and wait for approval [ ] At next mandatory change

    ATP REQUIRED? [✓] Yes [ ] No

    USQ SCREEN? [ ] Yes [✓] No
11. APPROVAL: [signature] Date: 3/22/94

    [signature] Date: 3/22/94

    [signature] EG&G/LANL Date: 3/22/94
12. ASSIGNED TO: R.W Truitt Phone No.: 376-2590 Planned Release Date: 3-25-94

3.

13. SOLUTION COMMENTS: [ ] See Attached [ ] None

    ATP-069

    ECN-608351 (L)
14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
15. COMPLETED: [signature] Date: 6/1/94 Phone No. 376-2590

4.

16. VERIFIED BY: [signature] Date: 6/1/94 Phone No. 376-2590
17. RELEASE VERSION: N/A
18. CLOSED BY: [signature] Date: 6/1/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (1-25-94)

Software Description
TANKTMPS

1. Description

TANKTMPS is an executable software program written to obtain data from SY-101 thermocouples during the jet impingement test. The program acquires data from up to 32 Type J thermocouples connected to a remote instrument at 30-second intervals and stores the data to disk for later retrieval and analysis.

2. System requirements

2.1 Hardware

2.1.1 Personal computer, MS-DOS based with ISA expansion slots. The software was designed and tested on an Action Instruments VU-PAC industrial computer, with an Intel 486DX/33 processor, 8 MB RAM, and a 340 MB hard drive. Approximately 60 KB of free disk space is required for each data file.

2.1.2 HPIB interface card, Hewlett-Packard HP82335B, with Windows and DOS command library. The interface card must be configured to use Select Code 7.

2.1.3 VXI mainframe, Hewlett-Packard 75000 Series B mainframe with E1326B internal 5-1/2 digit voltmeter and HP E1347 Thermocouple/Relay mux (maximum of 2 mux cards supported). The mainframe/voltmeter must be set to an address of 903, with the mux cards set to logical addresses of 25 and 26.

2.2 Software required for operation

2.2.1 Microsoft MS-DOS 5.0. The program should run on Compaq DOS 3.31 and MS-DOS 6.x, but has been tested only with MS-DOS 5.0.

2.2.2 Microsoft Windows Version 3.1.

2.2.3 INST_TAG.ID - ASCII text file containing the thermocouple channel tag numbers. This file must be in the same directory as TANKTMPS.EXE.

2.2.4 TANKTMPS.EXE - the executable version of the program described in this document. This file may be placed in any directory on the C: drive.

2.2.5 VBRUN200.DLL - run-time library supplied with Visual Basic 2.0 (see section 2.3.1). This file should be installed in the \WINDOWS or \WINDOWS\SYSTEM directory of the control computer.

2.2.6 MHAS200.VBX (run-time version) - Custom assembly language routine supplied with VBTOOLS (see section 2.3.2). This file should be installed in the \WINDOWS or \WINDOWS\SYSTEM directory of the control computer. It may also be installed in the directory containing TANKTMPS.EXE.

2.2.7 HPIB.DLL - HPIB function library supplied with HP 82335B interface card. This file should be installed in the \WINDOWS or \WINDOWS\SYSTEM directory of the control computer.

2.2.8 SHARE.EXE - supplied with MS-DOS 5.0. While not absolutely required for operation, use of SHARE is highly recommended. SHARE allows the file locking features of Visual Basic to prevent inadvertent operations on data files that TANKTMPS may have open. If used, SHARE must be executed before starting Windows.

2.2.9 HPIB INTERACTIVE TOOLS - Supplied with the HP 82335B interface card. Not absolutely required, but highly recommended. This software toolkit allows closing the HPIB interface card if a fatal program error leaves it open accidentally, thus permitting restart of TANKTMPS without shutting off the control computer.

2.3 Software required for code development/modification

2.3.1 Microsoft Visual Basic For Windows Version 2.0

2.3.2 MicroHelp VBTools Version 2.5. The developer's version of assembly language module MHAS200.VBX from VBTools is required for program modification.

2.3.3 Program modules TANKTMPS.MAK, MAINFORM.FRM, SETTIME.FRM, ERRHNDL.BAS, GLOBAL.BAS, and ROCHPIB.BAS. These modules are the source code files for TANKTMPS.

3. Program Use

3.1 Precautions

3.1.1 TANKTMPS opens the data file when data collection is started and holds it open until 240 data points (approx. 2 hours' worth) have been collected, or the user stops data collection. File operations or system errors that affect the open data file can, therefore, cause a loss of up to 2 hours worth of data. Use of SHARE (see section 2.2.8 above) is highly recommended to reduce the possibility of data corruption.

3.1.2 Data is stored in sequentially numbered files on the control computer's hard disk. Proper system operation is not guaranteed if more than 99 data files (198 hours' worth) are allowed to accumulate in the data directory.

3.1.3 Each time data acquisition is started, the file numbering sequence starts over. TANKTMPS checks to see if the first data file already exists before beginning to collect data, and, if the file exists, prompts the user to remove old data files before allowing data collection to start. All data files must be removed from the hard disk at once -- otherwise new data may be appended onto the old data files.

3.1.4 For flexibility, the thermocouple ID tags are stored in a text file, INST_TAG.ID. If this file is not present at run-time, the user will be given the option to provide the tag ID file or run the program without instrument tags on the display.

3.2 Operator Instructions

3.2.1 Starting program execution

Operation of TANKTMPS is very simple. With Windows running and all of the hardware specified in section 2.1 operating, the user double-clicks on the TANKTMPS icon. The HPIB interface is opened and the main screen is displayed. If the instrument tag file INST_TAG.ID is not found, the user will be given the option of proceeding without use of instrument tags.

3.2.2 Starting data collection

Clicking on the Start button on the main TANKTMPS screen begins data collection. A data directory and the first data file are created. Data collection will start and will continue at 30-second intervals until stopped by the operator. The display will update each time a data sample is obtained. Every 240 data points, the data file is closed and a new data file is automatically started.

3.2.3 Stopping data collection

Data collection is stopped by clicking the Stop button on the main TANKTMPS screen. All open data files are closed and the Start button is enabled for future data collection. The HPIB interface remains open.

3.2.4 Exiting the program

Clicking on the Exit Program button will close all open data files, close the HPIB interface, and exit back to Windows.

3.3 Data Format

Data is stored in the C:\TANKTEMP directory on the control computer's hard drive. The data directory will be automatically created if it doesn't exist when data collection is started. Data files (automatically created as needed) are named TBTEMPxx.CSV, where xx is a sequence number (01 through 99). A warning is generated if the first data file (TBTEMP01.CSV) exists when data collection is started (see precaution 3.1.3 above). Each data file stores a maximum of 240 data records (samples). Data files are in ASCII format. Each data record (line) consists of the date, time, and one data point for each thermocouple channel. Data values within each record are separated by commas. Test data in this format has been successfully imported into Microsoft Excel V4.0 and Quattro Pro/Windows V5.0 without difficulty.

4. Programmer Information

4.1 General Information

TANKTMPS is written using Microsoft Visual Basic Version 2.0. A custom control, MHAS200.VBX, from Microhelp's VBTools, Version 2.5, is used to provide assembly language routines for determining status of the data directory and data files. The directory and data file information could have been obtained without use of the custom controls, but much additional time and coding would have been required.

The programmer information contained in this section assumes the user is familiar with Visual Basic and the use of custom controls.

4.2 Module Descriptions

The TANKTMPS source code is heavily commented, and no detailed description will be provided other than the module descriptions below.

The TANKTMPS source code consists of the following Visual Basic modules and custom controls:

TANKTMPS.MAK - The main source code project file for TANKTMPS.

MAINFORM.FRM - The startup form and primary data display. The number of data channels can be easily changed by modifying the value of variable NumChan in the MAINFORM_LOAD routine in this module and re-compiling. Valid values are 1 through 32. All displays and data acquisition routines will automatically reflect the new number of channels. However, the instrument tag file INST_TAG.ID may need to be manually updated if the number of channels is increased.

SETTIME.FRM - A secondary form used by the operator for setting the data collection interval. This feature is "hidden" from the normal display because it was added to assist program debugging. If needed, SETTIME is executed by double-clicking on the words "All Temperatures in Deg. F" on the main data screen.

ERRHNDL.BAS - An error-handling routine accessed by ROCHPIB.BAS in case of HPIB errors.

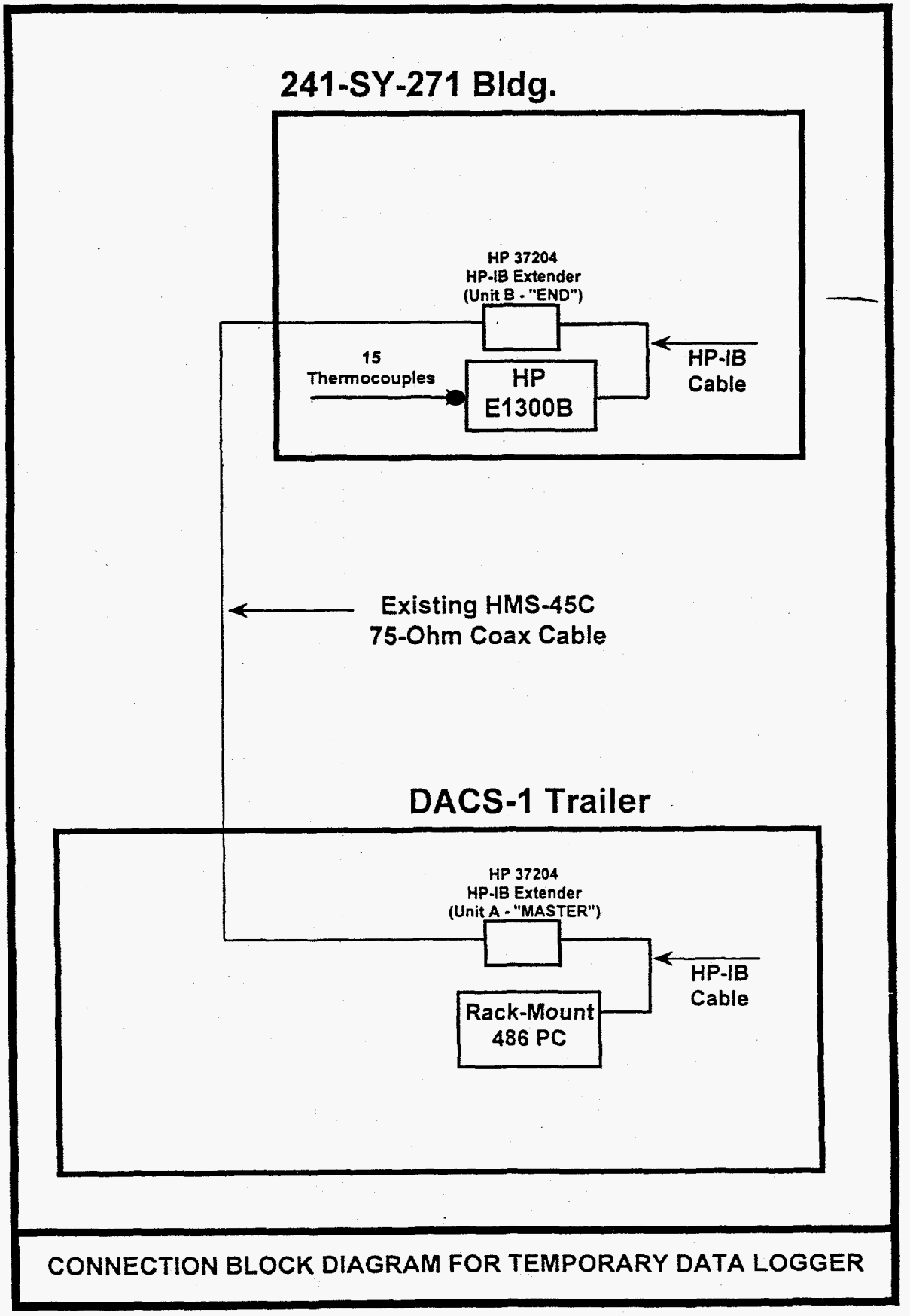
GLOBAL.BAS - Global variable and function declarations. This module is a carry-over from an earlier HPIB interfacing program that was developed using Visual Basic V1.0. Although Visual Basic V2.0 does not require use of a GLOBAL.BAS file, the file was included as-is to shorten program development time. Function declarations supplied by Hewlett-Packard with the HPIB interface card and VBTools are included in this module.

ROCHPIB.BAS - A general-purpose HPIB instrument addressing module. Originally written for use on another project, this

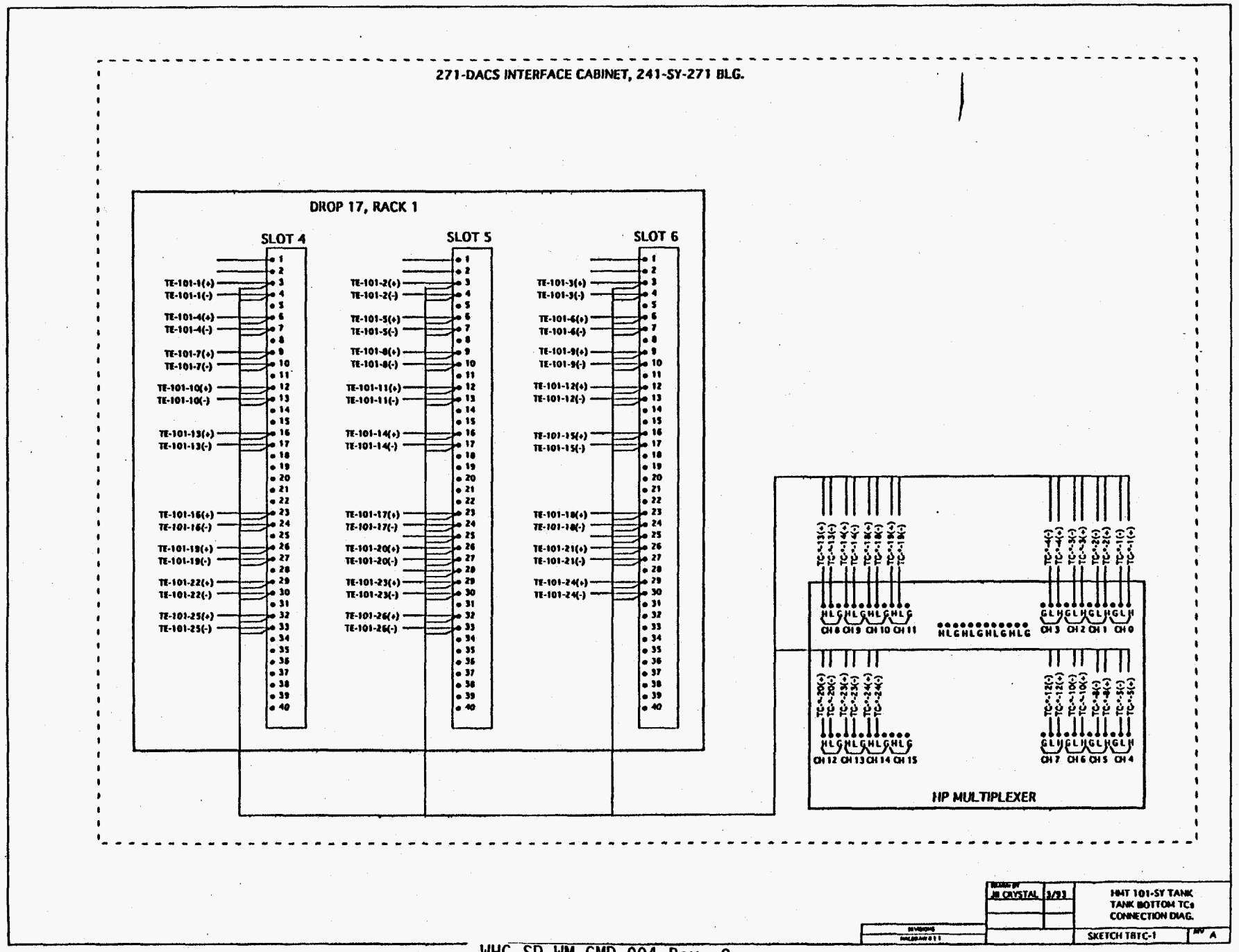
module was used to reduce program development time for TANKTMPS.

INST_TAGS.ID - An ASCII text file that contains the instrument tag numbers for each data channel. One instrument tag number appears on each line of the data file. If there are fewer tag numbers in this file than the number of data channels being monitored, an error is generated when the program is loaded. Extra tag numbers are ignored. If the file cannot be located by TANKTMPS, the operator is given an option to skip use of tag numbers.

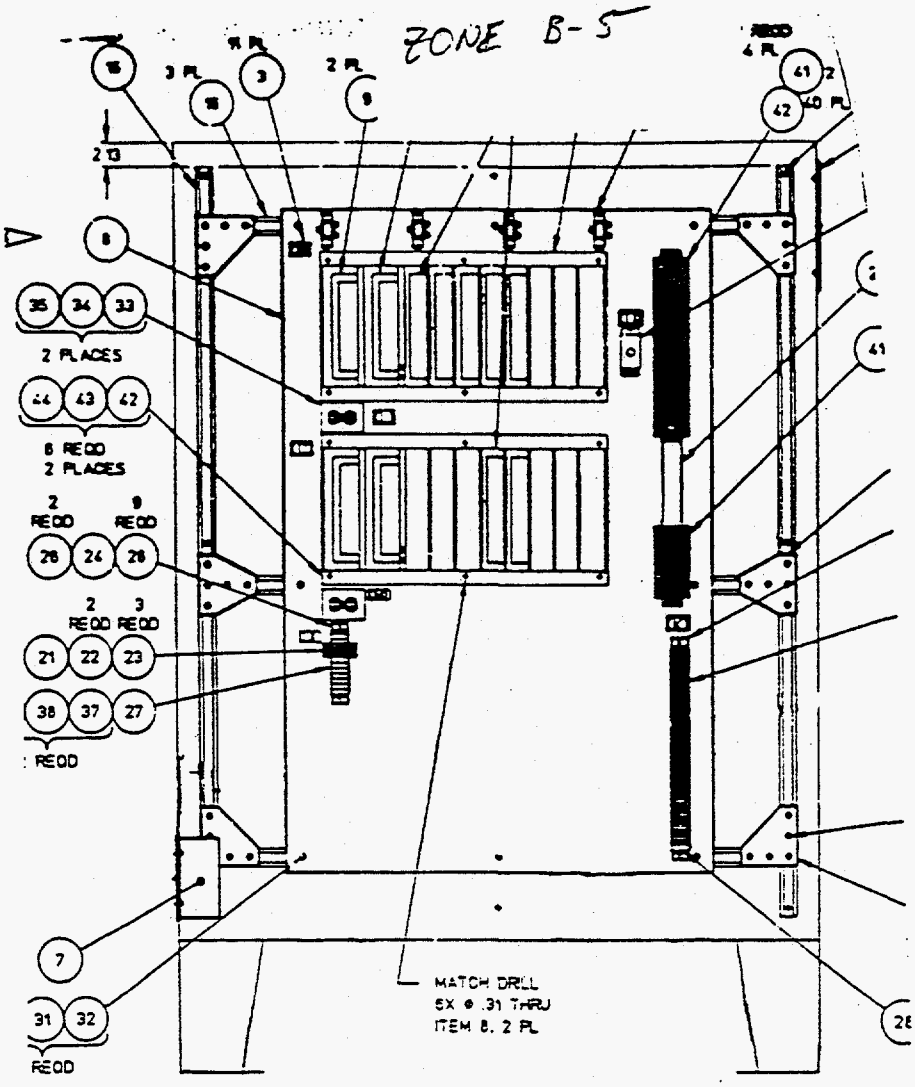
MHAS200.VBX - a custom control file supplied by Microhelp's VBTools. Three assemble routines from this file are used by TANKTMPS. MhDirectoryExists, which returns a value of TRUE if the directory specified in the argument exists, is used to determine if the data directory exists or needs to be created. MhFileExists, which returns a value of TRUE if the file specified in the argument exists, is used to check for existence of an old data file. MhExePath returns the directory of the calling executable file (TANKTMPS.EXE, in this case), and is used to tell TANKTMPS where to find the tag file INST_TAG.ID. VBTools contains two versions of MHAS200.VBX. A development version, which can only be used by licensed VBTools users, is required for program development. A run-time version which may be distributed with application executable files is also supplied. TANKTMPS.EXE will must find a copy of MHAS200.VBX in its own directory, on the DOS path, in the \WINDOWS directory, or in the \WINDOWS\SYSTEM directory.



CONNECTION BLOCK DIAGRAM FOR TEMPORARY DATA LOGGER

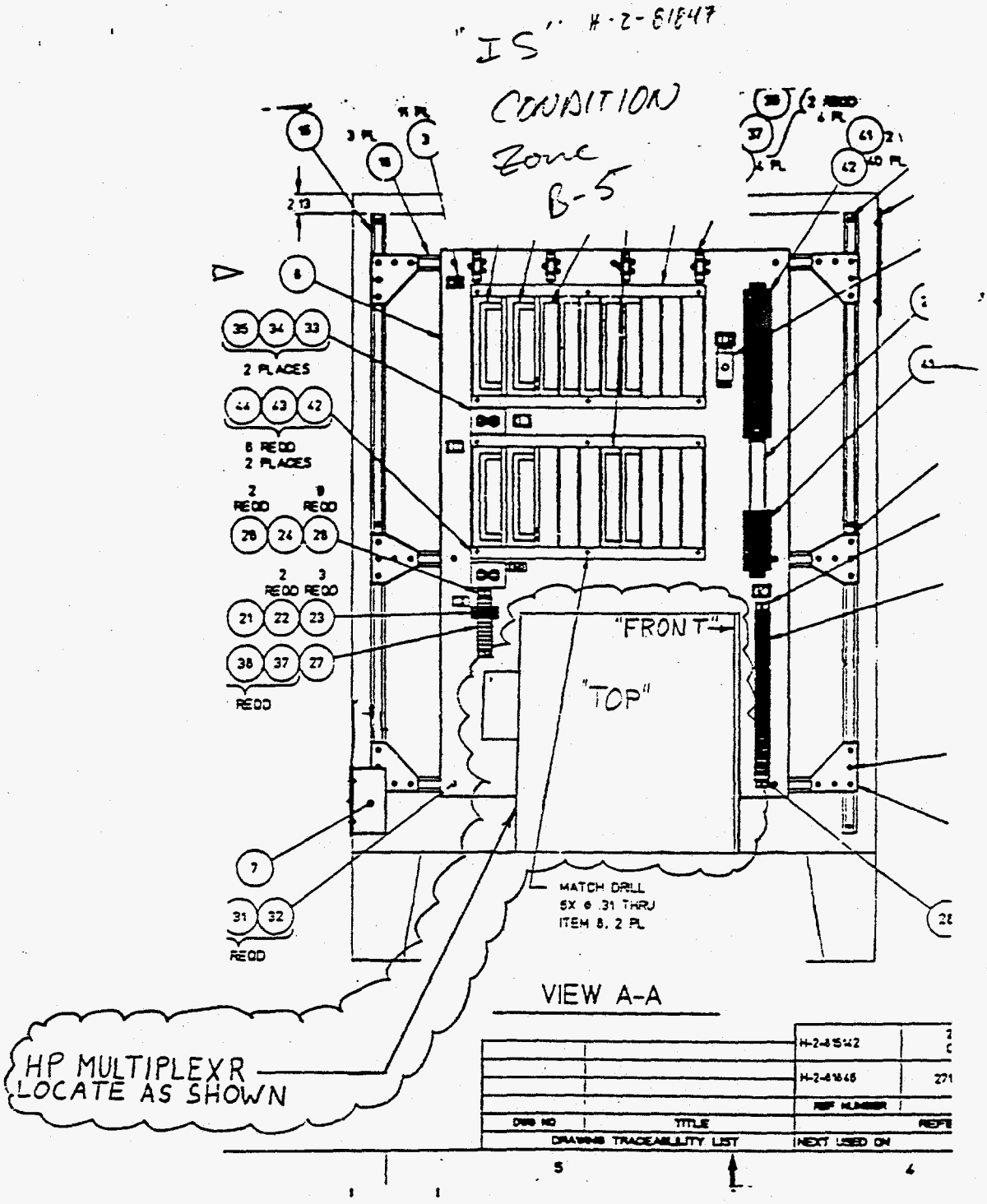

271-DACS INTERFACE CABINET, 241-SY-271 BLG.
DROP 17, RACK 1
SLOT 4
SLOT 5
SLOT 6
TE-101-1(+)
TE-101-1(-)
TE-101-4(+)
TE-101-4(-)
TE-101-7(+)
TE-101-7(-)
TE-101-10(+)
TE-101-10(-)
TE-101-13(+)
TE-101-13(-)
TE-101-16(+)
TE-101-16(-)
TE-101-19(+)
TE-101-19(-)
TE-101-22(+)
TE-101-22(-)
TE-101-25(+)
TE-101-25(-)
TE-101-2(+)
TE-101-2(-)
TE-101-5(+)
TE-101-5(-)
TE-101-8(+)
TE-101-8(-)
TE-101-11(+)
TE-101-11(-)
TE-101-14(+)
TE-101-14(-)
TE-101-17(+)
TE-101-17(-)
TE-101-20(+)
TE-101-20(-)
TE-101-23(+)
TE-101-23(-)
TE-101-26(+)
TE-101-26(-)
TE-101-3(+)
TE-101-3(-)
TE-101-6(+)
TE-101-6(-)
TE-101-9(+)
TE-101-9(-)
TE-101-12(+)
TE-101-12(-)
TE-101-15(+)
TE-101-15(-)
TE-101-18(+)
TE-101-18(-)
TE-101-21(+)
TE-101-21(-)
TE-101-24(+)
TE-101-24(-)
HLGHLGHLGHLG
CH 8 CH 9 CH 10 CH 11
GLHGLHGLHGLH
CH 3 CH 2 CH 1 CH 0
HLGHLGHLGHLG
CH 12 CH 13 CH 14 CH 15
GLHGLHGLHGLH
CH 7 CH 6 CH 5 CH 4
HLGHLGHLGHLG
HP MULTIPLEXER
JB CRYSTAL 3/93
H4T 101-SY TANK
TANK BOTTOM TCs
CONNECTION DIAG.
SKETCH T8TC-1
REV A

WAS CONDITION ZONE B-5



VIEW A-A

		H-2-81542
		H-2-81846
		REF NUMBER
DWG NO	TITLE	REFE
DRAWING TRACEABILITY LIST		NEXT USED ON

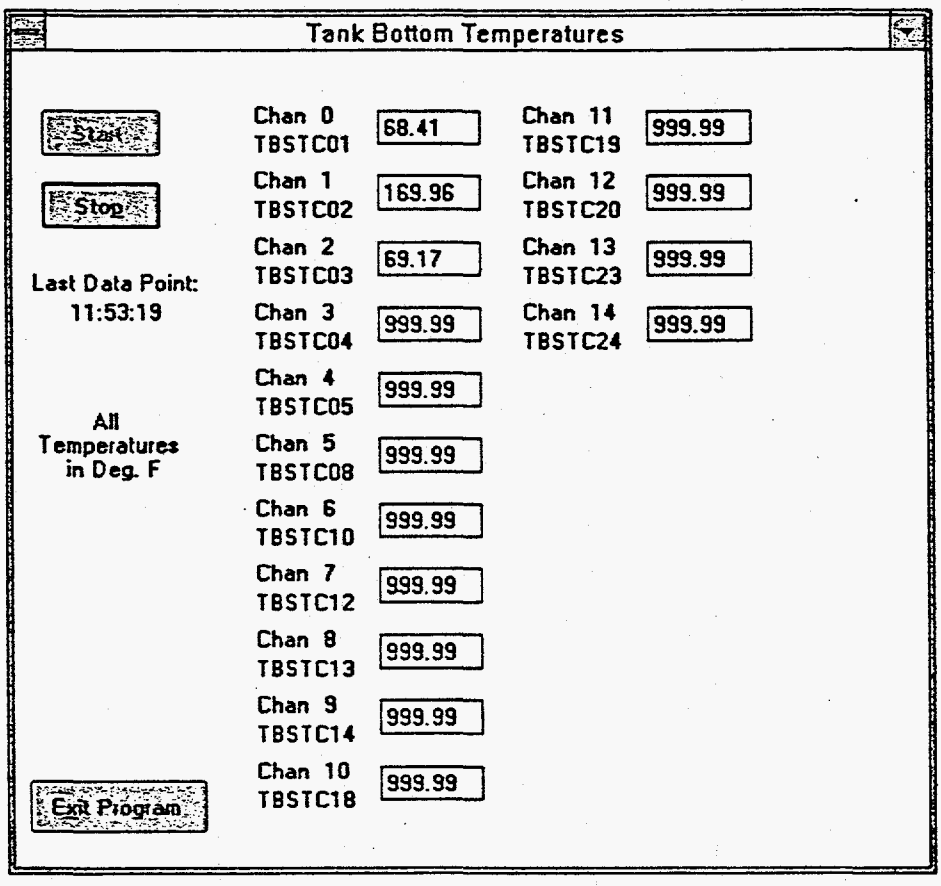


Installation Notes:

1. Rest multiplexer in bottom of cabinet as shown.

2. Plug HP Multiplexer into available receptacle, RCPT2.

3. Use existing coaxial cable in bottom-left of cabinet to connect multiplexer communications to DACS.


Tank Bottom Temperatures
Start
Stop
Last Data Point:
11:53:19
All
Temperatures
in Deg. F
Exit Program
Chan 0
TBSTC01
68.41
Chan 1
TBSTC02
169.96
Chan 2
TBSTC03
69.17
Chan 3
TBSTC04
999.99
Chan 4
TBSTC05
999.99
Chan 5
TBSTC08
999.99
Chan 6
TBSTC10
999.99
Chan 7
TBSTC12
999.99
Chan 8
TBSTC13
999.99
Chan 9
TBSTC14
999.99
Chan 10
TBSTC18
999.99
Chan 11
TBSTC19
999.99
Chan 12
TBSTC20
999.99
Chan 13
TBSTC23
999.99
Chan 14
TBSTC24
999.99

MAINFORM.FRM - 1

```
'SION 2.00
Begin Form mainform
   Caption          =   "Tank Bottom Temperatures"
   Height           =   7125
   Icon             =   (Icon)
   Left             =   1665
   LinkTopic        =   "Form1"
   MaxButton        =   0   'False
   ScaleHeight      =   6720
   ScaleWidth       =   5475
   Top              =   15
   Width            =   5595
   Begin CommandButton CmdExit
      Caption          =   "E&xit Program"
      Height           =   435
      Left             =   120
      TabIndex         =   7
      Top              =   6000
      Width            =   1455
   End
   Begin Timer TmrDataTimer
      Enabled          =   0   'False
      Interval         =   30000
      Left             =   300
      Top              =   4680
   End
   Begin TextBox TxtData
      Alignment        =   1  'Right Justify
      Height           =   285
      Index            =   0
      Left             =   3000
      TabIndex         =   3
      Top              =   480
      Visible          =   0   'False
      Width            =   855
   End
   Begin CommandButton CmdStop
      Caption          =   "Sto&p"
      Enabled          =   0   'False
      Height           =   375
      Left             =   240
      TabIndex         =   1
      Top              =   1080
      Width            =   975
   End
```

```
Begin CommandButton CmdStart
   Caption          =   "&Start"
   Height           =   375
   Left             =   240
   TabIndex         =   0
   Top              =   480
   Width            =   975
End
Begin Label LblChan
   Height           =   195
   Index            =   0
   Left             =   1980
   TabIndex         =   8
   Top              =   660
   Visible          =   0   'False
   Width            =   915
End
Begin Label LblTimeDisp
   Alignment        =   2   'Center
   Height           =   195
   Left             =   120
   TabIndex         =   6
   Top              =   2040
   Width            =   1455
End
Begin Label LblLastPoint
   Alignment        =   2   'Center
   Caption          =   "Last Data Point:"
   Height           =   195
   Left             =   120
   TabIndex         =   5
   Top              =   1800
   Width            =   1455
End
Begin Label LblTempDesc
   Alignment        =   2   'Center
   Caption          =   "All Temperatures in Deg. F"
   Height           =   735
   Left             =   180
   TabIndex         =   4
   Top              =   2940
   Width            =   1215
End
Begin Label LblDataLbl
   Caption          =   "Chan "
   Height           =   195
   Index            =   0
```

```
      Left            =   1980
      TabIndex        =   2
      Top             =   420
      Visible         =   0   'False
      Width           =   855
   End
End

SETTIME.FRM - 1

VERSION 2.00
Begin Form SetTime
   Caption         =   "Set Time Interval"
   ControlBox      =   0   'False
   Height          =   2085
   Left            =   2400
   LinkTopic       =   "Form1"
   MaxButton       =   0   'False
   MinButton       =   0   'False
   ScaleHeight     =   1680
   ScaleWidth      =   3120
   Top             =   1530
   Width           =   3240
   Begin CommandButton CmdCancel
      Caption         =   "&Cancel"
      Height          =   315
      Left            =   1800
      TabIndex        =   4
      Top             =   1140
      Width           =   795
   End
   Begin CommandButton CmdOK
      Caption         =   "&OK"
      Height          =   315
      Left            =   540
      TabIndex        =   3
      Top             =   1140
      Width           =   795
   End
   Begin TextBox TxtNewTime
      Height          =   315
      Left            =   1920
      TabIndex        =   0
      Top             =   240
      Width           =   555
   End
   Begin Label LblMaxTime
```

```
      Alignment          =    2  'Center
      Caption            =    "(Max 60 seconds)"
      Height             =    195
      Left               =    960
      TabIndex           =    2
      Top                =    720
      Width              =    1635
   End
   Begin Label LblNewTime
      Alignment          =    2  'Center
      Caption            =    "Time Interval (Sec)"
      Height             =    435
      Left               =    540
      TabIndex           =    1
      Top                =    180
      Width              =    1335
   End
End
```

ename: MAINFORM.FRM

```
 1 Dim Tags() As String
 2
 3 Sub CmdExit_Click ()
 4
 5     'Ensure data collection stopped and data file closed
 6     CmdStop_Click
 7
 8     'Close HPIB interface and end program execution
 9     If Not Office Then EndHPIB False.
10     End
11
12 End Sub
13
14 Sub CmdStart_Click ()
15
16     DataFileNum = 1
17     DataDir = "C:\TANKTEMP"
18     DataFileName = DataDir + "\TBTEMP" + Format$(DataFileNum, "00") + ".C
19
20     'Check for existing data directory and data files
21     If Not MhDirectoryExists(DataDir) Then
22         MkDir ("C:\TANKTEMP")  'Create new data directory
23     Else
24         If MhFileExists("C:\TANKTEMP\TBTEMP01.CSV") Then
25             DataExists   'Warn user of existing data files
26             Exit Sub     'and exit subroutine
27         End If
28     End If
29     Open DataFileName For Append Lock Read Write As #1
30
31     'Initialize data file full counter
32     StartNewFile = 1
33
34     'Take first set of data and start timer
35     TmrDataTimer_Timer
36     TmrDataTimer.Enabled = True
37     CmdStop.Enabled = True
38     CmdStart.Enabled = False
39
40 End Sub
41
42 Sub CmdStop_Click ()
43
44     'Stops data collection and closes data files
```

```
45
46      Dim Dummy As Integer
47
48      TmrDataTimer.Enabled = False
49      Close
50      StartNewFile = 1
51      DataFileNum = 1
52      CmdStart.Enabled = True
53      CmdStop.Enabled = False
54
55      'Clear data display
56      For Dummy = 0 To NumChan - 1
57          TxtData(Dummy).Text = ""
58      Next Dummy
59      TxtTimeDisp = ""
60      Exit Sub
61
62  End Sub
63
64  Sub DataExists ()
65
66      'Warns user that datafiles already exist
67
68      'Create warning message
69      BoxTitle$ = "OLD DATA EXISTS!"
70      BoxMsg$ = "An old data file C:\TANKTEMP\TBTEMP01.CSV exists!  "
71      BoxMsg$ = BoxMsg$ + "Use File Manager to copy all data files to anoth
72      BoxMsg$ = BoxMsg$ + "disk or data directory, then re-start data colle
73      MsgBox BoxMsg$, 16, BoxTitle$
74
75  End Sub
76
77  Sub Form_Load ()
78
79      Dim Dummy As Integer, LblDataTop As Integer, TxtDataTop As Integer
80      Dim LblChanTop As Integer, LblDataLeft As Integer, TxtDataLeft As Int
81      Dim LblChanLeft As Integer, TopIncr As Integer, LeftIncr As Integer
82      Dim UseTag As Integer
83
84      NumChan = 15 'Number of channels to scan - user set
85      Office = True  'Assume HPIB Card is not installed in host
86
87      ReDim Tags(NumChan) As String
88
89      'Determine if instrument tag ID file is available
90      Select Case TagFileExist()
91          Case 0   'Instrument tag file exists
```

```
92              UseTag = True
93              ReadTags
94          Case 3    'Abort requested
95              End
96          Case 4    'Tag file wanted, retry requested
97              UseTag = TagFileExist()
98              If UseTag <> 0 Then 'File can't be found
99                  Msg$ = "Instrument tag file can't be found." + Chr$(10) +
100                 Msg$ = Msg$ + "Program execution is terminating"
101                 MsgBox Msg$, 16, "FATAL ERROR!"
102                 End
103             End If
104         Case 5    'Tag file will not be used
105             UseTag = False
106     End Select
107
108     TopIncr = 540
109     LeftIncr = 2220
110
111     LblDataTop = LblDataLbl(0).Top + TopIncr
112     LblDataLeft = LblDataLbl(0).Left
113     TxtDataTop = TxtData(0).Top + TopIncr
114     TxtDataLeft = TxtData(0).Left
115     LblChanTop = LblChan(0).Top + TopIncr
116     LblChanLeft = LblChan(0).Left
117
118     'Adjust form size based on number of channels
119     If NumChan > 11 And NunChan < 23 Then
120         MainForm.Left = 825
121         MainForm.Width = 7605
122     End If
123     If NumChan > 22 Then
124         MainForm.Left = -15
125         MainForm.Width = 9615
126     End If
127
128     'Set up display
129     LblDataLbl(0).Visible = True
130     LblChan(0).Visible = True
131     TxtData(0).Visible = True
132     For Dummy = 1 To NumChan - 1
133         'Create data display elements
134         Load LblDataLbl(Dummy)
135         Load TxtData(Dummy)
136         Load LblChan(Dummy)
137
138         'Position data display elements
```

```
139         LblDataLbl(Dummy).Top = LblDataTop
140         LblDataLbl(Dummy).Left = LblDataLeft
141         TxtData(Dummy).Top = TxtDataTop
142         TxtData(Dummy).Left = TxtDataLeft
143         LblChan(Dummy).Top = LblChanTop
144         LblChan(Dummy).Left = LblChanLeft
145
146         LblDataTop = LblDataTop + TopIncr
147         TxtDataTop = TxtDataTop + TopIncr
148         LblChanTop = LblChanTop + TopIncr
149
150         If LblDataTop > 5940 Then  '1st data column complete
151             LblDataTop = 420
152             TxtDataTop = 480
153             LblChanTop = 660
154             LblDataLeft = LblDataLeft + LeftIncr
155             TxtDataLeft = TxtDataLeft + LeftIncr
156             LblChanLeft = LblChanLeft + LeftIncr
157         End If
158     Next Dummy
159
160     'Fill in display elements and make visible
161     For Dummy = 0 To NumChan - 1
162         LblDataLbl(Dummy).Caption = "Chan " + Str$(Dummy)
163         If UseTag Then LblChan(Dummy).Caption = Tags(Dummy)
164         LblDataLbl(Dummy).Visible = True
165         TxtData(Dummy).Visible = True
166         LblChan(Dummy).Visible = True
167     Next Dummy
168
169     'Initialize HPIB Interface
170     StartHPIB False  'Start HPIB interface without status messages
171
172 End Sub
173
174 Sub LblTempDesc_DblClick ()
175
176     'Allows changing the data recording time interval
177
178     'Ensure data collection is not in progress
179     If MainForm.CmdStop.Enabled Then Exit Sub
180
181     SetTime.Show
182
183 End Sub
184
185 Sub NewFile ()
```

```
186
187     'Closes data file and opens new file for data output
188     Close
189     DataFileNum = DataFileNum + 1
190     DataFileName = DataDir + "\TBTEMP" + Format$(DataFileNum, "00") + ".C
191     Open DataFileName For Append Lock Read Write As #1
192     StartNewFile = 1
193
194 End Sub
195
196 Sub ReadTags ()
197
198     'Reads in tag names from file
199     Dim Dummy As Integer, ExePath As String
200     ExePath = MhExePath$(hWnd)
201     Open ExePath + "\INST_TAG.ID" For Input Lock Read Write As #1
202     On Error GoTo NotEnoughTags
203     For Dummy = 0 To NumChan
204         Input #1, Tags(Dummy)
205     Next Dummy
206     Close
207     Exit Sub
208
209 NotEnoughTags:
210
211     Msg$ = "The number of instrument tags in " + ExePath + "\INST_TAG.ID
212     Msg$ = Msg$ + "does not match the number of data channels specified.
213     Msg$ = Msg$ + "will terminate"
214     MsgBox Msg$, 16, "FATAL ERROR"
215     On Error GoTo 0
216     End
217     Resume Next
218
219 End Sub
220
221 Function TagFileExist () As Integer
222
223     'Determines if instrument tag file exists or should be used
224
225     Dim ExePath As String, Dummy As Integer
226     ExePath = MhExePath$(hWnd)
227     If MhFileExists(ExePath + "\INST_TAG.ID") Then   'Instrument tag file
228         TagFileExist = 0
229     Else   'Tag file not found
230         Msg$ = "Instrument tag file " + ExePath + "\INST_TAG.ID not found
231         Msg$ = Msg$ + Chr$(10) + Chr$(10)
232         Msg$ = Msg$ + "Select IGNORE if tag file is not needed"
```

```
233         Msg$ = Msg$ + Chr$(10) + Chr$(10)
234         Msg$ = Msg$ + "Select RETRY after verifying tag file is in approp
235         Msg$ = Msg$ + Chr$(10) + Chr$(10)
236         Msg$ = Msg$ + "Select ABORT to terminate execution"
237         TagFileExist = MsgBox(Msg$, 2 + 16, MsgBoxTitle$)
238     End If
239
240 End Function
241
242 Sub TmrDataTimer_Timer ()
243
244     ReDim TempData(NumChan - 1) As Single
245     Dim Dummy As Integer, FirstChan As Integer, LastChan As Integer
246
247     'Read VXI data channels
248     FirstChan = 100
249     If NumChan <= 16 Then LastChan = 100 + NumChan - 1
250     If NumChan > 16 Then LastChan = 200 + (NumChan - 16) - 1
251     ReadTemp FirstChan, LastChan
252
253     'Store data channel outputs in temporary array,
254     ' then display and store on disk
255     Print #1, Date$; ","; Time$; ",";
256     For Dummy = 0 To NumChan - 1
257         If Office = True Then    'Generate test data
258             Randomize
259             TempData(Dummy) = 200 + Rnd * 15
260         Else                     'Use real data from VXI
261             TempData(Dummy) = TCIn(Dummy) * 1.8 + 32
262             If (TempData(Dummy) < 0) Or (TempData(Dummy) > 500) Then
263                 TempData(Dummy) = 999.99
264             End If
265         End If
266         TxtData(Dummy) = Format$(TempData(Dummy), "###.00")
267         Print #1, Format$(TempData(Dummy), "###.00"); ",";
268     Next Dummy
269     Print #1,  'Terminate output file record
270
271     LblTimeDisp.Caption = Time$
272
273     'Increment data file length counter
274     StartNewFile = StartNewFile + 1
275     If StartNewFile > 240 Then NewFile
276     DoEvents  'Allows Windows to execute other tasks until next
277               'timer interval
278
279 End Sub
```

```
280


Filename: SETTIME.FRM
281 Sub CmdCancel_Click ()
282
283     Unload SetTime
284
285 End Sub
286
287 Sub CmdOK_Click ()
288
289     Dim NewTime As Long
290
291     'Get new time interval
292     NewTime = CLng(TxtNewTime.Text)
293     If (NewTime > 0) And NewTime < 61 Then
294         MainForm.TmrDataTimer.Interval = 1000 * NewTime
295         Unload SetTime
296     Else  'Invalid time was entered
297         MBoxTitle$ = "INVALID TIME!"
298         MBoxMsg$ = "Time interval must be between 0 and 60 seconds.  "
299         MBoxMsg$ = MBoxMsg$ + "Try again"
300         MsgBox MBoxMsg$, 16, MBoxTitle$
301         TxtNewTime.Text = ""
302         TxtNewTime.SetFocus
303     End If
304
305 End Sub
306


Filename: ERRHNDL.BAS
307 'General Error Handling Module
308 'Required by use of ROCHPIB.BAS
309
310 Sub HpibErr (ErrNumber As Integer)
311
312     Dim Dummy As Integer
313
314     Select Case ErrNumber
315         Case ESEL
316             Office = True  'Assumes HPIB card not installed
317         Case EOPEN
318             MsgBox HpibErrStr$(ErrNumber), 16, "HPIB Error!"
319             'If Dummy = 1 Then End  'Unable to open HPIB card, terminate
320             End
```

```
321         Case Else
322             If Office = True Then Exit Sub
323             MsgBox HpibErrStr$(ErrNumber), 16, "HPIB Error!"
324             'If Dummy = 1 Then End  'Fatal HPIB error occurred, terminate
325             End
326     End Select
327
328 End Sub
329
330 Function HpibErrStr$ (errorcode As Integer)
331
332     'Error string handler (supplied with HPIB interface card)
333     Select Case errorcode
334     Case NOERR
335         Msg$ = " No error "
336     Case EUNKNOWN
337         Msg$ = " Unknown error "
338     Case ESEL
339         Msg$ = " Invalid select code or device address "
340     Case ERANGE
341         Msg$ = " Value out of range "
342     Case ETIME
343         Msg$ = " Timeout "
344     Case ECTRL
345         Msg$ = " HP-IB must be controller "
346     Case EPASS
347         Msg$ = " Pass control not permitted "
348     Case EFILE
349         Msg$ = " File I/O Error "
350     Case ENUMB
351         Msg$ = " Invalid Number "
352     Case EADDR
353         Msg$ = " Improper addressing "
354     Case EOPEN
355         Msg$ = " Cannot Open This Card "
356     Case ENOOPEN
357         Msg$ = " Card is not open "
358     Case ECLOSE
359         Msg$ = " Cannot close card "
360     Case EHANDLE
361         Msg$ = " Invalid handle for this ISC "
362     Case Else
363         Msg$ = " What? "
364 End Select
365 HpibErrStr$ = Msg$
366
367 End Function
```

```
368

Filename: GLOBAL.BAS
369 Global NumChan As Integer           'Number of data channels
370 Global Office As Integer            'Flag for HPIB card installed
371 Global TCIn() As Single             'T/C input data array
372 Global DataDir As String            'Data directory location on hard disk
373 Global DataFileName As String       'Data file name
374 Global StartNewFile As Integer      'Counter for setting data file length
375 Global DataFileNum As Integer       'Data file number counter
376 Global OpenAttempt As Integer       'Number of attempts to open HPIB card
377
378 'HPIB.DLL Access - DLL supplied by HP with 82335B HPIB card
379
380 Declare Function HpibAbort Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&) As I
381 Declare Function HpibClear Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&) As I
382 Declare Function HpibClose Lib "HPIB.DLL" (ByVal hwnd%) As Integer
383 Declare Function HpibControl Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, By
384 Declare Function HpibEnter Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, fVar
385 Declare Function HpibEnterA Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, fVa
386 Declare Function HpibEnterab Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, fV
387 Declare Function HpibEnterb Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, fVa
388 Declare Function HpibEnterf Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, ByV
389 Declare Function HpibEnterS Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, ByV
390 Declare Function HpibEoi Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, ByVal
391 Declare Function HpibEol Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, ByVal
392
393 Declare Function HpibFastout Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, By
394 Declare Function HpibGetterm Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, IV
395 Declare Function HpibGetversion Lib "HPIB.DLL" () As Integer
396 Declare Function HpibLlockout Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&) A
397 Declare Function HpibLocal Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&) As I
398 Declare Function HpibMatch Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, ByVa
399
400 Declare Function HpibOpen Lib "HPIB.DLL" (ByVal LVar&, hHandle As Integer
401 Declare Function HpibOutput Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, ByV
402 Declare Function HpibOutputa Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, fV
403 Declare Function HpibOutputab Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, f
404 Declare Function HpibOutputb Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, fV
405 Declare Function HpibOutputf Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, By
406 Declare Function HpibOutputs Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, By
407
408 Declare Function HpibPpoll Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, IVar
409 Declare Function HpibPpollc Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, ByV
410 Declare Function HpibPpollu Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&) As
411 Declare Function HpibRemote Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&) As
```

```
412 Declare Function HpibReset Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&) As I
413 Declare Function HpibSend Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, ByVal
414
415 Declare Function HpibSpoll Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, IVar
416 Declare Function HpibStatus Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, ByV
417 Declare Function HpibTimeout Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, By
418 Declare Function HpibTrigger Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&) As
419
420 Declare Function HpibPassctl Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&) As
421 Declare Function HpibTakectl Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, By
422 Declare Function HpibRequest Lib "HPIB.DLL" (ByVal hwnd%, ByVal LVar&, By
423
424
425 Global Const NOERR = 0
426 Global Const EUNKNOWN = 1
427 Global Const ESEL = 2
428 Global Const ERANGE = 3
429 Global Const ETIME = 4
430 Global Const ECTRL = 5
431 Global Const EPASS = 6
432 Global Const ENUMB = 7
433 Global Const EADDR = 8
434 Global Const EFILE = 9
435 Global Const EOPEN = 10
436 Global Const ENOOPEN = 11
437 Global Const ECLOSE = 12
438 Global Const EHANDLE = 13
439
440 Global Const STATREM = 0
441 Global Const STATSRQ = 1
442 Global Const STATNDAC = 2
443 Global Const STATSC = 3
444 Global Const STATAC = 4
445 Global Const STATTALK = 5
446 Global Const STATLIST = 6
447 Global Const STATADDR = 7
448 Global Const STATATN = 8
449 Global Const STATADR = 9
450 Global Const STATDIO = 10
451 Global Const STATBUS = 11
452 Global Const STATCARD = 12
453
454 'Function declarations required for use of VBTools custom control MHAS200
455 Declare Function MhDirectoryExists% Lib "mhas200.vbx" (ByVal A$)
456 Declare Function MhFileExists% Lib "mhas200.vbx" (ByVal A$)
457 Declare Function MhExePath$ Lib "mhas200.vbx" (ByVal hwnd As Integer)
458
```

```
ename: ROCHPIB.BAS
459 '   HPIB Addressing Module
460 '   3/10/94  dac
461
462 ' Module Variable Definitions
463 '   ISC=Select Code
464 '   ADD_VM = Scanning voltmeter (VXI) secondary address
465 '   ErrNum = HPIB status returned from all HPIB calls
466 '   TIMEVAL = HPIB timeout value
467 '   hHpib = Handle returned when opening HPIB acess
468 '   MAXCHAR = Maximum number of characters in HPIB statement
469 '   MessLen = Length of message to be sent via HPIB to an instrument
470
471 ' User Instructions
472 '   User must provide an error handling routine named HpibErr that will b
473 '   called by this module if an HPIB error occurs.  HpibError expects to
474 '   the error number passed as an integer value in calling statement.
475
476 '   User must verify that the ISC and instrument addresses in the system
477 '   with the values specified below.
478
479 '   Use of the scanning voltmeter functions requires the user to add the
480 '   statements to the global definitions file:
481 '       Global TCIn() As Single  (required for Type K T/C's)
482
483 Dim ErrNum As Integer, hHpib As Integer, MessLen As Integer
484
485 ' Define module constants
486
487 Const ISC& = 7
488 Const ADD_VM& = ISC * 10000 + 903
489 Const TIMEVAL# = 3#
490 Const MAXCHAR% = 50
491
492
493
494 Sub EndHPIB (ByVal DispStatFlg As Integer)
495
496 '   Set DispStatFlg = TRUE (-1) to display interface closed message
497
498 ' Close HPIB interface
499     ErrNum = HpibClose(hHpib)
500     If ErrNum <> NOERR Then HpibErr ErrNum
501     If DispStatFlg Then MsgBox "HPIB Interface Closed", 64, "END HPIB"
502
```

```
503 End Sub
504
505 Sub HpibSendCmd (Address As Long, Mess$)
506
507 ' Sends a command to an HPIB instrument
508
509     MessLen = Len(Mess$)
510     ErrNum = HpibOutputs(hHpib, Address, Mess$, MessLen)
511     If ErrNum <> NOERR Then HpibErr ErrNum
512
513 End Sub
514
515 Sub ReadTemp (StartChan As Integer, EndChan As Integer)
516
517 '   Reads temperature channels in deg C from VXI voltmeter
518 '   Requires Global Array Variable TCIn() as single-precision
519
520 Dim NumChan As Integer
521
522 NumChan = EndChan - StartChan + 1
523 ReDim TCIn(NumChan)
524
525 ' Output Read T/C  (Type J) command to VXI
526 VXIMess$ = "MEAS:TEMP? TC,J,(@" + Format$(StartChan) + ":" + Format$(EndC
527 HpibSendCmd ADD_VM, VXIMess$
528
529 ' Input T/C readings from VXI
530 ErrNum = HpibEnterA(hHpib, ADD_VM, TCIn(0), NumChan)
531 If ErrNum <> NOERR Then HpibErr ErrNum
532
533 End Sub
534
535
536 Sub StartHPIB (ByVal DispStatFlg As Integer)
537
538 '   User must set DispStatFlg = TRUE (or -1) when calling to display inte
539
540 ' Open HPIB card for access
541     ErrNum = HpibOpen(ISC, hHpib)
542     If ErrNum <> NOERR Then
543         HpibErr ErrNum
544     Else
545         Office = False  'HPIB card present
546     End If
547
548 ' Reset HPIB bus
549     ErrNum = HpibReset(hHpib, ISC)
```

```
550     If ErrNum <> NOERR Then HpibErr ErrNum
551
552 ' Set HPIB bus timeout
553
554     ErrNum = HpibTimeout(hHpib, ISC, TIMEVAL)
555     If ErrNum <> NOERR Then HpibErr ErrNum
556
557     ' Notify user HPIB opened Sat (if desired)
558     If DispStatFlg Then MsgBox "HPIB Interface opened", 64, "START HPIB"
559
560 End Sub
561
562
563
```

Page:1 TANKTMPS MicroHelp VBXRef Variable Cross-Ref
Functions

ıe	Module	Scope	Line No	# Refs
HpibAbort	EXTERNAL	G	356	0
HpibClear	EXTERNAL	G	357	0
HpibClose	EXTERNAL	G	358	1
ROCHPIB.BAS				
EndHPIB: 499				
HpibControl	EXTERNAL	G	359	0
HpibEnter	EXTERNAL	G	360	0
HpibEnterA	EXTERNAL	G	361	1
ROCHPIB.BAS				
ReadTemp: 530				
HpibEnterab	EXTERNAL	G	362	0
HpibEnterb	EXTERNAL	G	363	0
HpibEnterf	EXTERNAL	G	364	0
HpibEnterS	EXTERNAL	G	365	0
HpibEoi	EXTERNAL	G	366	0
HpibEol	EXTERNAL	G	367	0
HpibErrStr	ERRHNDL	G	330	2
ERRHNDL.BAS				
HpibErr: 318, 323				
bFastout	EXTERNAL	G	369	0
ıpibGetterm	EXTERNAL	G	370	0
HpibGetversion	EXTERNAL	G	371	0
HpibLlockout	EXTERNAL	G	372	0
HpibLocal	EXTERNAL	G	373	0
HpibMatch	EXTERNAL	G	374	0
HpibOpen	EXTERNAL	G	376	1
ROCHPIB.BAS				
StartHPIB: 541				
HpibOutput	EXTERNAL	G	377	0
HpibOutputa	EXTERNAL	G	378	0
HpibOutputab	EXTERNAL	G	379	0
HpibOutputb	EXTERNAL	G	380	0
HpibOutputf	EXTERNAL	G	381	0
HpibOutputs	EXTERNAL	G	382	1
ROCHPIB.BAS				
HpibSendCmd: 510				
HpibPassctl	EXTERNAL	G	396	0
HpibPpoll	EXTERNAL	G	384	0
HpibPpollc	EXTERNAL	G	385	0
HpibPpollu	EXTERNAL	G	386	0
HpibRemote	EXTERNAL	G	387	0
bRequest	EXTERNAL	G	398	0
HpibReset	EXTERNAL	G	388	1

```
      ROCHPIB.BAS
          StartHPIB: 549
 bSend.........................EXTERNAL.......G...........389...........0
HpibSpoll......................EXTERNAL.......G...........391...........0
HpibStatus.....................EXTERNAL.......G...........392...........0
HpibTakectl....................EXTERNAL.......G...........397...........0
HpibTimeout....................EXTERNAL.......G...........393...........1
      ROCHPIB.BAS
          StartHPIB: 554
HpibTrigger....................EXTERNAL.......G...........394...........0
MhDirectoryExists..............EXTERNAL.......G...........431...........1
      MAINFORM.FRM
          CmdStart_Click: 21
MhExePath......................EXTERNAL.......G...........433...........2
      MAINFORM.FRM
          ReadTags: 200
          TagFileExist: 226
MhFileExists...................EXTERNAL.......G...........432...........2
      MAINFORM.FRM
          CmdStart_Click: 24
          TagFileExist: 227
TagFileExist...................MAINFORM.......M...........221...........2
      MAINFORM.FRM
          Form_Load: 90, 97

Subprocedures
Name                           Module        Scope      Line No      # Refs
---------------------------------------------------------------------------
CmdCancel_Click................SETTIME........G...........281...........0
CmdExit_Click..................MAINFORM.......M.............3...........0
CmdOK_Click....................SETTIME........G...........287...........0
CmdStart_Click.................MAINFORM.......M............14...........0
CmdStop_Click..................MAINFORM.......M............42...........1
      MAINFORM.FRM
          CmdExit_Click: 6
DataExists.....................MAINFORM.......M............64...........1
      MAINFORM.FRM
          CmdStart_Click: 25
EndHPIB........................ROCHPIB........G...........494...........1
      MAINFORM.FRM
          CmdExit_Click: 9
Form_Load......................MAINFORM.......M............77...........0
HpibErr........................ERRHNDL........G...........310...........6
      ROCHPIB.BAS
          EndHPIB: 500
          HpibSendCmd: 511
          ReadTemp: 531
```

```
        StartHPIB: 543, 550, 555
HpibSendCmd.....ROCHPIB.....G.....505.....1
     ROCHPIB.BAS
         ReadTemp: 527
LblTempDesc_DblClick.....MAINFORM.....M.....174.....0
NewFile.....MAINFORM.....M.....185.....1
     MAINFORM.FRM
         TmrDataTimer_Timer: 275
ReadTags.....MAINFORM.....M.....196.....1
     MAINFORM.FRM
         Form_Load: 93
ReadTemp.....ROCHPIB.....G.....515.....1
     MAINFORM.FRM
         TmrDataTimer_Timer: 251
StartHPIB.....ROCHPIB.....G.....536.....1
     MAINFORM.FRM
         Form_Load: 170
TmrDataTimer_Timer.....MAINFORM.....M.....242.....1
     MAINFORM.FRM
         CmdStart_Click: 35

Line Labels and Numbers
Name                    Procedure              Module      Line No      # Refs
-------------------------------------------------------------------------------
NotEnoughTags.....ReadTags.....MAINFORM.....209.....2
     MAINFORM.FRM
         ReadTags: 202, 209

Constants
Name                                Module        Scope      Line No      # Refs
-------------------------------------------------------------------------------
ADD_VM.....ROCHPIB.....M.....554.....2
     ERRHNDL.BAS
         HpibErr: 315
         HpibErrStr: 338
     ROCHPIB.BAS
         ReadTemp: 527, 530
EADDR.....GLOBAL.....G.....409.....1
     ERRHNDL.BAS
         HpibErrStr: 352
     MAINFORM.FRM
         CmdStart_Click: =38
         CmdStop_Click: =52
ECLOSE.....GLOBAL.....G.....413.....1
     ERRHNDL.BAS
         HpibErrStr: 358
     MAINFORM.FRM
```

```
        DataExists: =69, 73
ECTRL.............................GLOBAL.........G...........406.........1
    ERRHNDL.BAS
        HpibErrStr: 344
    MAINFORM.FRM
        CmdStart_Click: 29
EFILE.............................GLOBAL.........G...........410.........1
    ERRHNDL.BAS
        HpibErrStr: 348
    MAINFORM.FRM
        CmdStop_Click: =56, =57, 58
EHANDLE...........................GLOBAL.........G...........414.........1
    ERRHNDL.BAS
        HpibErrStr: 360
    MAINFORM.FRM
        DataExists: =70, =71, 71, =72, 72, 73
ENOOPEN...........................GLOBAL.........G...........412.........1
    ERRHNDL.BAS
        HpibErrStr: 356
    MAINFORM.FRM
        CmdStop_Click: =59
ENUMB.............................GLOBAL.........G...........408.........1
    ERRHNDL.BAS
        HpibErrStr: 350
    MAINFORM.FRM
        CmdStart_Click: =37
        CmdStop_Click: =53
EOPEN.............................GLOBAL.........G...........411.........2
    ERRHNDL.BAS
        HpibErr: 317
        HpibErrStr: 354
    MAINFORM.FRM
        CmdStop_Click: 57
EPASS.............................GLOBAL.........G...........407.........1
    ERRHNDL.BAS
        HpibErrStr: 346
    MAINFORM.FRM
        CmdStart_Click: =36
        CmdStop_Click: =48
ERANGE............................GLOBAL.........G...........404.........1
    ERRHNDL.BAS
        HpibErrStr: 340
    ROCHPIB.BAS
        StartHPIB: 554
ESEL..............................GLOBAL.........G...........403.........2
    ERRHNDL.BAS
        HpibErr: 315
```

```
        HpibErrStr: 338
    ROCHPIB.BAS
        ReadTemp: 527, 530
ETIME.....GLOBAL.....G.....405.....1
    ERRHNDL.BAS
        HpibErrStr: 342
EUNKNOWN.....GLOBAL.....G.....402.....1
    ERRHNDL.BAS
        HpibErrStr: 336
    ROCHPIB.BAS
        StartHPIB: 541, 549
        554
        StartHPIB: 554
ISC.....ROCHPIB.....M.....553.....4
    ERRHNDL.BAS
        HpibErrStr: 336
    ROCHPIB.BAS
        StartHPIB: 541, 549
        554
        StartHPIB: 554
MAXCHAR.....ROCHPIB.....M.....556.....0
NOERR.....GLOBAL.....G.....401.....7
    ERRHNDL.BAS
        HpibErrStr: 334
    ROCHPIB.BAS
        EndHPIB: 500
        HpibSendCmd: 511
        ReadTemp: 531
        StartHPIB: 542, 550, 555
        549
STATAC.....GLOBAL.....G.....420.....0
STATADDR.....GLOBAL.....G.....423.....0
STATADR.....GLOBAL.....G.....425.....0
STATATN.....GLOBAL.....G.....424.....0
STATBUS.....GLOBAL.....G.....427.....0
STATCARD.....GLOBAL.....G.....428.....0
STATDIO.....GLOBAL.....G.....426.....0
STATLIST.....GLOBAL.....G.....422.....0
STATNDAC.....GLOBAL.....G.....418.....0
STATREM.....GLOBAL.....G.....416.....0
STATSC.....GLOBAL.....G.....419.....0
STATSRQ.....GLOBAL.....G.....417.....0
STATTALK.....GLOBAL.....G.....421.....0
TIMEVAL.....ROCHPIB.....M.....555.....1
    ERRHNDL.BAS
        HpibErrStr: 340
    ROCHPIB.BAS
```

StartHPIB: 554

lar Variables

Name	Mod/Proc	Scope	# Refs
Address	ROCHPIB/HpibSendCmd	L	2
ROCHPIB.BAS			
HpibSendCmd: 505, 510			
BoxMsg	MAINFORM/DataExists	L	6
ERRHNDL.BAS			
HpibErrStr: 360			
MAINFORM.FRM			
DataExists: =70, =71, 71, =72, 72, 73			
BoxTitle	MAINFORM/DataExists	L	2
ERRHNDL.BAS			
HpibErrStr: 358			
MAINFORM.FRM			
DataExists: =69, 73			
DataDir	GLOBAL	G	4
MAINFORM.FRM			
CmdStart_Click: =17, 18, 21			
NewFile: 190			
DataFileName	GLOBAL	G	4
MAINFORM.FRM			
CmdStart_Click: =18, 29			
NewFile: =190, 191			
DataFileNum	GLOBAL	G	6
MAINFORM.FRM			
CmdStart_Click: =16, 18			
CmdStop_Click: =51			
NewFile: =189, 189, 190			
DispStatFlg	ROCHPIB/StartHPIB	L	2
ROCHPIB.BAS			
StartHPIB: 536, 558			
DispStatFlg	ROCHPIB/EndHPIB	L	2
ROCHPIB.BAS			
EndHPIB: 494, 501			
Dummy	ERRHNDL/HpibErr	L	0
Dummy	MAINFORM/CmdStop_Click	L	3
ERRHNDL.BAS			
HpibErrStr: 348			
MAINFORM.FRM			
CmdStop_Click: =56, =57, 58			
Dummy	MAINFORM/Form_Load	L	20
MAINFORM.FRM			
Form_Load: =132, 134, 135, 136, =139, =140, =141, =142, =143, =144, 158, =161, 162, =162, =163, 163, =164, =165, =166, 167			

```
Dummy.............................MAINFORM/TmrDataTimer_Timer....L.........11
     MAINFORM.FRM
          TmrDataTimer_Timer: =256, =259, 261, =261, 262, 262, =263, =266, 266,
              267, 268
Dummy.............................MAINFORM/TagFileExist.........L.........1
     MAINFORM.FRM
          TagFileExist: 225
Dummy.............................MAINFORM/ReadTags.............L.........3
     MAINFORM.FRM
          ReadTags: =203, 204, 205
EndChan...........................ROCHPIB/ReadTemp..............L.........3
     ROCHPIB.BAS
          ReadTemp: 515, 522, 526
ErrNum............................ROCHPIB.......................M.........18
     ROCHPIB.BAS
          EndHPIB: =499, 500, 500
          HpibSendCmd: =510, 511, 511
          ReadTemp: =530, 531, 531
          StartHPIB: =541, 542, 543, =549, 550, 550, =554, 555, 555
ErrNumber.........................ERRHNDL/HpibErr..............L.........4
     ERRHNDL.BAS
          HpibErr: 310, 314, 318, 323
errorcode.........................ERRHNDL/HpibErrStr............L.........2
     ERRHNDL.BAS
          HpibErrStr: 330, 333
ExePath...........................MAINFORM/TagFileExist.........L.........3
     MAINFORM.FRM
          TagFileExist: =226, 227, 230
ExePath...........................MAINFORM/ReadTags.............L.........4
     MAINFORM.FRM
          ReadTags: 199, =200, 201, 211
FirstChan.........................MAINFORM/TmrDataTimer_Timer....L.........3
     MAINFORM.FRM
          TmrDataTimer_Timer: 245, =248, 251
hHpib.............................ROCHPIB/StartHPIB.............L.........3
     ROCHPIB.BAS
          StartHPIB: 541, 549, 554
hHpib.............................ROCHPIB/HpibSendCmd...........L.........1
     ROCHPIB.BAS
          HpibSendCmd: 510
hHpib.............................ROCHPIB/EndHPIB...............L.........1
     ROCHPIB.BAS
          EndHPIB: 499
hHpib.............................ROCHPIB/hHpib.................L.........1
     ROCHPIB.BAS
          549
hHpib.............................ROCHPIB/ReadTemp..............L.........1
```

ROCHPIB.BAS
ReadTemp: 530
d.....MAINFORM/ReadTags.....L.....1
MAINFORM.FRM
ReadTags: 200
hWnd.....MAINFORM/TagFileExist.....L.....1
MAINFORM.FRM
TagFileExist: 226
LastChan.....MAINFORM/TmrDataTimer_Timer....L.....4
MAINFORM.FRM
TmrDataTimer_Timer: 245, =249, =250, 251
LblChanLeft.....MAINFORM/Form_Load.....L.....4
MAINFORM.FRM
Form_Load: =116, 144, =156, 156
LblChanTop.....MAINFORM/Form_Load.....L.....5
MAINFORM.FRM
Form_Load: =115, 143, =148, 148, =153
LblDataLeft.....MAINFORM/Form_Load.....L.....5
MAINFORM.FRM
Form_Load: 80, =112, 140, 154, =154
LblDataTop.....MAINFORM/Form_Load.....L.....7
MAINFORM.FRM
Form_Load: 79, =111, 139, =146, 146, 150, =151
tIncr.....MAINFORM/Form_Load.....L.....5
MAINFORM.FRM
Form_Load: 81, =109, 154, 155, 156
MBoxMsg.....SETTIME/CmdOK_Click.....L.....4
SETTIME.FRM
CmdOK_Click: =298, =299, 299, 300
MBoxTitle.....SETTIME/CmdOK_Click.....L.....2
SETTIME.FRM
CmdOK_Click: =297, 300
Mess.....ROCHPIB/HpibSendCmd.....L.....3
ROCHPIB.BAS
HpibSendCmd: 505, 509, 510
MessLen.....ROCHPIB/MessLen.....L.....1
ERRHNDL.BAS
HpibErrStr: 334
ROCHPIB.BAS
EndHPIB: 500
HpibSendCmd: 511
ReadTemp: 531
StartHPIB: 542, 550, 555
549
MessLen.....ROCHPIB/HpibSendCmd.....L.....2
ROCHPIB.BAS
HpibSendCmd: =509, 510

```
Msg.....MAINFORM/Form_Load.....L.....4
    MAINFORM.FRM
        Form_Load: =99, 100, =100, 101
Msg.....MAINFORM/TagFileExist.....L.....14
    MAINFORM.FRM
        TagFileExist: =230, =231, 231, =232, 232, 233, =233, 234, =234, =235,
            235, 236, =236, 237
Msg.....ERRHNDL/HpibErrStr.....L.....16
    ERRHNDL.BAS
        HpibErrStr: =335, =337, =339, =341, =343, =345, =347, =349, =351,
            =353, =355, =357, =359, =361, =363, 365
Msg.....MAINFORM/ReadTags.....L.....6
    MAINFORM.FRM
        ReadTags: =211, 212, =212, =213, 213, 214
MsgBoxTitle.....MAINFORM/TagFileExist.....L.....1
    MAINFORM.FRM
        TagFileExist: 237
NewTime.....SETTIME/CmdOK_Click.....L.....4
    SETTIME.FRM
        CmdOK_Click: =292, 293, 293, 294
NumChan.....GLOBAL.....G.....14
    MAINFORM.FRM
        CmdStop_Click: 56
        Form_Load: =84, 119, 123, 132, 161
        ReadTags: 203
        TmrDataTimer_Timer: 249, 249, 250, 250, 256
    ROCHPIB.BAS
        ReadTemp: =522, 530
NunChan.....MAINFORM/Form_Load.....L.....1
    MAINFORM.FRM
        Form_Load: 119
Office.....GLOBAL.....G.....6
    MAINFORM.FRM
        CmdExit_Click: 9
        Form_Load: =85
        TmrDataTimer_Timer: =257
    ERRHNDL.BAS
        HpibErr: =316, =322
    ROCHPIB.BAS
        StartHPIB: =545
OpenAttempt.....GLOBAL.....G.....0
Read.....MAINFORM/NewFile.....L.....1
    MAINFORM.FRM
        NewFile: 191
Read.....MAINFORM/ReadTags.....L.....1
    MAINFORM.FRM
        ReadTags: 201
```

MAINFORM.FRM
Form_Load: 129, 164
TimeDisp.Caption.....MAINFORM.....1
MAINFORM.FRM
TmrDataTimer_Timer: =271
MainForm.CmdStop.Enabled.....MAINFORM.....1
MAINFORM.FRM
LblTempDesc_DblClick: 179
MainForm.Left.....MAINFORM.....2
MAINFORM.FRM
Form_Load: =120, =124
MainForm.TmrDataTimer.Interval.....SETTIME.....1
SETTIME.FRM
CmdOK_Click: =294
MainForm.Width.....MAINFORM.....2
MAINFORM.FRM
Form_Load: =121, =125
SetTime.....SETTIME.....2
SETTIME.FRM
CmdCancel_Click: 283
CmdOK_Click: 295
SetTime.Show.....MAINFORM.....1
MAINFORM.FRM
LblTempDesc_DblClick: 181
TmrDataTimer.Enabled.....MAINFORM.....2
ERRHNDL.BAS
HpibErrStr: 346
MAINFORM.FRM
CmdStart_Click: =36
CmdStop_Click: =48
TxtData.....MAINFORM.....2
MAINFORM.FRM
Form_Load: 135
TmrDataTimer_Timer: 266
TxtData.Left.....MAINFORM.....2
MAINFORM.FRM
Form_Load: 114, 142
TxtData.Text.....MAINFORM.....1
ERRHNDL.BAS
HpibErr: 317
HpibErrStr: 354
MAINFORM.FRM
CmdStop_Click: 57
TxtData.Top.....MAINFORM.....2
MAINFORM.FRM
Form_Load: 113, 141
TxtData.Visible.....MAINFORM.....2

```
Read............................MAINFORM/CmdStart_Click........L...........1
     ERRHNDL.BAS
         HpibErrStr: 344
     MAINFORM.FRM
         CmdStart_Click: 29
StartChan.......................ROCHPIB/ReadTemp...............L...........3
     ROCHPIB.BAS
         ReadTemp: 515, 522, 526
StartNewFile....................GLOBAL.........................G...........6
     MAINFORM.FRM
         CmdStart_Click: =32
         CmdStop_Click: =50
         NewFile: =192
         TmrDataTimer_Timer: =274, 274, 275
TopIncr.........................MAINFORM/Form_Load.............L...........8
     MAINFORM.FRM
         Form_Load: 81, =108, 111, 113, 115, 146, 147, 148
TxtDataLeft.....................MAINFORM/Form_Load.............L...........5
     MAINFORM.FRM
         Form_Load: 80, =114, 142, 155, =155
TxtDataTop......................MAINFORM/Form_Load.............L...........6
     MAINFORM.FRM
         Form_Load: 79, =113, 141, 147, =147, =152
T -TimeDisp.....................MAINFORM/CmdStop_Click.........L...........1
     ERRHNDL.BAS
         HpibErrStr: 356
     MAINFORM.FRM
         CmdStop_Click: =59
UseTag..........................MAINFORM/Form_Load.............L...........5
     MAINFORM.FRM
         Form_Load: =92, =97, 98, =105, 163
VXIMess.........................ROCHPIB/ReadTemp...............L...........2
     ROCHPIB.BAS
         ReadTemp: =526, 527

Array Variables
Name                            Mod/Proc                    Scope    # Refs
----------------------------------------------------------------------------
Tags............................MAINFORM.......................M...........2
     MAINFORM.FRM
         Form_Load: 163
         ReadTags: 204
TCIn............................GLOBAL.........................G...........2
     MAINFORM.FRM
         TmrDataTimer_Timer: 261
     ROCHPIB.BAS
         ReadTemp: 530
```

```
TempData..........................MAINFORM/TmrDataTimer_Timer....L...........7
     MAINFORM.FRM
          TmrDataTimer_Timer: 259, 261, 262, 262, 263, 266, 267

Form/Control Properties and Methods
Name                                              Module                # Refs
------------------------------------------------------------------------------
CmdStart.Enabled..........................MAINFORM..........................2
     ERRHNDL.BAS
          HpibErrStr: 352
     MAINFORM.FRM
          CmdStart_Click: =38
          CmdStop_Click: =52
CmdStop.Enabled...........................MAINFORM..........................2
     ERRHNDL.BAS
          HpibErrStr: 350
     MAINFORM.FRM
          CmdStart_Click: =37
          CmdStop_Click: =53
LblChan...................................MAINFORM..........................1
     MAINFORM.FRM
          Form_Load: 136
LblChan.Caption...........................MAINFORM..........................1
     MAINFORM.FRM
          Form_Load: =163
LblChan.Left..............................MAINFORM..........................2
     MAINFORM.FRM
          Form_Load: 116, 144
LblChan.Top...............................MAINFORM..........................2
     MAINFORM.FRM
          Form_Load: 115, 143
LblChan.Visible...........................MAINFORM..........................2
     MAINFORM.FRM
          Form_Load: 130, 166
LblDataLbl................................MAINFORM..........................1
     MAINFORM.FRM
          Form_Load: 134
LblDataLbl.Caption........................MAINFORM..........................1
     MAINFORM.FRM
          Form_Load: 162
LblDataLbl.Left...........................MAINFORM..........................2
     MAINFORM.FRM
          Form_Load: 112, 140
LblDataLbl.Top............................MAINFORM..........................2
     MAINFORM.FRM
          Form_Load: 111, 139
LblDataLbl.Visible........................MAINFORM..........................2
```

```
  MAINFORM.FRM
      Form_Load: 131, 165
:NewTime.SetFocus.....SETTIME.....1
  SETTIME.FRM
      CmdOK_Click: 302
```

WESTINGHOUSE STANDARDS LABORATORY PHYSICAL AND ELECTRICAL REPORT

CUSTODIAN/ADDRESS	STANDARDS CODE NUMBER	NEW / MODIFY	REFERENCE NUMBER
GROTH BD B4-08	817-67-11-002	MODIFY ✓	379532
		ORGANIZATION CODE: W25250	WORK ORDER: WWEA1

INSTRUMENT	SERIAL NUMBER	PROPERTY NUMBER	RECALL STATUS	RECALL CYCLE	TOLERANCE HISTORY
DATA ACQUSN SYSTEM H-P 75000B E13251A	3035A00434	WC13468	1 ACTIVE 2 NONRECALL 3 SUSPENDED 4 DELETED 1	360	N
	ROOM: N/A	BUILDING: 305	SERVICE DEPARTMENT: 4	DATE RECEIVED: 940317	TOLERANCE AS RECEIVED: 1 IN 2 OUT 3 NA 4 FAILED — 3

SENDER	COMMENTS	SHIPPING DAY
B HOPKINS 6-5013	~~INTERNAL VM ONLY~~ J TC 50-200°F	WE

INSTRUMENT SPECIFICATIONS: NOT KNOWN

TRAINING HOURS
CALIBRATION HOURS 2.5
REPAIR HOURS
OTHER HOURS
MATERIALS
TOTAL CHARGE = ($120 x SUM OF HOURS) + MATERIALS

STANDARD(S) USED IN CALIBRATION TRACEABLE TO NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY OR NATIONALLY RECOGNIZED STANDARDS   4:1 RATIO Y ☐ N ☑

STANDARD	EXPIRATION DATE	STANDARD	EXPIRATION DATE
002-14-01-035	6-22-94		

REMARKS: (WP-186)

DATE CALIBRATED: 3-22-94   DATE DUE: 3-22-95

PROCEDURE NUMBER: WHC-4-DAS REV.1

AMBIENT TEMPERATURE = 23°C

Standard °F	75000 Indication AS FOUND	FINAL	MFG'S SPEC'S
50	50.0	Same	NOT KNOWN
75	75.0		
100	100.0		
125	125.0		
150	150.0		
175	175.1		
200	200.1		

APPROVED BY	CALIBRATED BY	WHC STDS LAB			PAGE
[signature] 3-22-94	[initials]	39	Hanford Operations and Engineering Contractor for the United States Department of Energy	Westinghouse Hanford Company Subsidiary of Westinghouse Electric Corporation Box 1970, Richland, WA 99352	1 OF 1

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 325
Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: CAMS
2. VERSION/REVISION: NA
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [X] Enhancement [ ] Other DATE: 4-6-94.
4. SUBMITTER'S PRIORITY: [4] 1 = Critical 2 = High 3 = Medium 4 = Low
5. SYSTEM NAME/TITLE: Remove Cams unit from UPS Shack (DACS)
6. DESCRIPTION OF CHANGE: [ ] See Attached
   Remove CAM hardware from DACS UPS Shack. ARM will be used and has fail safe alarm.
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
   Remove unnecessary equipment. Rev. 8 of S.A. does not require a CAM unit at the DACS UPS Shack.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [X] ARP [ ] I/O Channel List [X] DACS Software [X] Drawings H-2-815176
   [ ] Other/Name
9. ORIGINATOR: Ray Pavazin Date: 3/30/94 Phone No.:

CCB

10. DISPOSITION:
    [X] Approve [ ] Approve/Modify
    [ ] Reject [ ] Cancel
    [ ] Defer 5-30-94.

11. WHEN TO IMPLEMENT CHANGE:
    [X] Upon completion of change
    [ ] Prepare change and wait for approval
    [ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

12. APPROVAL: [signature] Date: 4/5/94
    [signature] Date: 4/5/94
    [signature] EG&G/ARHCO Date: 4/5/94

13. ASSIGNED TO: [signature] Phone No.: 373-1779 Planned Release Date: 4-6-94

14. SOLUTION COMMENTS: [ ] See Attached [ ] None
    CAM removed
    Alarm panel display removed.
    Drawings updated.
    Procedures updated.

15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None

16. CHANGE INSTALLED: [signature] for AOV Date: 4/5/94 Phone No. 373-1779.

17. VERIFIED BY: [signature] Date: 4/19/94 Phone No. 373-2007

18. RELEASE VERSION:

19. CLOSED BY: [signature] Date: 4/19/94 Phone No. 3731779.

Form #: HMTP-SCR-1 (2-28-94)

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 326
Sheet 1 of 19

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Test Strategy - Help/KeyMacros
2. VERSION/REVISION: 2.24
3. SCR TYPE AND REQUESTED COMPLETION DATE: [ ] Development [ ] Problem Report [X] Enhancement [ ] Other DATE: 3/30/94
4. SUBMITTER'S PRIORITY: [2] 1 = Critical 2 = High 3 = Medium 4 = Low
5. SYSTEM NAME/TITLE: Keymacros For Jet Penetration Test
6. DESCRIPTION OF CHANGE: [X] See Attached

—

7. JUSTIFICATION FOR CHANGE: [X] See Attached
Screens required for Jet Penetration Testing

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [X] DACS Software [ ] Drawings
[ ] Other/Name

9. ORIGINATOR: J. A. Lechelt Date: 3/28/94 Phone No.: 373-3296

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

WHEN TO IMPLEMENT CHANGE:
[ ] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

~~USQ SCREEN?~~ N/A
~~[ ] Yes~~
~~[ ] No~~

11. APPROVAL:
[signature] Date: 3/30/94
[signature] Date: 3/30/94
[signature] EG&G/LANL Date: 3/30/94

12. ASSIGNED TO: S. G. McKenzie Phone No.: 376 9837 Planned Release Date: 3-30-94

3.

13. SOLUTION COMMENTS: [X] See Attached [ ] None

14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
Remote key Macro and Help Screens

15 COMPLETED: [signature] Date: 3/30/94 Phone No. 376-9837

4.

16 VERIFIED BY: [signature] Date: 3/30/94 Phone No. 373-3296

17 RELEASE VERSION: N/A - same version Test 2.26

18 CLOSED BY: [signature] Date: 4/5/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (1-25-94)

HYDROGEN MITIGATION TEST PROJECT
System Change Request (Continuation Sheet)

SCR No.: 326.

Sheet 2 of 18

[\] Description [ ] Justification [ ] Solution Comments [ ] Software Affected

Jet Penetration Testing Monitoring screens ~~are~~ are needed to monitor testing.

To ease set up of these screens two key macros (1 for Remote Station 1 · 1 for Remote Station 3) need to be developed (along with a help file notation).

Ctrl F2 - Station 1		Ctrl F4 - Station 3
1	TIR17B01	FIE5001
2	TIR17B02	PIR11B01
3	TIR17B03	LIR13A01
4	TIR17B04	PITN0111
5	VR232040	PITN0110
6	TIR17B05	GC2-H2S
7	TIR17B06	GC3-H2
8	TIR17 B07	FT-N20C
9	TIR17 B08	FTNH3C
10	VR232020	NIR17B01
11	TIR17B09	TIR17B17
12	TIR17B10	TIR17B18
13	TIR17B11	TIR17B19
14	TIR17B12	TIR17B20
15	VR232050	VR232040
16	TIR17B13	TIR17B21
17	TIR17B14	TIR17B22
18	TIR17B15	WIR17B01
19	TIR17B16	WIR17B02
20	PCR12A01	VR232020

This change will not impact the Test Strategy (version number) nor anything at the DACS trailer.

Form #: HMTP-SCRCS-1 (1-25-94)

SCR No. 326
Sheet 3 of 18
Justification

[9] From: Jeanne A Lechelt at ~WHC140 3/28/94 10:36AM (4522 bytes: 71 ln)
To: Ross W Truitt at ~WHC211, S G (Gayle) McNeece at ~WHC251
cc: Charles W Stewart at ~PNL53, Larry E Efferding at ~WHC244, John J Irwin at ~WHC244, Justin G Fadeff at ~WHC71, Jeanne A Lechelt, Leslie A Tusler, Nancy E Wilkins, Richard Clinton, Nicholas W (Nick) Kirch
Subject: Jet Penetration Pumping Trend Screens
---------- Message Contents ----------

Ross and Gayle,

After talking to Chuck and Larry Efferding, and experiencing system problems this morning, I think the best course of action is to ask Gayle to make macros to set up the stations with trend lists specific to the jet penetration testing planned for next week.

I had a call at 2:15 this morning from Larry. He had been instructed by the test engineers to reset the systems in the warroom and he needed some phone instructions. I am assuming there was a lockup at the DACS or some other good reason the test engineers asked Larry to reset. He would not have to reset if they were doing their routine reset for the test. I'm not complaining about the call (the whole purpose of having the RSS stations in 2750 is to monitor the test and the reason for the test is to see what happens when the pump is run in the waste). I'm just pointing out that even if we leave the machines in a ready state the night before, they may not be ready in the morning.

As an aside--The modem for station 1 also stopped working this morning. I "fixed" it about 7:45 by pressing the Arcnet reset button (after checking all the connections and trying to reconnect a couple of times, etc.) It had been working at 2:15--I asked at that time.

Chuck said he only wanted to see 10 or so of the bottom thermocouples of MIT 17B, but Larry said that was the optomistic approach and assumes things will do what they are supposed to do. He thought we probably should be looking at all of the TCs (or at least 20 of them--perhaps leaving off the top and bottom TCs.) We don't need to look at all the strains, only the two 17B strains. We would still like to look at the tank parameters (flow, pressure, etc.) and the gas data, along with pump parameters. It seems to me that we would best serve this need by putting 20 TCs on one station and the other stuff on the other station.

Another option would be to put temps on both stations. 20 TCs, four each on five screens, each with a pump parameter to tell when things are running. The last two TCs [22 total] and the two strains with a pump parameter would go on a sixth screen. The other parameters would go on the remaining two screens. We could go with all the gas stuff (GC2, GC3, N2O, NH3 and 17B Whittaker) and one each of flow and pressure, radar level and two other channels of interest. By pump parameters I mean the speed, voltage, current, volute pressure and perhaps the PITs. These all show by their behavior when the pump is running.

I know this is a lot to ask with short notice, but it would ensure that even if a system reset is necessary, the systems could be setup with a password and a few keystrokes, similar to Ctrl F1, in a short amount of time. Chuck and Larry both have a password and I am writing instructions for them, but I really feel the key macro is the way to go.

Thanks.

Jeanne

> Jeanne -
>
> I talked to Gayle McNeece yesterday about a request that Chuck Stewart had in the data management meeting yesterday. Chuck would like to be able to view and trend real-time any particular MIT-17B thermocouple in the war room during the jet impingement testing.
>
> Gayle said that you could probably either set him up to do

SCR No. 326
Sheet 4 of 18
Justification

that if you're out there, or maybe provide him with a password to do it himself. Could you get with Chuck and find out what his needs are, and verify that you can provide that to him? If necessary, we may be able to make changes for his needs, but we'll need to know in advance.

Thanks!

Ross

SCR No.: 326

Sheet 5 of 18

[ ] Description [ ] Justification [X] Solution Comments [ ] Software Affected

Remote / a Remote 3:

Directory RMT-HELP:

- Changed Standard.HLS compiled with KEYHELP to form Help*.gsp files and Standard.hlp.
- Moved above to g: Genosis directory.

Directory RMT-KEY:

- Changed Test.KMS, adding keymacros
  [Ctrl-F2] + Station 1 Logic
  [Ctrl-F4] + Station 2 Logic
- Compiled with Keymacs, forming Test.KML
- Moved to Test Directory, and to the Keymacs Directory

Form #: HMTP-SCRCS-1 (1-25-94)

SCR No. 326
Sheet 6 of 18
Solt. on Comments

)STANDARD.HLS March 29, 1994 Page 1

```
[F1] = (   :F1:,Display Directory).              ; Display User Diagrams
[F2] = (   :F2:,Disabled).                       ; Normally Get Tag Details
   = (   :F3:,Get Attached Display).             ; Get Attached Display
   = (   :F4:,Disabled).                         ; Normally Alarm Summary
[F5] = (   :F5:,Shift Historian).                ; Shift Historian
[F6] = (   :F6:,Recall Last Display).            ; Recall Last Display
[F7] = (   :F7:,System Trend).                   ; System Trend
[F8] = (   :F8:,Tag Sort).                       ; Tag Sort

[F9] =        (:F9:,Disabled).                   ; Normally Auto /  Manual).
[F10] =       (:F10:,Remote / Local).
[HOME] =      (:Home:,Toggle Between Windows).
[CR] =        (:Enter:,Enter Data Field).
[TAB] =       (:TAB:,Cursor to Next Field).
[Shift-TAB] = (:Shft TAB:,Cursor to Previous Field).
[PgUp] =      (:PGUP:,Previous Page).
[PgDn] =      (:PGDN:,Next Page).

[LEFT] =       (:<-:,Up Stream Trace).
[RIGHT] =      (:->:,Down Stream Trace).
[UP] =         (:UP:,Alternate Up Stream Trace).
[DOWN] =       (:DOWN:,Next Page).
[?] =          (:?:,Help System).
[Backspace] =  (:Backspac:,Delete Character).
[Ctrl-PrtSc] = (:Ctrl-Prt:,Print Screen).
[Shift-F9] =   (:Shift-F9:,Draw System Trend).

[Alt-A] = (:ALT-A:,Disabled).                    ; Normally System Parameters
[Alt-C] = (:ALT-C:,Save Database).
[Alt-D] = (:ALT-D:,Enter All Data Entries).
[Alt-E] = (:ALT-E:,Exit to DOS).
[Alt-F] = (:ALT-F:,File Management).
   -G] = (:ALT-G:,Disabled).                     ; Normally Acknowledge All Alarms
[Alt-H] = (:ALT-H:,History Replay).
[Alt-H] = (:ALT-L:,List File Utility).

[Alt-K] = (:ALT-K:,Host Communications).
[Alt-M] = (:ALT-M:,Modem).
[Alt-O] = (:ALT-O:,Profile Directory).
[Alt-P] = (:ALT-P:,Password Security).
[Alt-Q] = (:ALT-Q:,SPC/SQC Replay).
[Alt-R] = (:ALT-R:,Save Recipe Display).
[Alt-S] = (:ALT-S:,System Performance).
[Alt-U] = (:ALT-U:,Disabled).                    ; Normally Run User Task

[Alt-W] = (:ALT-W:,GEN-NET File Transfer).
[Alt-X] = (:ALT-X:,Clear Subwindow).
[Alt-Z] = (:ALT-Z:,GEN-NET Monitor).
[Ctrl-F1] = (:Ctrl-F1:,St1 Trend Setup).
[Ctrl-F2] = (:Ctrl-F2:,St1 Jet Pen. Setup).
[Ctrl-F3] = (:Ctrl-F3:,St3 Trend Setup).
[Ctrl-F4] = (:Ctrl-F4:,St3 Jet Pen. Setup).
```

<- Added

<- Added

```
;_____________________________________________________________
;Filename:  TEST.KMS

;  rpose:  This file contains the keymacro definitions for
;          the RSS stations
;_____________________________________________________________

;Disable keys that don't want rss users to have access to
[F2]=DISABLE.
[F4]=DISABLE.
[F9]=DISABLE.
[Alt-A]=DISABLE.
[Alt-G]=DISABLE.
[Alt-U]=DISABLE.
[MOUSE-LEFT]=ENTER.

;Setup System Trend for Station 1
STATION1=                ;name of macro
  SYSTEM(TREND_SUB)      ;bring up system trend submenu
  TREND(LIST)            ;bring up system trend list
  WAIT(1)                ;wait is required before deleting
  TREND(REM_PT)          ;removes current point highlighted in field
  TREND(REM_PT)          ;repeat to delete every tag and variable
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
    END(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)

  SYSTEM(TREND_SUB)      ;dummy addition is required before adding the real tags
  GOTO(1)
  DOWNLD_PT(DUMMY,)
  GOTO(2)
  DOWNLD_PT(OUT,)
  TREND(ADD_PT)
  WAIT(1)

  SYSTEM(TREND_SUB)      ;brings up the system trend submenu
  GOTO(1)                ;move cursor to tag name field
  DOWNLD_PT(WIR12A01,)   ;enter new tag name
  GOTO(2)                ;move cursor to variable field
  DOWNLD_PT(OUT,)        ;enter new variable name
  TREND(ADD_PT)          ;add point to system trend list
  WAIT(1)                ;wait is required between adding

  SYSTEM(TREND_SUB)      ;repeat for rest of tags
  GOTO(1)
  DOWNLD_PT(WIR12A02,)
   TO(2)
   WNLD_PT(OUT,)
  TREND(ADD_PT)
  WAIT(1)

  SYSTEM(TREND_SUB)
  GOTO(1)
```

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Sheet 8 of 18
Solution Comments

```
DOWNLD_PT(WIR12A03,)
GOTO(2)
  WNLD_PT(OUT,)
 .END(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(WIR12A04,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(VR232040,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(WIR1BA01,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
  WNLD_PT(WIR1BA02,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(WIR1BA03,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(LIR13A01,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(VR232020,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

 .STEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(WIR17B01,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
```

SCR No. 326
Sheet 9 of 18
Solution Comments

```
WAIT(1)

  STEM(TREND_SUB)
 TO(1)
DOWNLD_PT(WIR17B02,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(WIR17C01,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(WIR17C02,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(VR232050,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
 IT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(TIR12A01,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(TIR12A02,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(PITNO111,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(PITNO110,)
 TO(2)
 WNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
```

SCR No. 326
Sheet 10 of 18
Solution Comments

```
  DOWNLD_PT(PCR12A01,)
  GOTO(2)
    WNLD_PT(OUT,)
   END(ADD_PT)
  WAIT(1).                ;period is required at end of macro definition

  [Ctrl-F1]=MACRO(STATION1).   ;executes macro STATION1 defined above by using Ctrl-F1 in Runtime

;Setup System Trend for Station 3
STATION3=                 ;name of macro
  SYSTEM(TREND_SUB)       ;bring up system trend submenu
  TREND(LIST)             ;bring up system trend list
  WAIT(1)                 ;wait is required before deleting
  TREND(REM_PT)           ;removes current point highlighted in field
  TREND(REM_PT)           ;repeat to delete every tag and variable
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
    END(REM_PT)

  SYSTEM(TREND_SUB)       ;dummy addition is required before adding the real tags
  GOTO(1)
  DOWNLD_PT(DUMMY,)
  GOTO(2)
  DOWNLD_PT(OUT,)
  TREND(ADD_PT)
  WAIT(1)

  SYSTEM(TREND_SUB)       ;brings up the system trend submenu
  GOTO(1)                 ;move cursor to tag name field
  DOWNLD_PT(FTE50001,)    ;enter new tag name
  GOTO(2)                 ;move cursor to variable field
  DOWNLD_PT(OUT,)         ;enter new variable name
  TREND(ADD_PT)           ;add point to system trend list
  WAIT(1)                 ;wait is required between adding

  SYSTEM(TREND_SUB)       ;repeat for rest of tags
  GOTO(1)
  DOWNLD_PT(FTY50002,)
  GOTO(2)
  DOWNLD_PT(OUT,)
  TREND(ADD_PT)
  WAIT(1)

  SYSTEM(TREND_SUB)
  GOTO(1)
  DOWNLD_PT(PIR11B01,)
    TO(2)
    WNLD_PT(OUT,)
  TREND(ADD_PT)
  WAIT(1)

  SYSTEM(TREND_SUB)
  GOTO(1)
```

SCR No. 326
Sheet 11 of 18
Solution Comments

```
DOWNLD_PT(PYR17B04,)
GOTO(2)
 OWNLD_PT(OUT,)
.REND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(MT10001,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(GC2-H2S,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(GC3-H2,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
 OWNLD_PT(FT-N2OC,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(FT-NH3C,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(NIR17B01,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(TIPN0102,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

.YSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(TIPN0101,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
```

SCR No. 326
Sheet 2 of 18
Solution Comments

```
  WAIT(1)

   YSTEM(TREND_SUB)
  .OTO(1)
  DOWNLD_PT(TIPNO201,)
  GOTO(2)
  DOWNLD_PT(OUT,)
  TREND(ADD_PT)
  WAIT(1)

  SYSTEM(TREND_SUB)
  GOTO(1)
  DOWNLD_PT(TIPNO202,)
  GOTO(2)
  DOWNLD_PT(OUT,)
  TREND(ADD_PT)
  WAIT(1)

  SYSTEM(TREND_SUB)
  GOTO(1)
  DOWNLD_PT(VR232040,)
  GOTO(2)
  DOWNLD_PT(OUT,)
  TREND(ADD_PT)
  WAIT(1)

  SYSTEM(TREND_SUB)
  GOTO(1)
  DOWNLD_PT(NIR05A01,)
  GOTO(2)
  DOWNLD_PT(OUT,)
  TREND(ADD_PT)
   \IT(1)

  SYSTEM(TREND_SUB)
  GOTO(1)
  DOWNLD_PT(NITKSY06,)
  GOTO(2)
  DOWNLD_PT(OUT,)
  TREND(ADD_PT)
  WAIT(1)

  SYSTEM(TREND_SUB)
  GOTO(1)
  DOWNLD_PT(NITJSY06,)
  GOTO(2)
  DOWNLD_PT(OUT,)
  TREND(ADD_PT)
  WAIT(1)

  SYSTEM(TREND_SUB)
  GOTO(1)
  DOWNLD_PT(GC2-H2S,)
  GOTO(2)
  DOWNLD_PT(OUT,)
  TREND(ADD_PT)
  WAIT(1).                    ;period is required at end of macro definition

  [Ctrl-F3]=MACRO(STATION3).   ;executes macro STATION3 defined above by using Ctrl-F3 in Runtime

;Setup System Trend for Jet Penetration Testing for Station 1
   JP=                        ;name of macro
   (STEM(TREND_SUB)           ;bring up system trend submenu
  TREND(LIST)                 ;bring up system trend list
  WAIT(1)                     ;wait is required before deleting
  TREND(REM_PT)               ;removes current point highlighted in field
  TREND(REM_PT)               ;repeat to delete every tag and variable
  TREND(REM_PT)
```

added

SCR No. 326
Sheet 13 of 18
Solution Comments

```
TREND(REM_PT)
TREND(REM_PT)
  END(REM_PT)
 .END(REM_PT)
TREND(REM_PT)
TREND(REM_PT)
TREND(REM_PT)
TREND(REM_PT)
TREND(REM_PT)
TREND(REM_PT)
TREND(REM_PT)
TREND(REM_PT)
TREND(REM_PT)
TREND(REM_PT)
TREND(REM_PT)
TREND(REM_PT)

SYSTEM(TREND_SUB)       ;dummy addition is required before adding the real tags
GOTO(1)
DOWNLD_PT(DUMMY,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)       ;brings up the system trend submenu
GOTO(1)                 ;move cursor to tag name field
DOWNLD_PT(TIR17B01,)    ;enter new tag name
GOTO(2)                 ;move cursor to variable field
DOWNLD_PT(OUT,)         ;enter new variable name
TREND(ADD_PT)           ;add point to system trend list
  IT(1)                 ;wait is required between adding

SYSTEM(TREND_SUB)       ;repeat for rest of tags
GOTO(1)
DOWNLD_PT(TIR17B02,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(TIR17B03,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(TIR17B04,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(VR232040,)
  TO(2)
 .WNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
```

Added

SCR No. 326
Sheet 14 of 18
Solution Comments

```
DOWNLD_PT(TIR17B05,)
GOTO(2)
 OWNLD_PT(OUT,)
 REND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(TIR17B06,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(TIR17B07,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(TIR17B08,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
 OWNLD_PT(VR232020,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(TIR17B09,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(TIR17B10,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(TIR17B11,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

 YSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(TIR17B12,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
```

SCR No. 326
Sheet 15 of 18
Solution Comments

```
  WAIT(1)

   YSTEM(TREND_SUB)
  .OTO(1)
  DOWNLD_PT(VR232050,)
  GOTO(2)
  DOWNLD_PT(OUT,)
  TREND(ADD_PT)
  WAIT(1)

  SYSTEM(TREND_SUB)
  GOTO(1)
  DOWNLD_PT(TIR17B13,)
  GOTO(2)
  DOWNLD_PT(OUT,)
  TREND(ADD_PT)
  WAIT(1)

  SYSTEM(TREND_SUB)
  GOTO(1)
  DOWNLD_PT(TIR17B14,)
  GOTO(2)
  DOWNLD_PT(OUT,)
  TREND(ADD_PT)
  WAIT(1)

  SYSTEM(TREND_SUB)
  GOTO(1)
  DOWNLD_PT(TIR17B15,)
  GOTO(2)
  DOWNLD_PT(OUT,)
  TREND(ADD_PT)
   .IT(1)

  SYSTEM(TREND_SUB)
  GOTO(1)
  DOWNLD_PT(TIR17B16,)
  GOTO(2)
  DOWNLD_PT(OUT,)
  TREND(ADD_PT)
  WAIT(1)

  SYSTEM(TREND_SUB)
  GOTO(1)
  DOWNLD_PT(PCR12A01,)
  GOTO(2)
  DOWNLD_PT(OUT,)
  TREND(ADD_PT)
  WAIT(1).              ;period is required at end of macro definition

  [Ctrl-F2]=MACRO(ST1JP).   ;executes macro ST1JP defined above by using Ctrl-F2 in Runtime

;Setup System Trend for Jet Penetration Testing for Station 3
ST3JP=                  ;name of macro
  SYSTEM(TREND_SUB)     ;bring up system trend submenu
  TREND(LIST)           ;bring up system trend list
  WAIT(1)               ;wait is required before deleting
  TREND(REM_PT)         ;removes current point highlighted in field
  TREND(REM_PT)         ;repeat to delete every tag and variable
  TREND(REM_PT)
  TREND(REM_PT)
   REND(REM_PT)
   END(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
  TREND(REM_PT)
```

added

SCR No. 326
Sheet 16 of 18
Solution Comments

```
TREND(REM_PT)
TREND(REM_PT)
  END(REM_PT)
 .END(REM_PT)
TREND(REM_PT)
TREND(REM_PT)
TREND(REM_PT)
TREND(REM_PT)
TREND(REM_PT)

SYSTEM(TREND_SUB)       ;dummy addition is required before adding the real tags
GOTO(1)
DOWNLD_PT(DUMMY,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)       ;brings up the system trend submenu
GOTO(1)                 ;move cursor to tag name field
DOWNLD_PT(FTE50001,)    ;enter new tag name
GOTO(2)                 ;move cursor to variable field
DOWNLD_PT(OUT,)         ;enter new variable name
TREND(ADD_PT)           ;add point to system trend list
WAIT(1)                 ;wait is required between adding

SYSTEM(TREND_SUB)       ;repeat for rest of tags
GOTO(1)
DOWNLD_PT(PIR11B01,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
  IT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(LIR13A01,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(PITNO111,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(PITNO110,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(GC2-H2S,)
  TO(2)
 .WNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
```

SCR No. 326
Sheet 17 of 18
Solution Comments

```
DOWNLD_PT(GC3-H2,)
GOTO(2)
  WNLD_PT(OUT,)
 .END(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(FT-N2OC,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(FT-NH3C,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(NIR17B01,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
  WNLD_PT(TIR17B17,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(TIR17B18,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(TIR17B19,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

SYSTEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(TIR17B20,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
WAIT(1)

  STEM(TREND_SUB)
GOTO(1)
DOWNLD_PT(VR232040,)
GOTO(2)
DOWNLD_PT(OUT,)
TREND(ADD_PT)
```

added

SCR No. 326
Sheet 18 of 18
Solution Comments

```
  WAIT(1)

   'STEM(TREND_SUB)
   JTO(1)
  DOWNLD_PT(TIR17B21,)
  GOTO(2)
  DOWNLD_PT(OUT,)
  TREND(ADD_PT)
  WAIT(1)

  SYSTEM(TREND_SUB)
  GOTO(1)
  DOWNLD_PT(TIR17B22,)
  GOTO(2)
  DOWNLD_PT(OUT,)
  TREND(ADD_PT)
  WAIT(1)

  SYSTEM(TREND_SUB)
  GOTO(1)
  DOWNLD_PT(WIR17B01,)
  GOTO(2)
  DOWNLD_PT(OUT,)
  TREND(ADD_PT)
  WAIT(1)

  SYSTEM(TREND_SUB)
  GOTO(1)
  DOWNLD_PT(WIR17B02,)
  GOTO(2)
  DOWNLD_PT(OUT,)
  TREND(ADD_PT)
    IT(1)

  SYSTEM(TREND_SUB)
  GOTO(1)
  DOWNLD_PT(VR232020,)
  GOTO(2)
  DOWNLD_PT(OUT,)
  TREND(ADD_PT)
  WAIT(1).                    ;period is required at end of macro definition

  [Ctrl-F4]=MACRO(ST3JP).     ;executes macro ST3JP defined above by using Ctrl-F4 in Runtime
```

added

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 327
Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Motor - AF5000 Driver
2. VERSION/REVISION: N/A
3. SCR TYPE AND REQUESTED COMPLETION DATE: [ ] Development [ ] Problem Report [X] Enhancement [ ] Other DATE: 4/31/94
4. SUBMITTER'S PRIORITY: [X] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: Upgrade AF5000 Driver
6. DESCRIPTION OF CHANGE: [ ] See Attached
The current AF5000 driver does not correctly implement the communications failure. The new driver corrects this.
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
The current AF5000 driver does not correctly implement the communications failure.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [X] DACS Software [ ] Drawings
[ ] Other/Name
9. ORIGINATOR: SG McReece Date: 3/29/94 Phone No.: 376-9837

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[X] Yes
[ ] No

~~USQ SCREEN?~~
~~[ ] Yes~~
[ ] No

11. APPROVAL: Date: 3/30/94
Date: 3/30/94
EG&G/LANL Date: 3/30/94

12. ASSIGNED TO: SG McReece Phone No.: 376-9837 Planned Release Date: 4/31/94

3.

13. SOLUTION COMMENTS: [ ] See Attached [ ] None
Will be done by Ken Eldridge in conjunction with upgrade of Genesis & Hobbs Pkgs. ATP-082 verified proper operation.
14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
AF5000.DRV
15 COMPLETED: Date: 1/10/95 Phone No. 376-2590

4.

16 VERIFIED BY: Date: 1/30/95 Phone No. 373-1779
17 RELEASE VERSION: N/A
18 CLOSED BY: Date: 1/10/95 Phone No. 373-2007

Form #: HMTP-SCR-1 (1-25-94)

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 328
Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Motor Strategy
2. VERSION/REVISION: 2.17
3. SCR TYPE AND REQUESTED COMPLETION DATE: [ ] Development [X] Problem Report [ ] Enhancement [ ] Other DATE:
4. SUBMITTER'S PRIORITY: [3] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: Nuisance low alarm on position
6. DESCRIPTION OF CHANGE: [ ] See Attached
   On startup, a low alarm is reported for position since the true value has not yet been received from the PLC. DACS tag is POSITION
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
   Nuisance.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [X] DACS Software [ ] Drawings
   [ ] Other/Name
9. ORIGINATOR: Ruben Mendoza Date: 4/11/94 Phone No.: 373-2007

CCB

10. DISPOSITION:
    [ ] Approve [ ] Approve/Modify
    [1] Reject [ ] Cancel
    [1] Defer 4-12-94
    SEE SCR 344.

WHEN TO IMPLEMENT CHANGE:
[ ] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[ ] No

USQ SCREEN? NA
[ ] Yes
[ ] No

11. ~~APPROVAL:~~ REJECTED
    Ruben Mendoza Date: 5/3/94
    [illegible] Date: 5/3/94
    [illegible] EG&G/LANL Date: 5/3/94
12. ASSIGNED TO: Phone No.: Planned Release Date:

3.

13. SOLUTION COMMENTS: [ ] See Attached [ ] None
14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
15 COMPLETED: Date: / / Phone No.

4.

16 VERIFIED BY: Date: / / Phone No.
17 RELEASE VERSION:
18 CLOSED BY: [signature] Date: 5/3/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (1-25-94)

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 329
Sheet 1 of 3

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS
2. VERSION/REVISION: N/A
3. SCR TYPE AND REQUESTED COMPLETION DATE: [X] Development [ ] Problem Report [ ] Enhancement [ ] Other DATE: 6/3/94
4. SUBMITTER'S PRIORITY: [2] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: Upgrade DACS to ModBus Plus
6. DESCRIPTION OF CHANGE: [✓] See Attached
   Upgrade DACS to ModBus Plus.
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
   Need additional capability provided by ModBus Plus.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [X] ATP [X] SDD [X] Test Procedure [X] AOP [X] ARP [ ] I/O Channel List [X] DACS Software [X] Drawings
   [ ] Other/Name N/A N/A N/A
9. ORIGINATOR: Jeff Martin Date: 4/11/94 Phone No.:

CCB

10. DISPOSITION:
    [✓] Approve [ ] Approve/Modify
    [ ] Reject [ ] Cancel
    [ ] Defer

WHEN TO IMPLEMENT CHANGE:
[✓] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[✓] Yes
[ ] No
ATP-082

USQ SCREEN?
[ ] Yes
[✓] No

11. APPROVAL:
    [signature] WHC Date: 4/12/94
    [signature] LMC Date: 4/12/94
    [signature] EG&G/LANL Date: 4/12/94
12. ASSIGNED TO: S.G. McMacon Phone No.: 376-9837 Planned Release Date: 6/1/94

3.

13. SOLUTION COMMENTS: [ ] See Attached [ ] None
    ATP-082 verified proper operation
14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
15. COMPLETED: [signature] Date: 1/10/95 Phone No. 376-2590

4.

16. VERIFIED BY: [signature] Date: 1/10/95 Phone No. 373-1779
17. RELEASE VERSION: N/A
18. CLOSED BY: [signature] Date: 1/10/95 Phone No. 373-2007

Form #: HMTP-SCR-1 (1-25-94)

SCR No. 329
Description of Change
Continuation.
Sheet 2 of 3

[*1] From: Ross W Truitt at ~WHC211 4/11/94 10:02AM (3717 bytes: 58 ln)
To: Guy T Bear at ~WHC340, Douglas C (Doug) Larsen at ~WHC340, Alvin C Zuehlke at ~WHC266
G (Gayle) McNeece at ~WHC251, Samuel O (Sam) Smith at ~WHC76,
ory J Gauck at ~WHC340, Michael F Erhart at ~WHC140,
..ujillo_leonard_t@ofvax.lanl.gov at -SMTPLink, hoida@n1host.lanl.gov at -SMTPLink, Roger E Bauer at ~WHC76, Jeremy B Crystal at ~WHC211
Subject: ModBus Plus Change
---------- Message Contents ----------

Guy, Doug, & Zeke -

Leonard Trujillo and Jeff Martin would like to proceed as soon as possible with the first step of the DACS upgrade. This involves the replacement of the current 984A Modicon CPUs with new E984 CPUs, which will allow us to utilize Modbus Plus. This will GREATLY enhance the system performance between the PLCs and Genesis.

From a hardware standpoint, this will involve replacing the PLC CPUs, and installing Modbus Plus PC cards (Modicon SA85) into two of the Texas Microsystems CPUs. We could go ahead and install as much of the hardware and cabling in advance, and make the final connections when it's time to implement the change and perform the ATP on the actual DACS target system. I would also like to get this (the pre-installation work) done BEFORE the EG&G technicians are gone at the end of April.

From a software standpoint, this would involve significant changes to the PLC ladder logic, and to the TEST strategy. The MOTOR strategy would be unaffected. We would like to "freeze" the software sometime soon (prior to performing the ATP) to enable Jeff to make the changes at LANL.

We propose two parts to the ATP. One part would be performed in the 306E DACS development lab, utilizing the simulators. The different modules could be "traffic copped" (remapped in address space to duplicate existing DACS field I/O) to verify the software changes. We could verify EVERY channel in the lab in this fashion.

The second part of the ATP would be on the target system at the DACS trailer. Once we made the hardware swap (Jeff predicts about an hour or so to do the actual swap), we would then perform a functional check of the field signals. Zeke has apparently been discussing this already, and proposes to inject a signal on one channel per card in the field to ensure that all cards are reading correctly.

I think we'll have to discuss this further. We want to ensure that we have a verified system, but we don't want to be down for DAYS performing the ATP out at DACS. The 306E portion of the ATP will take some time, but meanwhile we're still up and running out at DACS.

I've asked Gayle McNeece to submit a change request to get this started. I think we'll need to all get together and discuss the appropriate methodology, as well as schedule, to ensure we get a proper ATP performed.

Please let me know how you'd like to proceed. We will discuss this tomorrow at the CCB meeting, but I will need to ensure that we all agree on the correct path to take. I'll also be including Mike McElroy on this, to ensure that QA has buy-in.

- Ross

SCR No: 239
Description of Change
continuation
sheet 3 of 3

[?] From: MARTIN-JR@egg.nv.doe.gov at -SMTPlink 4/18/94 5:13PM (3037 bytes: 55 l
n)
To: S G (Gayle) McNeece at ~WHC251
t: Modbus+ ATP - I/O drawings
---------- Message Contents ----------

Gayle,

With one exception, none of the I/O drawings will need to be re-done. All of the I/O can remain traffic-copped as it is currently. The exception is Drop 17. The 984-785E's only allow 16 drops to be defined. (this may be an option, but it is true of the one's we have in hand at LANL... perhaps, if it is an option, a 32 drop version could be ordered... need to check on this)
Anyway. We have less than 16 drops, but the address of drop 17 needs to be changed. I will proceed as if this drop will be changed to drop 13. The traffic cop of the modules within the drop won't change.

The software will be ATP'd at the development system with an I/O configuration which reflects the development system setup, not DACS' I/O setup. Therefore, we need to know the exact I/O configuration (i.e. drop, rack , slot) for all of the I/O modules in the development system so they can be specified in the ATP. We also need to know how the switch panel is setup - which switches and pots are wired to which inputs, which lights and dials are wired to which outputs. I assume this is flexible, but I would prefer to have a standard configuration and do most of the testing without changing the wiring. All of the ATP can be done using just one or more analog input modules, one or more digital input modules and one or more digital output modules. It doesn't really matter which particular type of digital module we use. All we're trying to do is to be able to manipulate the in the registers. It would be most efficient to base the up on the switch panel. I forget how many modules this can accommodate - but if it were fully utilized (all of the switches and pots and lights connected to modules), the testing would be more efficient. I seem to recall in the deep recesses of my mind that some of the digital modules have differing numbers of inputs or outputs. If that is true then it would be nice (but not essential) to have the one with the most inputs or outputs. So, if one type has 32 inputs and one type has 16 inputs, choose the one with 32 (less traffic-copping to do).

As you can probably tell, I'm not completely familiar with all of the I/O modules. In particular, I don't know what is special about an 865 module. We have only one input using this type of module. I feel sure that an 875 module would serve for testing this channel (just see if it wiggles when we change the register value) but you may want to find out about the 865's and let me know (manual should be in the trailer).

As for 885 and 883 modules, their data ends up in 40000 registers. So, we won't be using any of those for the ATP - we'll just wiggle the 40000 registers from Modsoft.

I need to get Zeke rolling on the ATP, so let me know about the lab setup soon.

--Jeff

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 330
Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS
2. VERSION/REVISION: N/A
3. SCR TYPE AND REQUESTED COMPLETION DATE: [X] Development [ ] Problem Report [ ] Enhancement [ ] Other DATE: 4/30/94
4. SUBMITTER'S PRIORITY: [2] 1 = Critical 2 = High 3 = Medium 4 = Low
5. SYSTEM NAME/TITLE: Upgrade DACS to latest proven Genesis
6. DESCRIPTION OF CHANGE: [ ] See Attached

Upgrade DACS to latest proven Genesis version.
3.72

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

Need additional capability provided by latest proven Genesis version.

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [X] ATP [X] SDD [X] Test Procedure [X] AOP [X] ARP [ ] I/O Channel List [X] DACS Software [ ] Drawings
[ ] Other/Name N/A N/A N/A

9. ORIGINATOR: Jeff Martin Date: 4/11/94 Phone No.:

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[X] Yes
[ ] No

USQ SCREEN?
[ ] Yes
[X] No

11. APPROVAL:
Ruben Mendoza WHC Date: 4/12/94
R.W. Tuttle WHC Date: 4/12/94
[signature] EG&G/LANL Date: 4/12/94

12. ASSIGNED TO: S6 McReece Phone No.: 376-9837 Planned Release Date: ~~4/30/94~~ 6/1/94

3.

13. SOLUTION COMMENTS: [ ] See Attached [ ] None

ATP-082 verified proper operation.

14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None

Genesis version 3.72 now installed.

15 COMPLETED: R.W. Tuttle Date: 1/10/95 Phone No. 376-2590

4.

16 VERIFIED BY: [signature] Date: 1/10/95 Phone No. 373-1779
17 RELEASE VERSION: Version 3.72
18 CLOSED BY: Ruben Mendoza Date: 1/10/95 Phone No. 373-2007

Form #: HMTP-SCR-1 (1-25-94)

HYDROGEN MITIGATION TEST PROJECT
System Change Request

ORIGINAL

SCR No.: 331.

Sheet 1 of 3

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS

2. VERSION/REVISION: N/A

3. SCR TYPE AND REQUESTED COMPLETION DATE: [ ] Development [ ] Problem Report [X] Enhancement [ ] Other DATE: 5/15/94

4. SUBMITTER'S PRIORITY: [3] 1 = Critical 2 = High 3 = Medium 4 = Low

5. SYSTEM NAME/TITLE: Upgrade to DOS 6.X and QEMM 7.X

6. DESCRIPTION OF CHANGE: [ ] See Attached

Upgrade to DOS 6.x and QEmm 7.X.

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

More efficient memory manager.
Easier liscensing is also made by change

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [ ] DACS Software [ ] Drawings
[X] Other/Name DOS/QEMM

9. ORIGINATOR: S.G. McNeece Date: 4/12/94 Phone No.: 6-9837

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

USQ SCREEN?
[ ] Yes
[X] No

11. APPROVAL:
[signature] WHC Date: 4/12/94
[signature] WHC Date: 4/12/94
[signature] EG&G/LANL Date: 4/12/94

12. ASSIGNED TO: SG. McNeece Phone No.: 376 9837 Planned Release Date: 5/15/94.

3.

13. SOLUTION COMMENTS: [X] See Attached [ ] None
upon completion, edit the original SCR to reflect actual versions (i.e. v6.21 QEMM not v6.x) QEMM did not provide required memory. Installed NetRoom3 v8.02

14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [X] See Attached [ ] None

15 COMPLETED: [signature] Date: 5/15/94 Phone No. 509 838-7517

4.

16 VERIFIED BY: [signature] Date: 5/5/94 Phone No. 376-9837

17 RELEASE VERSION: N/A

18 CLOSED BY: [signature] Date: 5/1/ Phone No. 376-2510

Form #: HMTP-SCR-1 (1-25-94)

HYDROGEN MITIGATION TEST PROJECT
System Change Request (Continuation Sheet)

SCR No.: 331
Sheet 2 of 3

[ ] Description [ ] Justification [X] Solution Comments [ ] Software Affected

DOS 6.0 and NetRoom3 were installed on all stations with following remarks:

Station 1 : Removed Videocloaking from config.sys.
To allow WPS.1 to operate correctly.

Station 2 : Did not install DOS 6.0 & Netroom3

Station 3 : Windows option was selected during installation. SETVER SQPLUS.EXE 5.00 was added to AUTOEXEC.BAT to allow Speed Cache Plus utility to work. See Sheet #

Station 4 : (See Continuation Sheet #3)

Station 5 : Deleted DEVICE = SETVER in Config.Sys
Deleted C:\ Smartdrive in Autoexec.bat
Deleted DOS = UMB in Config.sys

Station 6 : Deleted DEVICE = SETVER in Config.Sys
Deleted DOS = UMB in Config.sys
Deleted C:\ Smartdrive in Autoexec.bat

Station 7 : Deleted Device = SETVER in config.sys
Deleted DOS = UMB in config.sys
Deleted C:\ Smartdrive in Autoexec.bat

Station 8 : Deleted Device = setver in config.sys
Deleted DOS = UMB in config.sys
Deleted C:\ Smartdrive in Autoexec.bat

Remote 1 ; Deleted setver.exe from config.sys
Deleted C:\ Smartdrive from Autoexec.bat
Deleted DOS = UMB from Config.sys

Remote 3 : Deleted SETVER.EXE from config.sys
Deleted Videocloaking from config.sys
Deleted C:\ Smartdrive from Autoexec.bat
Deleted DOS = UMB from Config.sys

Form #: HMTP-SCRCS-1 11-26-93

SCR No.: 331

Sheet 3 of 3

[ ] Description [ ] Justification [X] Solution Comments [ ] Software Affected

Station 3: Because this is an HLAN station, installed DOS 6.0 and QEMM 7.02 so would be site standard.

Station 4: Only Hi.mem.Sys is used. Therefore neither QEMM nor NetRoom3 were installed.

Rev. 11:

To: Bob Williams, LANL

From: Ken Eldridge

Date: May 1, 1994

Subject: Netroom 3 memory manager and DOS 6.0 update

The upgrade of the expanded memory manager utilized Netroom 3 developed by Helix instead of QEMM 7.02. Several attempts were made to use the stealth option with QEMM but nothing reliable could be achieved with the AST lab computers beyond an additional 10K of memory. Utilizing QEMM 7.02 with limited stealthing allowed 50 K free with the TEST strategy, while Netroom 3 with video and system cloaking allowed 140 K free with the TEST strategy. I have used Netroom 3 in most of the Genesis applications for the last year and found it more reliable than QEMM. Netroom 3 has been implemented on the following stations with the listed results of memory left on startup of runtime.

Station	With old QEMM setup, DOS 5.0, and DOS=LOW		With Netroom 3, DOS 6.0 and DOS=HIGH		With Netroom 3, DOS 6.0 and DOS=LOW	
	Low	High	Low	High	Low	High
5 Runtime	35024	23008	101872	39520	54020	102960
6 RSS	53472	15104	93104	44208	92160	59648
7 Runtime	33184	45280	101872	61792	54080	125232
7 RSS	51680	496	122096	15264	92160	59648
8 Runtime	99280	73328	167152	90304	119360	153744
Remote 1	47600	160	122096	12464	92160	56848
Remote 3	35936	8512	93104	11392	92160	26832
Remote 11	65808	23232	136208	18032	90416	61472

Results: Netroom 3 yields significant savings in available memory.

Upgrade memory manager procedure

The following procedure was used to upgrade the systems to DOS 6.0 and Netroom 3.

1. Copy CONFIG.SYS to CONFIG.QEM and copy AUTOEXEC.BAT to AUTCEXEC.QEM. This is to allow quite switch back to QEMM memory management.

2. Install DOS 6.0 by A:SETUP. Select all default selections in DOS upgrade.

2b. Delete DEVICE=SETVER.EXE in CONFIG.SYS.

2c. Delete SMARTDRV.EXE from AUTOEXEC.BAT.

3. Install Netroom 3 with A:SETUP.

3b. Enter registration information with serial number.

3c. Select OK to question to copy CONFIG.SYS and AUTOEXEC.BAT to *.B4.

3d. Select OK to install stacks.exe.

3e. Select Cancel to view README file.

3f. Select Customize and remove Netroom floppy disk.

3g. Select ENTER to delete QEMM commands from CONFIG.SYS and AUTOEXEC.BAT.

3h. Select Aggressive Setup.

3i. Select NO to question on use with Super VGA mode.

3j. Restart computer with ENTER.

3k. Press any key to install HELIX BIOS before test on compatibility.

3l. Restart computer with ENTER.

3m. Answer YES if system is working properly.

4. Delete DOS=UMB from CONFIG.SYS.

4b. Reboot system.

5. Verify all applications work with video cloaking. Remove video cloaking if any application is not compatible by deleting DEVICE=VIDCLOAK.SYS from CONFIG.SYS.

6. Monitor amount of memory left low in Runtime. The 64K memory region above 1M can be accessed leaving more total memory available but less in conventional if DOS is loaded low. This is accomplished by deleting DOS=HIGH from CONFIG.SYS.

cc: Hiroshi Hoda
Leonard Trujillo
Tom Pounds
Gayle McNeece
Sam Smith
Jeff Martin

ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 332
Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Station #5
2. VERSION/REVISION: N/A.
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [ ] Enhancement [✓] Other DATE: 4-19-94
4. SUBMITTER'S PRIORITY: [ ] 1 = Critical 2 = High 3 = Medium (4) = Low
5. SYSTEM NAME/TITLE: Station #5 hardware cleanup
6. DESCRIPTION OF CHANGE: [ ] See Attached
   Remove SCSI Card in Slot #12 on station 5 It is not being used
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
   Cleanup of computer stations in DACS
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [ ] DACS Software [✓] Drawings
   [ ] Other/Name
9. ORIGINATOR: Art Villalobos Date: 4/12/93 Phone No.: 373-4733

CCB

10. DISPOSITION:
    [✓] Approve [ ] Approve/Modify
    [ ] Reject [ ] Cancel
    [ ] Defer
11. WHEN TO IMPLEMENT CHANGE:
    [✓] Upon completion of change
    [ ] Prepare change and wait for approval
    [ ] At next mandatory change
    ATP REQUIRED?
    [ ] Yes
    [✓] No
12. APPROVAL: Ruben Mendoza Date: 4/12/94
    Date: 4/12/94
    EG&G, INC. Date: 4/12/94
13. ASSIGNED TO: Art Villalobos Phone No.: 376-9837 Planned Release Date: 4-19-94
14. SOLUTION COMMENTS: [ ] See Attached [✓] None
15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
16. CHANGE INSTALLED: Slot for AOV Date: 4/19/94 Phone No. 546-5015
17. VERIFIED BY: Ruben Mendoza Date: 4/19/94 Phone No. 373-2007
18. RELEASE VERSION:
19. CLOSED BY: [signature] Date: 4/19/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (2-28-94)

HYDROGEN MITIGATION TEST PROJECT
System Change Request

ORIGINAL SCR No.: 333
Sheet 1 of 2

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Test strategy
2. VERSION/REVISION: N/A
3. SCR TYPE AND REQUESTED COMPLETION DATE: [ ] Development [X] Problem Report [ ] Enhancement [ ] Other DATE: 4/9/94
4. SUBMITTER'S PRIORITY: [2] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: Correct naming of alarm.txt files
6. DESCRIPTION OF CHANGE: [ ] See Attached
   The alarm/event summary files "ALARM.TXT" should be renamed to identify the time and date of creation. The same naming convention used for history files should be used.
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
   Current file names are incorrect
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [✓] DACS Software [ ] Drawings
   [ ] Other/Name
9. ORIGINATOR: Ruben Mendoza Date: 4/12/94 Phone No.: 373-2007

CCB

10. DISPOSITION:
   [✓] Approve [ ] Approve/Modify
   [ ] Reject [ ] Cancel
   [ ] Defer

WHEN TO IMPLEMENT CHANGE:
[✓] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[✓] No

USQ SCREEN?
[ ] Yes
[✓] No

11. APPROVAL:
   Ruben Mendoza WHC Date: 4/12/94
   [illegible] WHC Date: 4/12/94
   [illegible] EG&G/LANL Date: 4/12/94
12. ASSIGNED TO: SG McNeece Phone No.: 376 9837 Planned Release Date: 4-19-94

3.
13. SOLUTION COMMENTS: [✓] See Attached [ ] None
14. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [✓] See Attached [ ] None
15 COMPLETED: SG McNeece Date: 4/12/94 Phone No. 376-9837

4.
16 VERIFIED BY: [illegible] Date: 4/12/94 Phone No. 3-4554
17 RELEASE VERSION: 2.2b8
18 CLOSED BY: [illegible] Date: 4/19/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (1-25-94)

HYDROGEN MITIGATION TEST PROJECT
System Change Rrequest (Continuation Sheet)

SCR No.: 333
Sheet 2 of 2
Solution Comments

The problem was caused by the deletion of the file ALEXP.EXE per CR #322. This file was not of obvious value--source code was among the manual tags vestigial code.

Rather than ~~simply~~ restoring the code, the files were put in a subdirectory, \test\c_test, renamed to almrenam.*, and comments added to the source file.

The executable and almcopy.bat were restored to Station 5's \test directory, runtime.bat was modified to call almrenam (rather than alexp), st5restr.bat and st5bckup.bat were modified to restore/save these files.

The strategy wasn't affected, so the revision number was not changed. A disk was made of Test 2.26B.

Test--verify after bringing the test strategy down/up, that the alarm files were copied to \hist and \hist2 with a filename based on the date/time (YMDHAL.TXT, where Y is the year, M is the month, D is the day, and H is the hour). MM

~~44CD16AL.TXT~~
~~MM 16~~ JM

44CD16AL.TXT

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 334
Sheet 1 of 3

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Motor Strategy
2. VERSION/REVISION: 2.17
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [X] Enhancement [ ] Other DATE: 5-31-94
4. SUBMITTER'S PRIORITY: [3] 1 = Critical 2 = High 3 = Medium 4 = Low
5. SYSTEM NAME/TITLE: Remove Demo Mode from Stge. 8
6. DESCRIPTION OF CHANGE: [ ] See Attached
Remove demo mode from Motor Strategy.
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
No longer works, complicates, and slows strategy and report and recipe code
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [X] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [X] DACS Software [ ] Drawings
[ ] Other/Name
9. ORIGINATOR: S.G. McNeece Date: 4/19/94 Phone No.: 376-9837

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

11. WHEN TO IMPLEMENT CHANGE:
[4] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

12. APPROVAL: Samuel O. Smith for Tom Pounds LANL/EG&G Date: 4/19/94
[illegible] for Ross Taylor Date: 4/19/94
[illegible] Date: 4/19/94

13. ASSIGNED TO: SG McNeece. Phone No.: 376-9837 Planned Release Date: 5-31-94

14. SOLUTION COMMENTS: [X] See Attached [ ] None

15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [X] See Attached [ ] None

16. CHANGE INSTALLED: [illegible] S Smith Date: 6/1/94 Phone No. 546-5015

17. VERIFIED BY: [illegible] 5/5/94 Date: 6/1/94 Phone No. 373-2521

18. RELEASE VERSION: 2.19

19. CLOSED BY: [illegible] Date: 6/21/94 Phone No. 3737779

Form #: HMTP-SCR-1 (2-28-94)

SCR No.: 334

Sheet 2 of 3

[ ] Description [ ] Justification [X] Solution Comments [X] Software Affected

The Following Report & Recipe Code was deleted:
BUDEMO.RPS
DEMOINIT.RPS
DSTART.RPS
MDUDEMO.RPS
MPUDEMO.RPS
PBDEMPP.RPS
PBDEMRP.RPS
PBUDEMO.RPS
PSTART.RPS

The Following Report & Recipe Code was modified to delete Demo Code:
BSTOPIT.RPS
BUMPENAB.RPS
BUMPIT.RPS
PBBUTSTP.RPS
PBCHKCLR.RPS
PBOOSPMP.RPS
PBSETVAL.RPS
PBRUN59.RPS
PSTOP.RPS
PBBUTSTP.RPS

The Following Strategy blocks were deleted or modified
PBUDEMO
BUDEMO
AREPORT (inputs changed; Files)
CREPORT
MPUDEMO
MDUDEMO
DEMO
PBREPORT (inputs changed; files)
PBDEMPP

Form #: HMTP-SCRCS-1 (1-25-94)

SCR No.: 334

Sheet 3 of 3

[ ] Description [ ] Justification [X] Solution Comments [X] Software Affected

PBDEMPP
PBREPORT2 (inputs changed; files)
DBREPORT
STARTSHT (output deleted)
STOPRCPT (inputs changed; files)
3STRTADD (output deleted)

Run: Pump Bump, Manual Position, Manual Run, & 3 test
Additionally: Each piece of R&R code was executed in the trailer.

Ken Eldridge performed additional testing on the offline system prior to Test Engineering Verification in the DAES trailer.

Form #: HMTP-SCRCS-1 (1-25-94)

ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 335
Sheet 1 of ~~3~~ 2

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Motor Strategy
2. VERSION/REVISION: 2.17
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [X] Enhancement [ ] Other DATE: 5-31-94
4. SUBMITTER'S PRIORITY: [3] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: Rename Sequence Directory to Motor Directory
6. DESCRIPTION OF CHANGE: [ ] See Attached

Rename "Sequence" Directory to "Motor" Directory on Station 7 to be consistent with "Motor Strategy" name. Coordinate with Test Manager.

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

Lessons Learned.

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [X] AOP [ ] ARP [ ] I/O Channel List [ ] DACS Software [ ] Drawings
[X] Other/Name: Directory Name Label on Station 7

9. ORIGINATOR: S.G. McNeese Date: 4/19/94 Phone No.: 6-9837

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

11. WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

12. APPROVAL:
[signature] Date: 4/19/94
[signature] EG&G/LANL Date: 4/19/94
[signature] Date: 4/19/94

13. ASSIGNED TO: SG McNeese Phone No.: 376-9837 Planned Release Date: 5-31-94.

14. SOLUTION COMMENTS: [X] See Attached [ ] None

15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
Motor Directory Name, STSBCKUP.BAT, STSRESTR.BAT

16. CHANGE INSTALLED: [signature] Date: 4/20/94 Phone No. 6-9837

17. VERIFIED BY: [signature] Date: 4/20/94 Phone No.

18. RELEASE VERSION: 2.18

19. CLOSED BY: [signature] Date: 5/5/94 Phone No. 373-1779.

Form #: HMTP-SCR-1 (2-28-94)

HYDROGEN MITIGATION TEST PROJECT
System Change Request (Continuation Sheet)

SCR No.: 335

Sheet 2 of 2

[ ] Description [ ] Justification [X] Solution Comments [ ] Software Affected

Notified Guy Bear
Wrote on Whiteboard
Changed Label on Station 8
Removed directory on Station 8
Removed directory on Station 7
Sent e-mail message to all Test Engineers

Form #: HMTP-SCRCS-1 (1-25-94)

SYSTEM CHANGE REQUEST (SCR)

SCR No.: 336
Sheet 1 of 1

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS Computers
2. VERSION/REVISION: N/A
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [X] Enhancement [ ] Other DATE: 5-29-94
4. ORIGINATOR'S PRIORITY: [3] 1 = Critical 2 = High 3 = Medium 4 = Low
5. SYSTEM NAME/TITLE: Delete Unused Files
6. DESCRIPTION OF CHANGE: [ ] See Attached

Delete all *.GIF files Except Test.Gif in the Genesis directory of Station 1 - Station 8

Delete all AF5000.* files Except in Genesis directory of Station 1 - Station 8.

Delete all Modicon.* and Help*.Gsp files Except in Genesis directory.

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

Ease maintenance and understanding.

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [ ] DACS Software [ ] Drawings
[ ] Other/Name Genesis Directories

9. ORIGINATOR: Ken Eldridge Date: 4/29/94 Phone No.:

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

11. WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

12. APPROVAL: Ruben Mendoza Date: 5/3/94
Tim [illegible] EG&G/LANL Date: 5/2/94
[illegible] Date: 5/3/94

13. ASSIGNED TO: S. G. McNeece Phone No.: 376-9837 Planned Release Date: 5-29-94

14. SOLUTION COMMENTS: [ ] See Attached [ ] None
Modified STS/8 RESTR.BAT & STS/8BCKUP.BAT
AWAITING DACS LAB FOR OFF LINE TESTING.

15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [X] See Attached [ ] None

16. CHANGE INSTALLED: [illegible] Date: 5/5/94 Phone No. 509-838-7517

17. VERIFIED BY: [illegible] Date: 5/5/94 Phone No. 376-9837

18. RELEASE VERSION: Test 226C / NOTCR 2.19

19. CLOSED BY: [illegible] Date: 6/1/94 Phone No. 373-1779

Form #: HM1P-SCR-1 (4-20-94)

SCR No. 336

Sheet 2 of 5

[ ] Description [ ] Justification [ ] Solution Comments [X] Software Affected

Ken Eldridge, the Genesis consultant was on-site when this SCR was being processed. Using his expert knowledge he did full system cleanups per the attached pages.

Form #: HMTP-SCRCS-1 (1-25-94)

. Files deleted from

5/5/94 1 of 3
KKE

STATION 7

C:\Genesis\

HELP0000.GSP
HELP1000.GSP
HELP2000.GSP
HELP3000.GSP
HELP4000.GSP
HELP5000.GSP
HELP6000.GSP
VANDV.
WTEMPS.TXT
MIREPT.TXT
USERTASK.OPT

SCR 336
Sheet 3 of 5
Software Affected

C:\QEMM*.*

C:\CONFIG.QEM
C:\AUTOEXEC.QEM
C:\OLD_DOS.1*.*

STATION 8

C:\Genesis\

CONFIG.SYS
AUTOEXEC.BAT
USERTASK.OPT

C:\QEMM*.*

C:\OLDSEQ*.*

C:\OLD_DOS.1*.*
C:\CONFIG.QEM
C:\AUTOEXEC.QEM

Files deleted from

5/5/94 2 of 3

ISKE

SCR 336

Sheet 4 of 5

Software Affected

STATION 6

C:\CONFIG.QEM
C:\AUTOEXEC.QEM
C:\CONFIG.NET
C:\AUTOEXEC.NET

C:\QEMM*.*

C:\OLD_DOS.1*.*

C:\GENESIS>

KEN.GNF
KEN.NCF
USERTASK.OPT

STATION 5

C:\CONFIG.QEM
C:\CONEIG.NET
C:\AUTOEXEC.QEM
C:\AUTOEXE.NET
C:\DBTODBF*.*
C:\QEMM*.*
C:\GENESIS>

AUTOEXEC.BAT
CONFIG.SYS
STAIR.DXF
KEN.GNF
KEN.NCF
*.GRP
SEQ.TXT
MIREPT.TXT
WTEMPS.TXT

(CONT.)

[redacted]

SCR 336

Sheet 5 of 5

Software Affected

STATION 5 (cont.)

C:\TEST>

\GENCFG*.*

ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
SYSTEM CHANGE REQUEST (SCR)

SCR No.: 337

Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: MOTOR STRATEGY.
2. VERSION/REVISION: U 2.18
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [✓] Enhancement [ ] Other DATE:
4. ORIGINATOR'S PRIORITY: [ ] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: DEVICE BLOCK IN MOTOR STRATEGY.
6. DESCRIPTION OF CHANGE: [ ] See Attached

CHANGE THE NUMBER OF SCANS BETWEEN RE-TRIES TO 1 FROM 30 IN THE DEVICE BLOCK FOR ONLINE/OFFLINE CHECKING.

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

THIS WILL INCREASE THE FREQUECY OF CHECKING THE AFSOC

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [ ] DACS Software [ ] Drawings
[ ] Other/Name
9. ORIGINATOR: KEN ELDRIDGE Date: 4/29/94 Phone No.:

CCB

10. DISPOSITION:
[ ] Approve [ ] Approve/Modify
[✓] Reject [ ] Cancel
[ ] Defer

11. WHEN TO IMPLEMENT CHANGE:
[ ] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[ ] No

12. ~~APPROVAL:~~ REJECTED
[signature] Date: 5/3/94
[signature] Date: 5/3/94
[signature] EG&G/LANL Date: 5/3/94

13. ASSIGNED TO: Phone No.: Planned Release Date:

14. SOLUTION COMMENTS: [ ] See Attached [ ] None

Change not needed - Limited added valve

15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
16. CHANGE INSTALLED: Date: / / Phone No.
17. VERIFIED BY: Date: / / Phone No.
18. RELEASE VERSION:
19. CLOSED BY: [signature] Date: 5/3/94 Phone No. 373/779

Form #: HMTP-SCR-1 (4-20-94)

HYDROGEN MITIGATION TEST PROJECT
SYSTEM CHANGE REQUEST (SCR)

SCR No.: 338
Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: TEST STRATEGY
2. VERSION/REVISION: U 2.26
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [✓] Development [ ] Problem [ ] Enhancement [ ] Other DATE:____
4. ORIGINATOR'S PRIORITY: [ ] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: RSS NETWORK CONFIGURATION
6. DESCRIPTION OF CHANGE: [ ] See Attached
   MODIFY NETWORK CONFIGURATION ON ALL RSS STATIONS TO HAVE MASTER 1: STATION 5 AND MASTER 2: STATION 7
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
   CURRENTLY SET TO AUTO CONFIG THEREFORE IT IS IGNORING THE MASTER AND ALTERNATE MASTER AND THE FIELDS ARE SET INCORRECTLY
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [✓] DACS Software [ ] Drawings
   [ ] Other/Name
9. ORIGINATOR: KEN ELDRIDGE Date: 4 / 29 / 94 Phone No.:

CCB

10. DISPOSITION:
    [ ] Approve [ ] Approve/Modify
    [✓] Reject [ ] Cancel
    [ ] Defer
11. WHEN TO IMPLEMENT CHANGE:
    [ ] Upon completion of change
    [ ] Prepare change and wait for approval
    [ ] At next mandatory change
    ATP REQUIRED?
    [ ] Yes
    [ ] No
12. ~~APPROVAL~~: REJECTED
    Date: 5/3/94
    Date: 5/3/94
    Date: 5/3/94
13. ASSIGNED TO: Phone No.: Planned Release Date:

14. SOLUTION COMMENTS: [ ] See Attached [ ] None
    LIMITED VALUE ADDED IF PROBLEM ARISES CORRECTIVE ACTIONS WILL BE TAKEN
15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
16. CHANGE INSTALLED: Date: / / Phone No.
17. VERIFIED BY: Date: / / Phone No.
18. RELEASE VERSION:
19. CLOSED BY: Date: 5 / 4 / 94 Phone No. 373-1779

Form #: HMTP-SCR-1 (4-20-94)

ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
SYSTEM CHANGE REQUEST (SCR)

SCR No.: 339
Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: TEST STRATEGY
2. VERSION/REVISION: V 2.26
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [✓] Problem [ ] Enhancement [ ] Other DATE: 5/2/94
4. ORIGINATOR'S PRIORITY: [3] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: SPECIFY CORRECT AMES DATALOGGING VARIBLES
6. DESCRIPTION OF CHANGE: [ ] See Attached

   SPECIFY 15 VARIABLES FOR AMES DATALOGGING INSTEAD OF 19

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

   THE MOST RECENT VERSION OF GENESIS (3.92) INDICATES THE DISCREPANCY AT STARTUP

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [ ] DACS Software [ ] Drawings
   [ ] Other/Name
9. ORIGINATOR: KEN ELDRIDGE Date: 4/29/94 Phone No.:

CCB

10. DISPOSITION:
    [ ] Approve [ ] Approve/Modify
    [X] Reject 6-1-94 [ ] Cancel
    [X] Defer 5-3-94
11. WHEN TO IMPLEMENT CHANGE:
    [ ] Upon completion of change
    [ ] Prepare change and wait for approval
    [ ] At next mandatory change

    ATP REQUIRED?
    [ ] Yes
    [ ] No
12. APPROVAL: As concurred by CCB [signature] 6-1-94 Date: / / Date: / / Date: / /
13. ASSIGNED TO: Phone No.: Planned Release Date:
14. SOLUTION COMMENTS: [ ] See Attached [ ] None

    ~~WILL BE DONE BY JEFF MARTIN IN CONJUNCTION WITH ERS~~ SCRs TO UPGRADE ~~GENESIS AND MODBUS PLUS~~. Rejected since associated software in Genesis not used
15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
16. CHANGE INSTALLED: Date: / / Phone No.
17. VERIFIED BY: Date: / / Phone No.
18. RELEASE VERSION:
19. CLOSED BY: [signature] Date: 6/1/94 Phone No. 373-1729

Form #: HMTP-SCR-1 (4-20-94)

ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
SYSTEM CHANGE REQUEST (SCR)

SCR No.: 340
Sheet 1 of 1

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: ASCII BASIC PROGRAMS
2. VERSION/REVISION: NOT ESTABLISHED
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [X] Enhancement [ ] Other DATE: 6/1/94
4. ORIGINATOR'S PRIORITY: [3] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: Comment ASCII BASIC Programs
6. DESCRIPTION OF CHANGE: [ ] See Attached
   Jeff Martin has commented the ASCII BASIC programs
   The comments need to be put into place
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
   Need for understanding code. primarily by the software programmer
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [X] DACS Software [ ] Drawings
   [ ] Other/Name
9. ORIGINATOR: Jeff Martin Date: 4/21/94 Phone No.:

CCB

10. DISPOSITION:
    [X] Approve [ ] Approve/Modify
    [ ] Reject [ ] Cancel
    [ ] Defer
11. WHEN TO IMPLEMENT CHANGE:
    [ ] Upon completion of change
    [ ] Prepare change and wait for approval
    [ ] At next mandatory change

    ATP REQUIRED?
    [ ] Yes
    [X] No

12. APPROVAL: Date: 5/3/94
    Date: 5/3/94
    EG&G/LANL Date: 5/3/94
13. ASSIGNED TO: S.G. M. Morse Phone No.: 376-9837 Planned Release Date: 5.29.94
14. SOLUTION COMMENTS: [X] See Attached [ ] None
    Comments added. Independent code verification performed by R.O. Carter. All code set to Rev. 2.0 installed ST3 C:\BASPRGS>
15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
    GC3.BAS, MASS.BAS and MIXEFF.BAS
16. CHANGE INSTALLED: [signature] Date: 6/1/94 Phone No. 546-5016
17. VERIFIED BY: Russell Carter Date: 5/12/94 Phone No. 376-2619
18. RELEASE VERSION: 2.0
19. CLOSED BY: [signature] Date: 6/21/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (4-20-94)

SCR No.: 340
Sheet : 2 of 2

```
 Directory of C:\BASPROG

.            <DIR>      12-16-93  11:53a
             <DIR>      12-16-93  11:53a
MASS     BAS        1671 06-02-93   1:15p
GC3      BAS         453 07-08-93   9:57p
MIXEFF   BAS        1117 11-11-93   2:33p
        5 file(s)          3241 bytes
                   150192128 bytes free

Type "Exit" to return to Menu
C:\BASPROG>dir b:

 Volume in drive B has no label
 Volume Serial Number is 2636-12F4
 Directory of B:\

GC3      BAS        1465 05-12-94   1:50p
MIXEFF   BAS        3298 05-12-94   1:51p
MASS     BAS        4360 05-12-94   1:51p
        3 file(s)          9123 bytes
                     1447936 bytes free

Type "Exit" to return to Menu
C:\BASPROG>
```

old

New

Both Versions on archive floppy and ST3. Current is *.BAS other is *.OLD.

chive Floppy Label

ASCII BASIC Modules

Name	Rev	Date
GC3	2.0	5/12/94
MIXEFF	2.0	5/12/94
MASS	2.0	5/12/94

HYDROGEN MITIGATION TEST PROJECT
SYSTEM CHANGE REQUEST (SCR)

SCR No.: 341
Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Test Strategy
2. VERSION/REVISION: 2.26
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [X] Problem [ ] Enhancement [ ] Other DATE: 6/30/94
4. ORIGINATOR'S PRIORITY: [3] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: Remove Obsolete WIR14A01, WIR14A02, WIR14A03 Tags
6. DESCRIPTION OF CHANGE: [ ] See Attached

   Tags WIR14A01-03 (Strain Gauge, 14A VDTT) are no longer brought into DACS. These tags should be removed.

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

   Remove obsolete tags for easier understanding/maintenance

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [X] DACS Software [ ] Drawings
   [ ] Other/Name
9. ORIGINATOR: Jeff Martin Date: 4/27/94 Phone No.: 702-295-0252

CCB

10. DISPOSITION:
    [X] Approve [ ] Approve/Modify
    [ ] Reject [ ] Cancel
    [ ] Defer
11. WHEN TO IMPLEMENT CHANGE:
    [X] Upon completion of change
    [ ] Prepare change and wait for approval
    [ ] At next mandatory change

    ATP REQUIRED? [ ] Yes [X] No
12. APPROVAL: Ruben Mendoza Date: 5/3/94
    Tom W. Date: 5/3/94
    EG&G/LANL Date: 5/3/94
13. ASSIGNED TO: Jeff Martin Phone No.: 702-295-0252 Planned Release Date: 6/31/94
14. SOLUTION COMMENTS: [ ] See Attached [ ] None
    Will be done by Jeff in conjunction with CRS to upgrade Genesis & ModBus+
15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
    Test Version 3.001
16. CHANGE INSTALLED: P.W. Date: 1/10/95 Phone No. 376-2590
17. VERIFIED BY: Ruben Mendoza Date: 1/10/95 Phone No. 373-2007
18. RELEASE VERSION: V. 3.00.1
19. CLOSED BY: Ruben Mendoza Date: 1/10/95 Phone No. 373-2007

Form #: HMTP-SCR-1 (4-20-94)

ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
SYSTEM CHANGE REQUEST (SCR)

SCR No.: 342
Sheet 1 of 3

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: PLC Ladder Logic

2. VERSION/REVISION: DACS201

3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [✓] Enhancement [ ] Other DATE: 6/31/94

4. ORIGINATOR'S PRIORITY: [2] 1=Critical 2=High 3=Medium 4=Low

5. SYSTEM NAME/TITLE: Unused Inputs to Composite Abc/ts

6. DESCRIPTION OF CHANGE: [ ] See Attached
The composite logic to create STRNABET (coil 00033) includes inputs 10202, 10218, 10204 and 10220 which are unused and should therefore be removed. The symbol table description for LTESTENAB should be changed to read "OR of BMP & FHB LATCHED ENABLES".

7. JUSTIFICATION FOR CHANGE: [ ] See Attached
Unused logic needs to be deleted to minimize confusion and maintenance

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [✓] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [✓] DACS Software [ ] Drawings
[ ] Other/Name

9. ORIGINATOR: S.G. McNeece Date: 04/27/94 Phone No.: 376-9837

CCB

10. DISPOSITION:
[✓] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

11. WHEN TO IMPLEMENT CHANGE:
[✓] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[✓] Yes 9/22/94
[ ] No SC
ATP-082

12. APPROVAL: Ruben Mendoza Date: 5/3/94
[signature] Date: 5/3/94
[signature] EG&G/LANL Date: 5/3/94

13. ASSIGNED TO: Jeff Martin Phone No.: 702-295-0252 Planned Release Date: 6/31/94

14. SOLUTION COMMENTS: [ ] See Attached [ ] None
Will be done by Jeff Martin in conjunction with CEs to upgrade Genesis and Modbus Plus. Tested and verified by ATP-082

15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
PLC ladder logic

16. CHANGE INSTALLED: 2-13-94 [signature] Date: 12/13/94 Phone No. 376-2510

17. VERIFIED BY: KWT for R.E. Mendoza Date: 01/31/95 Phone No. 373-2007

18. RELEASE VERSION: PLC300

19. CLOSED BY: KWT for R.E. Mendoza Date: 1/31/95 Phone No. 373-2007

Form #: HMTP-SCR-1 (4-20-94)

SCR # 342
PAGE 3 OF 3
ORIGINAL
SCR: 342
DESCRIPTION OF CHANGE (CONTINUED).

00111	= 0 E	MS_ERROR		G15C6.15	Seg 02 P004 Net #003 2,* -( )
00112	= 0 E	MS_PROG		G15C6.16	Seg 02 P004 Net #003 4,* -( )
00113	= 0 E	MS_STAT1	PORT A INPUT BUSY	G15C7.1	
00114	= 0 E	MS_STAT2	PORT A OUTPUT BUSY	G15C7.2	
00115	= 0 E	MS_STAT3	PORT B INPUT BUSY	G15C7.3	
00116	= 0 E	MS_STAT4	PORT B OUTPUT BUSY	G15C7.4	
00117	= 0 E	MS_STAT5	ASCII/BASIC RUNNING (PC COMMAND)	G15C7.5	
00118	= 0 E	MS_STAT6	BASIC RUNNING (SCHED COMMAND)	G15C7.6	
00119	= 0 E	MS_STAT7	CUE/ERROR IN RUNNING ACTIVITY	G15C7.7	
00120	= 0 E	MS_STAT8	SCHEDULER PENDING	G15C7.8	
00121	= 0 E	MS_SWD8	USER FLAG 8	G15C7.9	
00122	= 0 E	MS_SWD7	USER FLAG 7	G15C7.10	
00123	= 0 E	MS_SWD6	USER FLAG 6	G15C7.11	
00124	= 0 E	MS_SWD5	USER FLAG 5	G15C7.12	
00125	= 0 E	MS_SWD4	USER FLAG 4	G15C7.13	
00126	= 0 E	MS_SWD3	USER FLAG 3	G15C7.14	
00127	= 0 E	MS_SWD2	USER FLAG 2	G15C7.15	
00128	= 0 E	MS_SWD1	USER FLAG 1	G15C7.16	
00129	= 0 E	MS_SEQ1		G15C8.1	
00130	= 0 E	MS_SEQ2		G15C8.2	
00131	= 0 E	MS_SEQ3		G15C8.3	
00132	= 0 E	MS_SEQ4		G15C8.4	
00133	= 0 E	MS_SEQ5		G15C8.5	
00134	= 0 E	MS_SEQ6		G15C8.6	
00135	= 0 E	MS_SEQ7		G15C8.7	
00136	= 0 E	MS_SEQ8		G15C8.8	
00137	= 0 E	MS_SEQ9		G15C8.9	
00138	= 0 E	MS_SEQ10		G15C8.10	
00139	= 0 E	MS_SEQ11		G15C8.11	
00140	= 0 E	MS_SEQ12		G15C8.12	
00141	= 0 E	MS_SEQ13		G15C8.13	
00142	= 0 E	MS_SEQ14		G15C8.14	
00143	= 0 E	MS_SEQ15		G15C8.15	
00144	= 0 E	MS_SEQ16		G15C8.16	
00145	= 0 E	MS_NSEQ1		G15C9.1	Seg 02 P004 Net #004 7,* -( )
00146	= 0 E	MS_NSEQ2		G15C9.2	Seg 02 P004 Net #005 1,* -( )
00147	= 0 E	MS_NSEQ3		G15C9.3	Seg 02 P004 Net #005 4,* -( )
00148	= 0 E	MS_NSEQ4		G15C9.4	Seg 02 P004 Net #006 4,* -( )
00149	= 0 E	MS_NSEQ5		G15C9.5	Seg 02 P004 Net #006 7,* -( )
00150	= 0 E	MS_NSEQ6		G15C9.6	Seg 02 P004 Net #007 4,* -( )
00151	= 0 E	MS_NSEQ7		G15C9.7	Seg 02 P004 Net #007 6,* -( )
00152	= 0 E	MS_NSEQ8		G15C9.8	Seg 02 P004 Net #008 4,* -( )
00153	= 0 E	MS_NSEQ9		G15C9.9	Seg 02 P004 Net #008 6,* -( )
00154	= 0 E	MS_NSEQ10		G15C9.10	Seg 02 P004 Net #009 4,* -( )
00155	= 0 E	MS_NSEQ11		G15C9.11	Seg 02 P004 Net #009 6,* -( )
00156	= 0 E	MS_NSEQ12		G15C9.12	Seg 02 P004 Net #010 4,* -( )
00157	= 0 E	MS_NSEQ13		G15C9.13	Seg 02 P004 Net #010 5,* -( )
00158	= 0 E	MS_NSEQ14		G15C9.14	Seg 02 P004 Net #011 4,* -( )
00159	= 0 E	MS_NSEQ15		G15C9.15	
00160	= 0 E	MS_NSEQ16		G15C9.16	
00161	= 0 E	MS_BASICRN		G15C10.1	Seg 02 P004 Net #003 5,* -( )
00162	= 0 E	MS_IDLE		G15C10.2	Seg 02 P004 Net #003 7,* -( )
00163	= 0 E	MS_NOTFRST		G15C10.3	Seg 02 P004 Net #002 7,* -( )
00164	= 0 E	MS_TRESET		G15C10.4	Seg 02 P004 Net #013 1,* -( )
00165	= 0 E	DM_CHECK		G15C10.5	Seg 02 P002 Net #005 4,* -( )
00166	= 0 E	PLSDONE		G15C10.6	Seg 02 P006 Net #005 1,* -( )
00167	= 0 E	HF_ALM		G15C10.7	Seg 02 P006 Net #001 1,* -( )
00168	= 0 E	LTESTENAB	OR OF BMP LO FLO & PH B LATCHED ENABLES	G15C10.8	Seg 02 P000 Net #004 1,* -( )

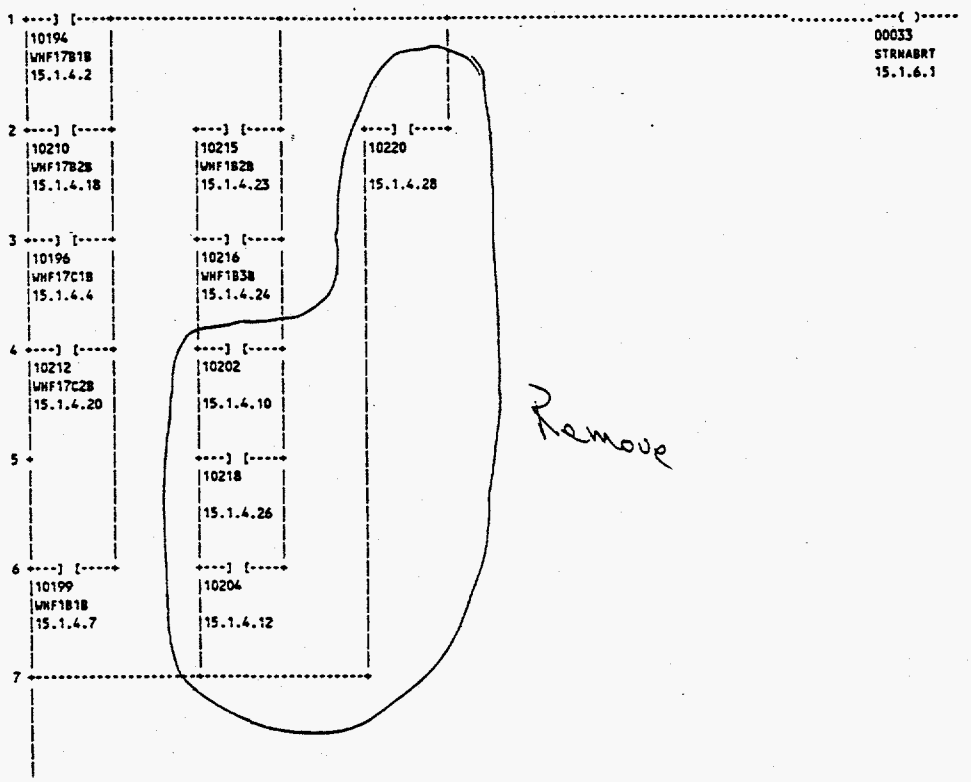
Remove

ORIGINAL
SCR 342
DESCRIPTION OF CHANGE (CONTINUED)
PAGE 2 of 3

Date: 4/12/94 Time: 16:14 Page: 118

Segment: 02 Object: P003 Network: #00061

create composite aborts



00033 STRNABRT 15.1.6.1 HIGH FREQ STRN ABORT-8828 5V TTL G10C12 G15C2.1 02P003#061w1,* -( ) 02P003#063r3,1 -] [

Date: 4/12/94 Time: 16:14 Segment: 02 Object: P003 Network: #00061 Page: 118

ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
SYSTEM CHANGE REQUEST (SCR)

SCR No.: 343
Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Test Strategy

2. VERSION/REVISION: 2.26

3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [X] Problem [ ] Enhancement [ ] Other DATE: 5.29.94

4. ORIGINATOR'S PRIORITY: [3] 1=Critical 2=High 3=Medium 4=Low

5. SYSTEM NAME/TITLE: NIR17B01 Recorded Twice in Vol. History File

6. DESCRIPTION OF CHANGE: [ ] See Attached

NIR17B01 is recorded twice in the VOL history file -- only needs to be recorded once (Recorded as Tag 8 & tag 12)

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

takes extra time to move data, takes up extra disk space

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [ ] DACS Software [ ] Drawings
[ ] Other/Name

9. ORIGINATOR: Jeff Martin Date: 4/19/94 Phone No.: 702-295-0252

CCB

10. DISPOSITION:
[ ] Approve [ ] Approve/Modify
[X] Reject [ ] Cancel
[ ] Defer

11. WHEN TO IMPLEMENT CHANGE:
[ ] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

12. ~~APPROVAL~~: Reject
[signature] Date: 5/3/94
[signature] Date: 5/3/94
[signature] EG&G/LANL Date: 5/3/94

13. ASSIGNED TO: S.G. McNeece Phone No.: 376-9837 Planned Release Date: 5.29.94

14. SOLUTION COMMENTS: [ ] See Attached [ ] None
Will be done by Jeff Martin in conjunction with the CRs to upgrade Genesis & ModBus Plus. REJECTED DUE TO (…) VALUE ADDED AND DATA ANALYST ROUTINES WOULD BE IMPACTED

15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None

16. CHANGE INSTALLED: Date: / / Phone No.

17. VERIFIED BY: Date: / / Phone No.

18. RELEASE VERSION:

19. CLOSED BY: [signature] Date: 5/3/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (4-20-94)

ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
System Change Request

SCR No.: 344 / 313 A

Sheet 1 of 1

Cancelled 5.10.94

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS TEST Strategy
2. VERSION/REVISION: 2.26
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [✓] Development [ ] Problem [ ] Enhancement [ ] Other DATE: 5.29.94
4. SUBMITTER'S PRIORITY: [3] 1 = Critical 2 = High 3 = Medium 4 = Low
5. SYSTEM NAME/TITLE: POSITION tag alarm removal
6. DESCRIPTION OF CHANGE: [ ] See Attached
   Remove high and Low alarms from MOTOR strategy tag POSITION.
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
   Alarms not needed. Currently, POSITION tag alarms spuriously when station 8 is started.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [X] DACS Software [ ] Drawings
   [ ] Other/Name
9. ORIGINATOR: Ruben Mendoza Date: 5/3/94 Phone No.: 373-2007

CCB

10. DISPOSITION:
    [✓] Approve [ ] Approve/Modify
    [ ] Reject [ ] Cancel 5-10-94
    [ ] Defer
11. WHEN TO IMPLEMENT CHANGE:
    [ ] Upon completion of change
    [ ] Prepare change and wait for approval
    [ ] At next mandatory change

    ATP REQUIRED?
    [ ] Yes
    [ ] No
12. APPROVAL:
    Ruben Mendoza Date: 5/3/94
    Date:
    EG&G/LANL Date: 5/3/94
13. ASSIGNED TO: S/L McKeen Phone No.: 376-9537 Planned Release Date: 5.29.94
14. SOLUTION COMMENTS: [ ] See Attached [ ] None
15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
    Motor Strategy
16. CHANGE INSTALLED: Date: / / Phone No.
17. VERIFIED BY: Date: / / Phone No.
18. RELEASE VERSION:
19. CLOSED BY: Date: / / Phone No.

Form #: HMTP-SCR-1 (2-28-94)

ORIGINAL

SYSTEM CHANGE REQUEST (SCR)

SCR No.: 345

Sheet 1 of 1

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: PLC Logic
2. VERSION/REVISION: DACS201
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [✓] Enhancement [ ] Other DATE: 5.29.94
4. ORIGINATOR'S PRIORITY: [3] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: Limit Switch abort coil additions
6. DESCRIPTION OF CHANGE: [ ] See Attached
   Add required PLC logic to provide automatic abort capability to the limit switches. (DACS tags ZIMPE143, ZIMPE144).
   To be implemented after the Genesis + Modbus Plus upgrade.
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
   Limit switches should stop the pumprotation.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [X] ATP [ ] SDD [ ] Test Procedure [X] AOP [X] ARP [ ] I/O Channel List [X] DACS Software [ ] Drawings
   [ ] Other/Name
9. ORIGINATOR: Ruben Mendoza Date: 5/3/94 Phone No.: 373-2007

CCB

10. DISPOSITION:
    [✓] Approve [ ] Approve/Modify
    [ ] Reject [ ] Cancel
    [ ] Defer
11. WHEN TO IMPLEMENT CHANGE:
    [✓] Upon completion of change
    [ ] Prepare change and wait for approval
    [ ] At next mandatory change

    ATP REQUIRED? [✓] Yes ATRCL [ ] No
12. APPROVAL: Ruben Mendoza Date: 5/3/94
    [signature] Date: 5/3/94
    [signature] EG&G/LANL Date: 5/3/94
13. ASSIGNED TO: S.G. McPeece Phone No.: 3769837 Planned Release Date: 5.29.94

14. SOLUTION COMMENTS: [ ] See Attached [ ] None "It's about time this was done"
    Included in upgrade. Jeff Martin
15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
16. CHANGE INSTALLED: [signature] Date: 27/Feb/95 Phone No. 373-6977
17. VERIFIED BY: [signature] Date: 27/Feb/95 Phone No. 373-1779
18. RELEASE VERSION: PLC 3.00
19. CLOSED BY: [signature] Date: 27/Feb/95 Phone No. 373-1779

Form #: HMTP-SCR-1 (4-20-94)

ORIGIN

HYDROGEN MITIGATION TEST PROJECT
SYSTEM CHANGE REQUEST (SCR)

SCR No.: 346
Sheet 1 of 2

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Motor Strategy
2. VERSION/REVISION: 2.18
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [X] Problem [ ] Enhancement [ ] Other DATE: 5-31-94
4. ORIGINATOR'S PRIORITY: [3] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: Nuisance Low Alarm on Position.
6. DESCRIPTION OF CHANGE: [ ] See Attached
   On startup, a low alarm is reported for position since the true value has not yet been received from the PLC. DACS tag is POSITION.
   Strategy will have 30 sec delay before POSITION TO be recognized.
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
   The low alarm is a false alarm on initial startup.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [X] DACS Software [ ] Drawings
   [ ] Other/Name
9. ORIGINATOR: Ruben Mendoza Date: 5/10/94 Phone No.: 373-2007

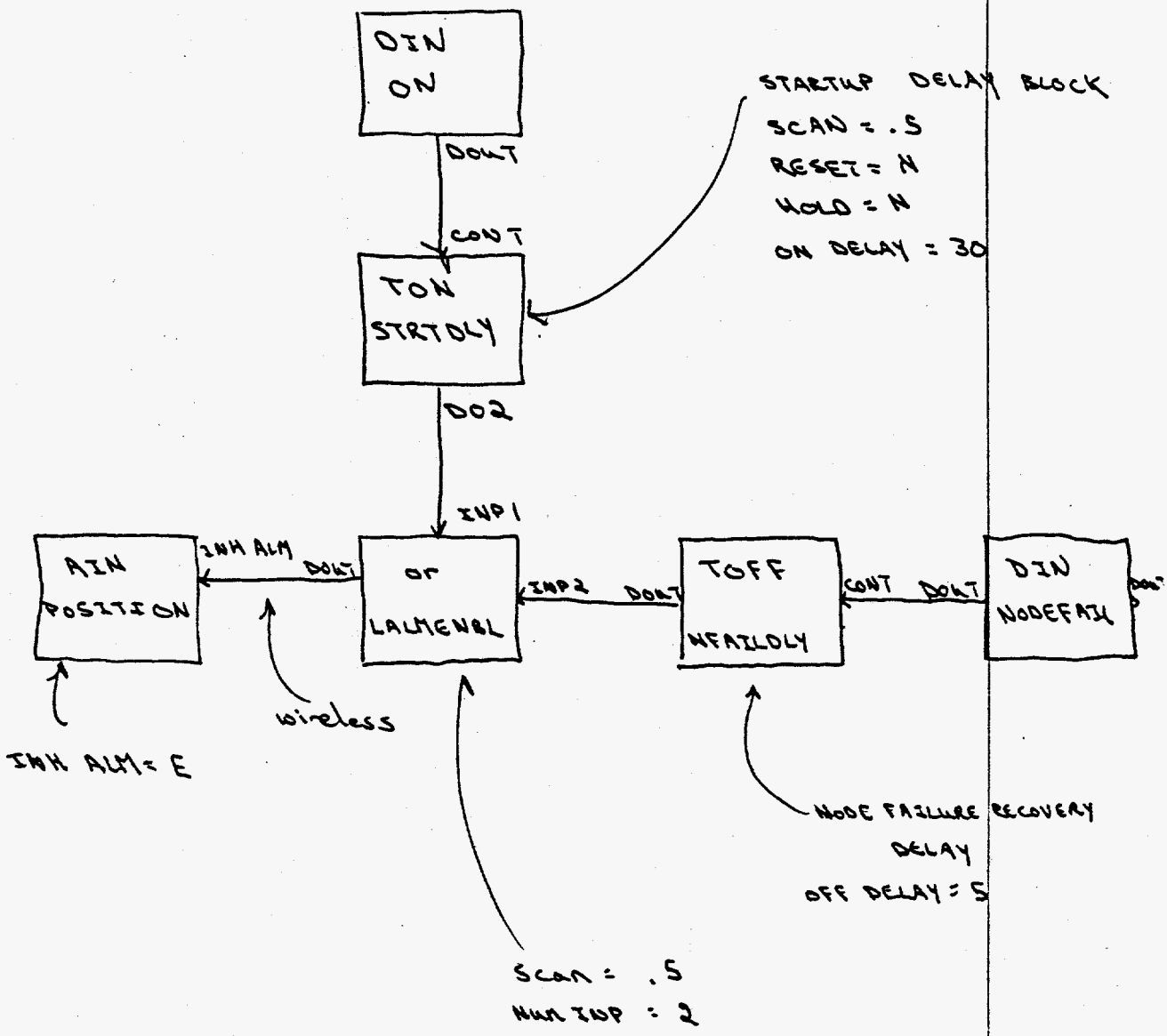
CCB

10. DISPOSITION:
    [✓] Approve [ ] Approve/Modify
    [ ] Reject [ ] Cancel
    [ ] Defer
11. WHEN TO IMPLEMENT CHANGE:
    [✓] Upon completion of change
    [ ] Prepare change and wait for approval
    [ ] At next mandatory change

    ATP REQUIRED? [ ] Yes [✓] No
12. APPROVAL: Ruben Mendoza Date: 5/10/94
    Signed per telecon with S.G. McNeece Date: 5/10/94
    Signed per telecon with S.G. McNeece Date: 5/10/94
13. ASSIGNED TO: S.G. McNeece Phone No.: 376-9837 Planned Release Date: 5-31-94

14. SOLUTION COMMENTS: [X] See Attached [ ] None
    Run: Pump Buzz, Manual Position, Manual Run, OB test
15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
    Motor Strategy
16. CHANGE INSTALLED: [signature] 5/5/94 Date: 6/1/94 Phone No. 546-5015
17. VERIFIED BY: [signature] Date: 6/1/94 Phone No. 373-2521
18. RELEASE VERSION: V2.19
19. CLOSED BY: [signature] Date: 7/5/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (4-20-94)


DIN
ON
DOUT
CONT
TON
STRTDLY
DO2
STARTUP DELAY BLOCK
SCAN = .5
RESET = N
HOLD = N
ON DELAY = 30
INP1
AIN
POSITION
INH ALM
DOUT
OR
LALMENBL
INP2
DOUT
TOFF
NFAILDLY
CONT
DOUT
DIN
NODEFAIL
wireless
INH ALM = E
NODE FAILURE RECOVERY
DELAY
OFF DELAY = 5
Scan = .5
Num INP = 2

ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
SYSTEM CHANGE REQUEST (SCR)

SCR No.: 347.

Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: MOTOR Strategy.

2. VERSION/REVISION: V. 2.18

3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [✓] Enhancement [ ] Other DATE: 5-31-94

4. ORIGINATOR'S PRIORITY: [2] 1=Critical 2=High 3=Medium 4=Low

5. SYSTEM NAME/TITLE: DEVICE BLOCK IN MOTOR STRATEGY.

6. DESCRIPTION OF CHANGE: [ ] See Attached

CHANGE THE NUMBER OF SCANS BETWEEN RETRIES TO 1 FROM 30 IN THE DEVICE BLOCK FOR ONLINE/OFFLINE CHECKING. Part of upgrades for Genesis & Modbus + SEE SCR# 338 AND SCR# 339.

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

THIS WILL INCREASE THE FREQUENCY OF CHECKING THE AF SEC'D.

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP ~~[ ] SDD~~ [✓] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List ~~[✓] DACS Software~~ FAS [ ] Drawings
[ ] Other/Name

9. ORIGINATOR: KEN ELDRIDGE Date: 4/29/94 Phone No.:

CCB

10. DISPOSITION:
[✓] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

11. WHEN TO IMPLEMENT CHANGE:
[✓] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[✓] No

12. APPROVAL: Ruben Mendoza — Date: 5/10/94
signed per telecon with S.G. McKee [illegible] — Date: 5/10/94
signed per telecon with S.O. Smith [illegible] — Date: 5/10/94

13. ASSIGNED TO: ~~KEN E~~ S.G. McKee Phone No.: 6-9837 Planned Release Date: 5-31-94

14. SOLUTION COMMENTS: [ ] See Attached [ ] None

Scans between retries changed to 10 to accomodate RS232 communications avoiding overload problems.

15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None

~~Test~~ MOTOR Strategy 3.00

16. CHANGE INSTALLED: SO Smith Date: 1/10/95 Phone No. 373-6977

17. VERIFIED BY: [signature] Date: 1/10/95 Phone No. 3-1779.

18. RELEASE VERSION: V.3.00.

19. CLOSED BY: Ruben Mendoza Date: 1/10/95 Phone No. 373-2007

Form #: HMTP-SCR-1 (4-20-94)

ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
SYSTEM CHANGE REQUEST (SCR)

SCR No.: 348
Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: TEST Strategy
2. VERSION/REVISION: V. 626
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [X] Development [ ] Problem [ ] Enhancement [ ] Other DATE:____
4. ORIGINATOR'S PRIORITY: [2] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: RSS Network Configuration
6. DESCRIPTION OF CHANGE: [ ] See Attached

MODIFY NETWORK CONFIGURATION ON ALL RSS STATIONS TO HAVE MASTER 1: STATIONS AND MASTER 2: STATION 7
Part of upgrades for Genesis & Modbus +

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

CURRENTLY SET TO AUTO CONFIG THEREFORE IT IS IGNORING THE MASTER 1 AND ALTERNATE MASTER AND THE FIELDS ARE SET INCORRECTLY

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [ ] DACS Software [ ] Drawings
[ ] Other/Name

9. ORIGINATOR: KEN ELDRIDGE Date: 4/29/94 Phone No.:

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

11. WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

12. APPROVAL: Arlen Mendoza Date: 5/10/94
Signed for Telecon with S.G. McNeese Date: 5/10/94
Signed for telecon with S.O. Smith Date: 5/10/94

13. ASSIGNED TO: S.G. McNeese Phone No.: 6937 Planned Release Date: 5.31.94

14. SOLUTION COMMENTS: [ ] See Attached [ ] None

ATP-082 verified proper operation

15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
Test Strategy V. 3.00 D. utilizes new RSS Network Conf

16. CHANGE INSTALLED: S Smith Date: 1/10/95 Phone No. 373-6977

17. VERIFIED BY: [signature] Date: 1/10/94 Phone No. 373-1777

18. RELEASE VERSION: N/A

19. CLOSED BY: Arlen Mendoza Date: 1/10/95 Phone No. 373-2007

Form #: HMTP-SCR-1 (4-20-94)

HYDROGEN MITIGATION TEST PROJECT
SYSTEM CHANGE REQUEST (SCR)

SCR No.: 349

Sheet 1 of 4

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: MOTOR Strategy

2. VERSION/REVISION: 2.18

3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [✓] Development [ ] Problem [ ] Enhancement [ ] Other DATE: 5.31.94

4. ORIGINATOR'S PRIORITY: [2] 1=Critical 2=High 3=Medium 4=Low

5. SYSTEM NAME/TITLE: REMOVE "DISPLAY" SCREEN

6. DESCRIPTION OF CHANGE: [X] See Attached

REMOVE DISPLAY screen from DACS and any associated software. This change will not be made until the upgraded GENESIS And MODBUS+ have been implemented.

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

NO LONGER USED AND NOT PROJECTED TO BE USED.

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [✓] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [ ] DACS Software [ ] Drawings
[ ] Other/Name

9. ORIGINATOR: Greg Frank Date: 5/10/94 Phone No.: 373-1779

CCB

10. DISPOSITION:
[✓] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

11. WHEN TO IMPLEMENT CHANGE:
[✓] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

12. APPROVAL: [signature] Date: 5/10/94
signed per telecon w/ GG McPherson Date: 5/10/94
signed per telecon w/ S.C. Smith Date: 5/10/94

13. ASSIGNED TO: GG McPherson Phone No.: 6-9837 Planned Release Date: 5.31.94

14. SOLUTION COMMENTS: [ ] See Attached [ ] None

15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
MOTOR Strategy 3.00

16. CHANGE INSTALLED: SC Smith Date: 1/10/95 Phone No. 373-6977

17. VERIFIED BY: [signature] Date: 1/10/95 Phone No. 3-1779

18. RELEASE VERSION: MOTOR Strategy 3.00

19. CLOSED BY: [signature] Date: 1/10/95 Phone No. 373-2007

Form #: HMTP-SCR-1 (4-20-94)

SCR No. 349
Sheet 2 of 4
Description of Change

[2] From: Alvin C Zuehlke at ~WHC266 5/4/94 2:33PM (2859 bytes: 49 ln)
To: S G (Gayle) McNeece at ~WHC251, Samuel O (Sam) Smith at ~WHC76
ss W Truitt at ~WHC211, Douglas C (Doug) Larsen at ~WHC340
t: Problems With Station #8 Strategy
---------- Message Contents ----------

Hello!

Today Mike, Doug, and I were able to perform some pump run simulations at Station #8. They were originally to check out the new operating procedure for Rich, but, while the system was setup, we took the opportunity to perform a couple of simulations using the manual pump control screen (PDISPLAY).

What we found was that the alarm and abort limits for speed are updated and displayed at Station #8 (and at Stations # 5 - 7 on the CSMAIN and PUMPALRM screens) for whatever speed has been set, but the discharge pressure and motor current limits are not. I realize that the discharge pressure and motor current alarm and abort limits are not a part of the PDISPLAY screen, but they should still be updated to Stations # 5 - 7. What we found was that the alarm and abort limits that were set for the last "bump" or Phase B test were still displayed as the limits for the manual pump run regardless of the SET POINT SPEED.

There is a possible situation where this could cause us problems - a low speed Phase B test or "bump" followed by a high speed manual run. The low current and discharge pressure limits from the first run could cause an abort during the manual run, and as far as I can tell, there would be no easy way to get around the problem, short of performing another high-er speed Phase B run or "bump".

Doug informed me that we never have used the manual control screen and are not likely to ever use it, but this is a problem that (in my opinion) should be looked at if we leave this option in the strategy.

We also noted that the change in pump data archive rates from slow to fast does not occur in manual. Again, this should be looked at if we leave the screen and the strategy for manual pump runs "in". By the way, I mentioned this to Jeff, and he would like to see it left "in" because he uses the manual pump screen and strategy as a software development tool.

If a decision about the future of this screen and strategy is made soon, it could save me a lot of development work on the new ATP, and save us some testing time later on.

Thanks,

Zeke

SCR No. 349
Sheet 3 of 4
Description of Change

[4] From: Alvin C Zuehlke at ~WHC266 5/5/94 8:32AM (648 bytes: 8 ln)
To: S G (Gayle) McNeece at ~WHC251, Samuel O (Sam) Smith at ~WHC76
    oss W Truitt at ~WHC211, Douglas C (Doug) Larsen at ~WHC340,
    in-jr@egg.nv.doe.gov at -SMTPLink
    ct: Problems With Station #8 Strategy
---------- Message Contents ----------

Gayle;

The decision concerning the manual pump control screen will be Doug's or the TRG's, and it only affects that screen. The manual positioning screen is still used frequently, and is needed long term to position the pump.

Zeke

SCR No. 349
Sheet 4 of 4
Description of Change

[7] From: Douglas C (Doug) Larsen at ~WHC340 5/5/94 2:10PM (1417 bytes: 26 ln)
To: Alvin C Zuehlke at ~WHC266, S G (Gayle) McNeece at ~WHC251,
iel O (Sam) Smith at ~WHC76
ss W Truitt at ~WHC211, martin-jr@egg.nv.doe.gov at -SMTPLink,
en E Mendoza, Gregory J Gauck, Michael F Erhart at ~WHC140
Subject: Problems With Station #8 Strategy
---------- Message Contents ----------

Gayle;

The decision concerning the manual pump control screen will be Doug's or the TRG's, and it only affects that screen. The manual positioning screen is still used frequently, and is needed long term to position the pump.

Zeke

Folks,

Please don't make any modifacations to the manual positioning screen/software. We use this screen daily when positioning the pump.

The manual operation screen is not used currently and I don't foresee using this screen in the future. The pump bump screen does everthing the man. ops. screen does and more. Lets plan on pulling the screen, but do it off-line, in the 306 lab first and then role it into a major change later in the spring/summer.

Thanks,
Doug

ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
SYSTEM CHANGE REQUEST (SCR)

SCR No.: 352
Sheet 1 of 3

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Motor Strategy

2. VERSION/REVISION: V 2.18

3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [✓] Problem [ ] Enhancement [ ] Other DATE: 5.31.94

4. ORIGINATOR'S PRIORITY: [2] 1=Critical 2=High 3=Medium 4=Low

5. SYSTEM NAME/TITLE: Erroneous restart of directional motor on abort

6. DESCRIPTION OF CHANGE: [ ] See Attached

Correct the rotation motor restart condition. Currently the rotation motor automatically restarts after an abort coil has been tripped.

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

The rotation motor should never start without an operator initiated action.

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [✓] DACS Software [ ] Drawings
[ ] Other/Name

9. ORIGINATOR: Ken Eldacrab Date: 5/19/94 Phone No.: (509) 3387517

CCB

10. DISPOSITION:
[✓] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

11. WHEN TO IMPLEMENT CHANGE:
[✓] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[✓] No

12. APPROVAL: Ruben Mendoza Date: 5/10/94
signed per telecon w/ SG McNeece Date: 5/10/94
signed per telecon w/ SO Smith Date: 5/10/94

13. ASSIGNED TO: SG McNeece Phone No.: 6-9837 Planned Release Date: 5.31.94

14. SOLUTION COMMENTS: [✓] See Attached [ ] None

Runs: Pump Bump, Manual Position, Manual Run, & B-test
Additionally: Activated abort logic, determination of correct operation

15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None

ABORT.RPS

16. CHANGE INSTALLED: SO Smith Date: 6/1/94 Phone No. 546-5015

17. VERIFIED BY: [signature] Glen Elliott 5/5/94 Date: 6/1/94 Phone No. 373-2521

18. RELEASE VERSION: 2.19

19. CLOSED BY: [signature] Date: 6/21/94 Phone No. 373-1729

Form #: HMTP-SCR-1 (4-20-94)

SCR No. 350
Sheet 2 of 2
Solution Comments


```
;_____________________________________________________________________
; Code:          "ABORT.RPS"

;    pose:       This code will stop the position motor and the pump motor.
;                This code is only called out for an abort condition.
;
; Related task: Abort
;
; Revision date:5/17/93
;               1/22/94
;
; Author:        Darrel Holt
; Modifications:Ken Eldridge    1/22/94
;                       To provide additional comments to code.
;               S.G. McNeece    5/09/94
;                       SCR #350 Erroneous restart of directional motor
;                       after abort
;
; This code is executed by:
;               'APULSE.DOUT which is set high when RR code AF5ABRT.RPS is
;                       executed.
;               ABORT.DOUT goes high when the PLC abort coil which is
;                       monitored by the ABRTCOIL.DOUT in the TEST strategy.
;
; Reference:    REPORTA.SOURCE_FILE1
;               REPORTA.SOURCE_FILE2
;_____________________________________________________________________

BSET(DISMOVE.OUT,1)     ;Prevent position motor from restarting

BSET(DISSTRST.OUT,1)    ;Enable pump stop.
BWAIT(10)               ;Wait 1 second.
B T(PMSTOP.OUT,1)       ;Tell pump motor to stop.

BSE.(BUTPULSE.OUT,1)    ;Tell directional motor to stop.
```

Added

LINED CONTINUATION PAGE FOR SYSTEM CHANGE REQUEST
DESCRIPTION/JUSTIFICATION/SOLUTION

SCR No.: 350

Sheet 3 of 3

[ ] Description [ ] Justification [ ] Solution Comments [ ] Software Affected

Ken Eldridge performed additional testing on the offline system prior to Test Engineering verification in the DACS trailer.

Dave Strausser activated abort conditions during runs of: ~~Bump~~ Bump, Manual Position, Manual Run, and OB tests & no rotation motor "restarts" were detected.

Form #: HMTP-SCRCS-1 (4-20-94)

Description of Change (cont.)

[96] From: Douglas C (Doug) Larsen 5/4/94 4:11PM (3086 bytes: 49 ln)
To: Ruben E Mendoza, Gregory J Gauck, Guy T Bear
Subject: Problems With Station #8 Strategy
---------- Forwarded ----------
From: Alvin C Zuehlke at ~WHC266 5/4/94 2:33PM (2881 bytes: 49 ln)
To: S G (Gayle) McNeece at ~WHC251, Samuel O (Sam) Smith at ~WHC76
cc: Ross W Truitt at ~WHC211, Douglas C (Doug) Larsen at ~WHC340
Subject: Problems With Station #8 Strategy
---------- Message Contents ----------

Hello!

Today Mike, Doug, and I were able to perform some pump run simulations at Station #8. They were originally to check out the new operating procedure for Rich, but, while the system was setup, we took the opportunity to perform a couple of simulations using the manual pump control screen (PDISPLAY).

What we found was that the alarm and abort limits for speed are updated and displayed at Station #8 (and at Stations # 5 - 7 on the CSMAIN and PUMPALRM screens) for whatever speed has been set, but the discharge pressure and motor current limits are not. I realize that the discharge pressure and motor current alarm and abort limits are not a part of the PDISPLAY screen, but they should still be updated to Stations # 5 - 7. What we found was that the alarm and abort limits that were set for the last "bump" or Phase B test were still displayed as the limits for the manual pump run regardless of the SET POINT SPEED.

There is a possible situation where this could cause us problems - a low speed Phase B test or "bump" followed by a high speed manual run. The low current and discharge pressure limits from the first run could cause an abort during the manual run, and as far as I can tell, there would be no easy way to get around the problem, short of performing another high-er speed Phase B run or "bump".

Doug informed me that we never have used the manual control screen and are not likely to ever use it, but this is a problem that (in my opinion) should be looked at if we leave this option in the strategy.

We also noted that the change in pump data archive rates from slow to fast does not occur in manual. Again, this should be looked at if we leave the screen and the strategy for manual pump runs "in". By the way, I mentioned this to Jeff, and he would like to see it left "in" because he uses the manual pump screen and strategy as a software development tool.

If a decision about the future of this screen and strategy is made soon, it could save me a lot of development work on the new ATP, and save us some testing time later on.

Thanks,

Zeke

Description (Cont'd.)

[104] From: Douglas C (Doug) Larsen at ~WHC340 5/5/94 2:10PM (1469 bytes: 26 ln)
To: Alvin C Zuehlke at ~WHC266, S G (Gayle) McNeece at ~WHC251,
Samuel O (Sam) Smith at ~WHC76
CC: Ross W Truitt at ~WHC211, martin-jr@egg.nv.doe.gov at -SMTPLink,
Ruben E Mendoza, Gregory J Gauck, Michael F Erhart at ~WHC140
Subject: Problems With Station #8 Strategy
---------- Message Contents ----------

Gayle;

The decision concerning the manual pump control screen will be Doug's or the TRG's, and it only affects that screen. The manual positioning screen is still used frequently, and is needed long term to position the pump.

Zeke

Folks,

Please don't make any modifacations to the manual positioning screen/software. We use this screen daily when positioning the pump.

The manual operation screen is not used currently and I don't foresee using this screen in the future. The pump bump screen does everthing the man. ops. screen does and more. Lets plan on pulling the screen, but do it off-line, in the 306 lab first and then role it into a major change later in the spring/summer.

Thanks,
Doug

original

HYDROGEN MITIGATION TEST PROJECT
SYSTEM CHANGE REQUEST (SCR)

SCR No.: 351
Sheet 1 of 2

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS "TEST" strategy

2. VERSION/REVISION: V. 2.26

3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [✓] Enhancement [ ] Other DATE: 6-30-94

4. ORIGINATOR'S PRIORITY: [4] 1=Critical 2=High 3=Medium 4=Low

5. SYSTEM NAME/TITLE: Remove unused screens from Test Strategy

6. DESCRIPTION OF CHANGE: [✓] See Attached

① Remove screens: 1. SLUDGE1 6. SLUDGE2
~~2. TBSTC~~ 11-3-94 7. ~~PMPM~~ PMPBMP3
3. WHITH2 8. PMPBMP12
4. PUMPOILT 9. TANK
5. PUMPVIB 10. REPORT

② Check for screen links

③ and MAP screen will be affected and changed

Must be coordinated with the LANL upgrade.

7. JUSTIFICATION FOR CHANGE: [ ] See Attached
No longer needed.

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [✓] SDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [✓] DACS Software [ ] Drawings
[✓] Other/Name CSDD

9. ORIGINATOR: RE Mendoza Date: 6/1/94 Phone No.: 373-2007

CCB

10. DISPOSITION:
[✓] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

11. WHEN TO IMPLEMENT CHANGE:
[✓] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[✓] No

12. APPROVAL: Ruben Mendoza Date: 6/1/94
[signature] Date: 6/1/94
[signature] EG&G/LANL Date: 6/1/94

13. ASSIGNED TO: S.C. Smith Phone No.: 546 5015 Planned Release Date: 6-30-94

14. SOLUTION COMMENTS: [ ] See Attached [ ] None

15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
V 3.00 D

16. CHANGE INSTALLED: signed per telecon with R.K. Tu... Date: 1/10/95 Phone No. 373-1779

17. VERIFIED BY: Ruben Mendoza Date: 1/10/95 Phone No. 373-2007

18. RELEASE VERSION: V. 3.00 D.

19. CLOSED BY: Ruben Mendoza Date: 1/10/95 Phone No. 373-2007

Form #: HMTP-SCR-1 (4-20-94)

SCR No. 351
Description of Change
continuation.
pg 2 of 2

[1] From: Jeanne A Lechelt at ~WHC140 5/12/94 8:23AM (1685 bytes: 37 ln)
To: Ruben E Mendoza at ~WHC340, S G (Gayle) McNeece at ~WHC251, Leslie A Tusler,
~ncy E Wilkins
egory J Gauck at ~WHC340, Ross W Truitt at ~WHC211, Samuel O (Sam) Smith
WHC76, martin-jr@egg.nv.doe.gov at -SMTPLink, raw2@lanl.gov at -SMTPLink
Subject: Test Strategy Displays
---------- Message Contents ----------

Ruben,

In the past you and I have talked about eliminating test displays that are no longer of use. It seems to me, that any that can be eliminated should be so there are fewer we have to make sure work in the upgrade. Could you look into this matter and write up a CR ASAP if any can be eliminated?

Thanks

Gayle

Gayle,

I have made a list of ten screens that I thought we could delete. These will need to be confirmed with the analysis people. Greg is out today but when he returns (assumably tomorrow) I will make the CR official.

1. SLUDGE1
2. TBSTC
3. WHITH2
4. PUMPOILT
5. PUMPVIB
6. SLUDGE2
7. PMPBMP3
8. PMPBMP12
9. TANK
10. REPORT

Jeanne, do you know of anyone using these in the warroom? If not, I think we should delete them.

Ruben

Ruben, I think I can safely say that there are no users of these screens who frequent the warroom. So long screens. Jeanne

original

HYDROGEN MITIGATION TEST PROJECT
SYSTEM CHANGE REQUEST (SCR)

SCR No.: 352
Sheet 1 of

cancelled 6.21.94

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS TEST strategy
2. VERSION/REVISION: 2.26
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [X] Enhancement [ ] Other DATE: 6-30-94
4. ORIGINATOR'S PRIORITY: [4] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: Remove AMES history file
6. DESCRIPTION OF CHANGE: [ ] See Attached
   Remove DACS history file AMES.PRN and associated blocks.
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
   This file is not needed.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [X] I/O Channel List [X] DACS Software [ ] Drawings
   [ ] Other/Name
9. ORIGINATOR: RE Mendoza Date: 6 / 1 / 94 Phone No.: 373-2007

CCB

10. DISPOSITION:
    [X] Approve [ ] Approve/Modify
    [ ] Reject [ ] Cancel
    [ ] Defer
11. WHEN TO IMPLEMENT CHANGE:
    [X] Upon completion of change
    [ ] Prepare change and wait for approval
    [ ] At next mandatory change
    ATP REQUIRED? [ ] Yes [X] No
12. APPROVAL: Rube Mendoza Date: 6 / 1 / 94
    Date: / / 94
    EG&G/LANL Date: 6 / 1 / 94
13. ASSIGNED TO: S.O. Smith Phone No.: 546-5015 Planned Release Date: 6.30.94
14. SOLUTION COMMENTS: [ ] See Attached [ ] None
    cancelled ~~and replaced~~ (see SCR #353)
15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
16. CHANGE INSTALLED: Date: / / Phone No.
17. VERIFIED BY: Date: / / Phone No.
18. RELEASE VERSION:
19. CLOSED BY: Date: 6/21/94 Phone No. 373-1773

original

HYDROGEN MITIGATION TEST PROJECT
SYSTEM CHANGE REQUEST (SCR)

SCR No.: 353
Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS TEST STRATEGY
2. VERSION/REVISION: 2.26
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [X] Enhancement [ ] Other DATE: 6-30-94
4. ORIGINATOR'S PRIORITY: [4] 1 = Critical 2 = High 3 = Medium 4 = Low
5. SYSTEM NAME/TITLE: Delete unused Ames tags from history file
6. DESCRIPTION OF CHANGE: [ ] See Attached

Remove DACS ~~history file Ame~~ tags associated. with Ames ~~PRH~~ tags and associated blocks.

X1R12A01 X1R12A03 X1PN0101 X1PN0201
X1R12A02 X1R12A04 X1PN0401 X1PN0501

7. JUSTIFICATION FOR CHANGE: [ ] See Attached

The filed Ames tags. are not used.

8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [X] I/O Channel List [X] DACS Software [ ] Drawings
[ ] Other/Name

9. ORIGINATOR: G J Gauck Date: 6/21/94 Phone No.: 373-1779.

CCB

10. DISPOSITION:
[X] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

11. WHEN TO IMPLEMENT CHANGE:
[X] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[ ] Yes
[X] No

12. APPROVAL: Gregory J. Gauck Date: 6/21/94
Thomas A. Peterson EG&G/LANL Date: 6/21/94
Date: 6/21/94

13. ASSIGNED TO: S.O. Smith Phone No.: 546-5015 Planned Release Date: 6.30.94

14. SOLUTION COMMENTS: [ ] See Attached [ ] None

15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None

16. CHANGE INSTALLED: S.O. Smith Date: 11/4/94 Phone No. 373-6977

17. VERIFIED BY: Gregory J. Gauck Date: 11/4/94 Phone No. 373-1779

18. RELEASE VERSION: TEST V2.27

19. CLOSED BY: Gregory J. Gauck Date: 11/4/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (4-20-94)

original.

HYDROGEN MITIGATION TEST PROJECT
SYSTEM CHANGE REQUEST (SCR)

SCR No.: 354
Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS TEST Strategy
2. VERSION/REVISION: 2.26
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [✓] Enhancement [ ] Other DATE: ~~6-30-94~~ 8-1-94
4. ORIGINATOR'S PRIORITY: [2] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: ADD RGA-5 SIGNALS TO DACS
6. DESCRIPTION OF CHANGE: [ ] See Attached
The Gas Monitoring Team will be replacing GC-2 with a new dual-GC, called the RGA-5. It will become 'GC-1 and GC-2. A new ASCII-BASIC module will be added to disp 14, connected by RS232 to station 2 (host computer for the RGA-5).
The GASSYS screen will need to be updated to add the displays for GC-1, and a new file for archiving will be needed. The low range (0-100 ppm) will be GC-1 (NE/NT-GCMSY-5-1), and the high range (>100 ppm) will be GC-2 (NE/NT-GCMSY-8-1)
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
The RGA-5 will replace GC-2, and will be required to go to DACS for data logging and display.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
[ ] FDC [M] ATP [M] SDD [M] Test Procedure [ ] AOP [ ] ARP [M] I/O Channel List [M] DACS Software [M] Drawings ~~Modules~~ EGG Translation Docs
[ ] Other/Name
9. ORIGINATOR: Ru Truitt Date: 6/21/94 Phone No.: 376-2590

CCB

10. DISPOSITION:
[✓] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

11. WHEN TO IMPLEMENT CHANGE:
[✓] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED?
[✓] Yes
[ ] No
ATP-598

12. APPROVAL:
[signature] Date: 6/21/94.
[signature] EG&G/LANL Date: 6/21/94
[signature] Date: 6/21/94

13. ASSIGNED TO: S.O. Smith Phone No. 376-5015 Planned Release Date: ~~6-30-94~~ 8-1-94

14. SOLUTION COMMENTS: [ ] See Attached [ ] None
Ames ASCII/Basic module used for RGA-5. The new program was downloaded to the module, the TEST strategy and DACS201 Letterlayout were modified to accomodate RGA-5 data.

15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None

16. CHANGE INSTALLED: [signature] Date: 15 Sep 94 Phone No. 373-6977

17. VERIFIED BY: [signature] Date: 9/15/94 Phone No. 373-2007

18. RELEASE VERSION: TEST #227 DACS203

19. CLOSED BY: [signature] Date: 9/22/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (4-20-94)

External Port

In order to integrate the complete Host software into some facilities, it is necessary to provide data to the data collection system of that facility. This software package provides the necessary data through an RS232 output on the computer running this software. It is only necessary to enable the data output by Opening the external port through the 'Setup' Menu Item on the Main Menu. This of course requires the host computer to have two separate RS232 serial ports. Typically COM1 is used for the host to RGA5 data link and COM2 is used for the External Port. The data is provided in ASCII at the end of each RGA5 run. The data appears as follows and is all separated by commas or line feeds to enable a very simple parsing routine for any other system that needs to link to this host system.

Run=057, Stream=TANK , Date=05-18-94, Time=09:58
H2A=1221.3, H2B=1342.2

Note: There is 1 space after every comma separated variable. There are 8 spaces available for the Stream name.

Trace Analytical Inc.

RGA5 is a Registered Trademark of Trace Analytical Inc.

original.

DACS FORMS

System Change Request and Problem Report (SCR)

SCR No.: 355. Sheet 1 of 1

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS Test Strategy
2. VERSION/REVISION: 2.26
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [✓] Enhancement [ ] Other DATE: 9/30/94
4. ORIGINATOR'S PRIORITY: [2] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: AMMONIA MONITOR DATA TO DACS
6. DESCRIPTION OF CHANGE: [ ] See Attached ADD NECESSARY CODE TO ASCII/BASIC MODULE AND GENESIS TAGS & SCREENS FOR AMMONIA MONITOR INFORMATION (B+
7. JUSTIFICATION FOR CHANGE: [ ] See Attached The Kinetics computer will be sending ammonia monitor information to the GMS-2 ASCII/BASIC module for DACS Needs backup to FTIR NH3 Min Inst. List. display and logging. (GASSUM screen)
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [ ] ATP [✓] SDD [✓] CSDD [✓] Test Procedure [ ] AOP [ ] ARP [✓] I/O Channel List [✓] DACS Software [ ] Drawings
   Other/Name
9. ORIGINATOR: RW Truitt Date: 8/11/94 Phone No.: 376-2590

CCB

10. DISPOSITION: [✓] Approve [ ] Approve/Modify [ ] Reject [ ] Cancel [ ] Defer
11. CHANGE PRIORITY: [ ] Emergency [ ] Urgent [✓] Routine
12. WHEN TO IMPLEMENT CHANGE: [ ] Upon completion of change [✓] Prepare change and wait for approval from E Stackbund. [ ] At next mandatory change
    ATP REQUIRED ? [✓] Yes [ ] No WHC-SD-WM-TP-262 ATP-095
13. APPROVAL:
    Samuel O. Smith Date: 8/11/94
    Date: 8/11/94
    Date: 8/11/94
14. ASSIGNED TO: Jeff Martin Planned Release Date: 9/30/94. Phone No. 202 295 0252

IMPLEMENTATION

15. SOLUTION COMMENTS: [✓] See Attached [ ] ECN _____ [ ] None
16. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
17. CHANGE INSTALLED: S D Smith Date: 15 Sep 94 Phone No. 373-6977
18. VERIFIED BY: Barbara Mendoza Date: 9/15/94 Phone No. 373-2007
19. RELEASE VERSION: TEST V2.27, DACS203, GC3.BAS v1.0
20. CLOSED BY: Jeff Martin Date: 9/22/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (6-19-94)

Attached: GC-3 ASCII/Basic ~~source used for test~~ code & TEST Strategy & DACS Ladder Logic were modified to accomodate B&K ammonia monitor data. GC-2 is no longer logged by DACS. GC-3.BAS is THE ASCII/BASIC CODE. (Tag: PHO-NH3)

original.

DACS FORMS

System Change Request and Problem Report (SCR)

SCR No.: 356 Sheet 1 of 1

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS Test Strategy, PLC Ladder Logic
2. VERSION/REVISION: 2.26 / DACS201
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [✓] Enhancement [ ] Other DATE: 9/30/94
4. ORIGINATOR'S PRIORITY: [3] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: MASS SPEC REMOVAL FROM DACS
6. DESCRIPTION OF CHANGE: [ ] See Attached REMOVE ALL LADDER LOGIC, ASCII/BASIC code, and Genesis tags that refer to the Mass Spec.
7. JUSTIFICATION FOR CHANGE: [ ] See Attached The Mass Spec has been removed from the farm. Removal of associated code will keep the system up to date.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [ ] ATP [✓] SDD [✓] CSDD [ ] Test Procedure [ ] AOP [ ] ARP [✓] I/O Channel List [✓] DACS Software [ ] Drawings
   Other/Name
9. ORIGINATOR: RW TRUITT Date: 8/11/94 Phone No.: 376-2590

CCB

10. DISPOSITION: [✓] Approve [ ] Approve/Modify [ ] Reject [ ] Cancel [ ] Defer
11. CHANGE PRIORITY: [ ] Emergency [ ] Urgent [✓] Routine
12. WHEN TO IMPLEMENT CHANGE: [ ] Upon completion of change [✓] Prepare change and wait for approval from E. Staalsund. [ ] At next mandatory change
    ATP REQUIRED ? [ ] Yes [✓] No
13. APPROVAL:
    Date: 8/11/94
    Date: 8/11/94
    Date: 8/11/94
14. ASSIGNED TO: Jeff Martin Planned Release Date: 9/30/94 Phone No. 703/295/0252

IMPLEMENTATION

15. SOLUTION COMMENTS: [ ] See Attached [ ] ECN _____ [ ] None
16. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
17. CHANGE INSTALLED: Date: 15 Sep 94 Phone No. 373-6977
18. VERIFIED BY: Date: 9/15/94 Phone No. 373-2007
19. RELEASE VERSION: TEST V2.27, DACS203
20. CLOSED BY: Date: 9/22/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (6-19-94)

Attached: TEST strategy & DACS ladder logic were modified to remove all mass spectrometer related data acquisition.

original.

DACS FORMS

System Change Request and Problem Report (SCR)

SCR No.: 357 Sheet 1 of ~~357~~ 3

ORIGINATOR	1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS TEST STRATEGY / PLC CONFIGURATION
	2. VERSION/REVISION: 2.26
	3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [✓] Enhancement [ ] Other DATE: 9/30/94
	4. ORIGINATOR'S PRIORITY: [2] 1=Critical 2=High 3=Medium 4=Low
	5. SYSTEM NAME/TITLE: CHANGE MODICON DROP 17 TO 13.
	6. DESCRIPTION OF CHANGE: [ ] See Attached Re-address drop 17 to 13. This affects the PLC configuration and the I/O status screen.
	7. JUSTIFICATION FOR CHANGE: [ ] See Attached The new 984-785E PLC controllers for the DACS-1 upgrade do not allow drop addresses greater than 16. Implementing now will allow the capability to use the old software as a backup during this Firmware Limitation greater than 16
	8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED: [ ] FDC [ ] ATP [✓] SDD [✓] CSDD [ ] Test Procedure [ ] AOP [ ] ARP [✓] I/O Channel List [✓] DACS Software [ ] Drawings Other/Name
	9. ORIGINATOR: R. W. Truitt Date: 8/11/94 Phone No.: 376-2590
B	10. DISPOSITION: [✓] Approve [ ] Approve/Modify [ ] Reject [ ] Cancel [ ] Defer
	11. CHANGE PRIORITY: [ ] Emergency [✓] Urgent [ ] Routine
	12. WHEN TO IMPLEMENT CHANGE: [ ] Upon completion of change [✓] Prepare change and wait for approval from R.W. Truitt. [ ] At next mandatory change — ATP REQUIRED ? [✓] Yes [ ] No ATP-082.
	13. APPROVAL: [signature] Date: 8/11/94; [signature] Date: 8/11/94; [signature] Date: 8/11/94
	14. ASSIGNED TO: Jeff Martin. Planned Release Date: 9/30/94 Phone No. 702/295/0252
IMPLEMENTATION	15. SOLUTION COMMENTS: [✓] See Attached [ ] ECN ____ [ ] None
	16. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
	17. CHANGE INSTALLED: [signature] Date: 15 Sep 94 Phone No. 373-6977
	18. VERIFIED BY: [signature] Date: 9/15/94 Phone No. 373-2007
	19. RELEASE VERSION: TEST V2.27, DACS 203
	20. CLOSED BY: [signature] Date: 9/22/94 Phone No. 373-1779.

Form #: HMTP-SCR-1 (6-19-94)

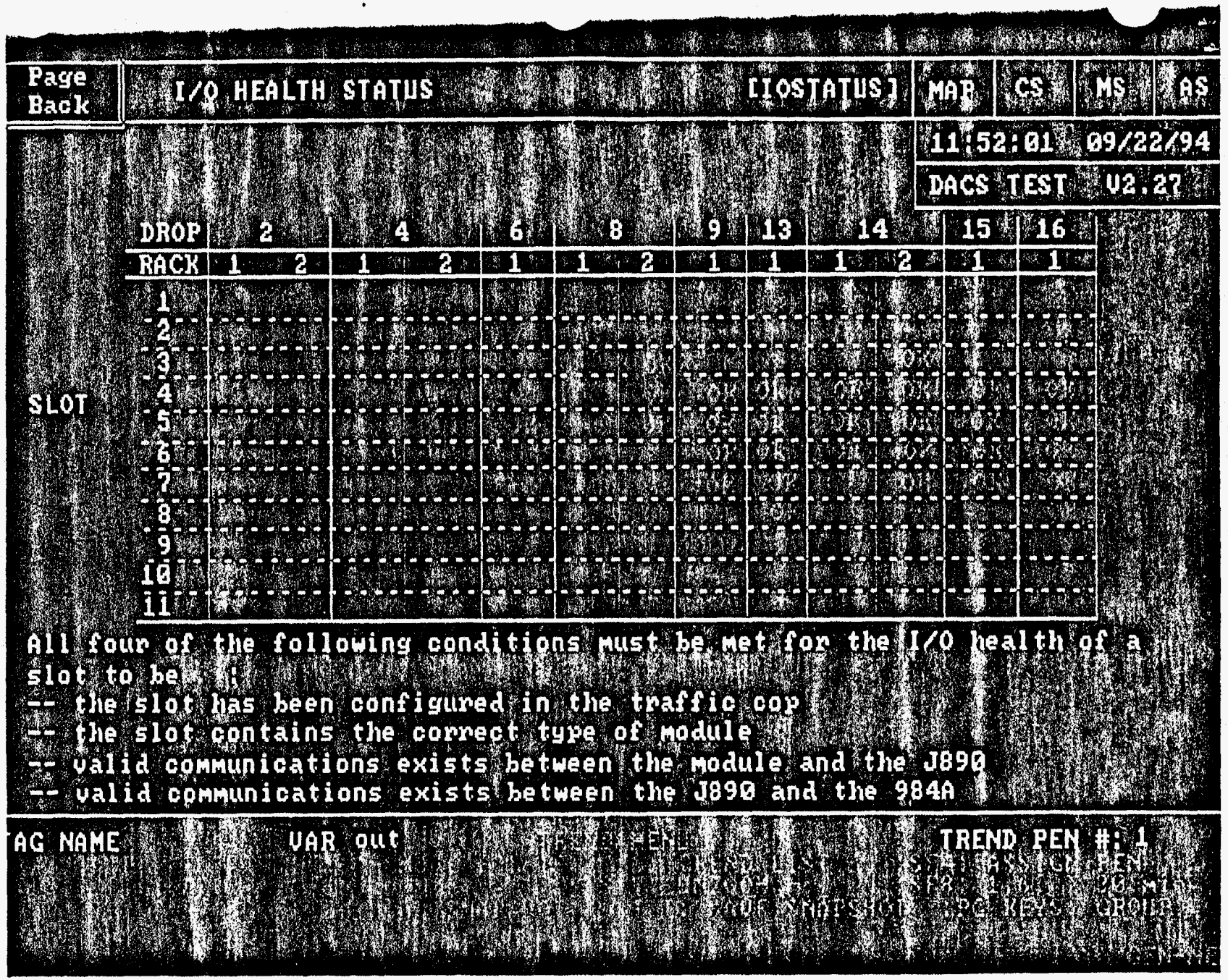
Attached: TEST Strategy & displays and DACS ladder logic were modified and J890 for DROP 17 was re-addressed as DROP 13. (See Attachment for support documentation.)

SCR# 357 Attachment

I/O LOC.	DROP#	RACK#	SLOT	MODULE	CHAN. USED	CHAN. SPARE	MODULE NAME
7	15	1	1-3	P810			POWER SUPPLY
DACS				J890			COMMUNICATIONS
TRAILER			4	B829	7/16	9/16	DIGITAL INPUT
			5	B829	7/16	9/16	DIGITAL INPUT
			6	B828	0/16	16/16	DIGITAL OUTPUT
			7	B885			ASCII MOD.
			TOTAL DIGITAL IN:		14/32	18/32	
			TOTAL DIGITAL OUT:		0/16	16/32	
8	16	1	1-3	P810			POWER SUPPLY
241-SY				J890			COMMUNICATIONS
271 BLDG			4	B875	8/8	0/8	ANALOG INPUT
			5	B875	7/8	1/8	ANALOG INPUT
			6	B875	8/8	0/8	ANALOG INPUT
			7	B875	4/8	4/8	ANALOG INPUT
			8	B875	0/8	8/8	ANALOG INPUT
			9	(SPARE)			
			10	(SPARE)			
			11	(SPARE)			
			TOTAL ANALOG IN:		27/40	13/40	
(17) changed to 13		1	1-3	P810			POWER SUPPLY
				J890			COMMUNICATIONS
			4	B883-200	8/10	2/10	THERMOCOUPLES
			5	B883-200	7/10	3/10	THERMOCOUPLES
			6	B883-200	7/10	3/10	THERMOCOUPLES
			7	B875	0/8	8/8	ANALOG INPUT
I/O Status Screen			8	B875	1/8	7/8	ANALOG INPUT
I/O Map Modsoft			9	(SPARE)			
			10	(SPARE)			
			11	(SPARE)			
			TOTAL THERMO:		22/30	8/30	
			TOTAL ANALOG IN:		1/16	15/16	

SUMMARY:

TOTAL ANALOG INPUTS:	110/232	122/232
TOTAL DIGITAL INPUTS 24V:	27/160	133/160
TOTAL DIGITAL OUTPUTS 24V:	7/32	25/32
TOTAL DIGITAL INPUTS 5V:	14/32	18/32
TOTAL DIGITAL OUTPUTS 5V:	0/16	16/16
TOTAL THERMOCOUPLES:	44/60	44/60



SCR#357 Attachment SL.3#3

original.

DACS FORMS

System Change Request and Problem Report (SCR)

SCR No.: 358 Sheet 1 of 1

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS MOTOR STRATEGY
2. VERSION/REVISION: 2.19
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [✓] Enhancement [ ] Other DATE: 9/30/94
4. ORIGINATOR'S PRIORITY: [2] 1 = Critical 2 = High 3 = Medium 4 = Low
5. SYSTEM NAME/TITLE: DOUBLE-CLICK FOR PUMP STOP
6. DESCRIPTION OF CHANGE: [ ] See Attached WHEN PUMP IS RUNNING, REQUIRE TWO MOUSE CLICKS TO STOP PUMP. BUTTON WILL INITIALLY BE LABELED AS "STOP ENABLE", THEN "STOP TEST".
7. JUSTIFICATION FOR CHANGE: [ ] See Attached OPERATIONS AND TEST ENGINEERING HAS REQUESTED THIS TO PRECLUDE ACCIDENTAL PUMP STOPS WITH THE MOUSE.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:

   [ ] FDC [ ] ATP [ ] SDD [✓] CSDD [~~✓~~] Test Procedure [~~✓~~] ATOP [~~✓~~] ARP [ ] I/O Channel List [✓] DACS Software [ ] Drawings

   Other/Name _____
9. ORIGINATOR: RW TRUITT Date: 8/11/94 Phone No.: 376-2590

CCB

10. DISPOSITION: [✓] Approve [ ] Approve/Modify [ ] Reject [ ] Cancel [ ] Defer
11. CHANGE PRIORITY: [ ] Emergency [✓] Urgent [ ] Routine
12. WHEN TO IMPLEMENT CHANGE: [✓] Upon completion of change [ ] Prepare change and wait for approval [ ] At next mandatory change
    ATP REQUIRED ? [✓] Yes [ ] No ATP-082
13. APPROVAL:
    Gregory J. Frank Date: 8,11,94
    Sanford O. Smith Date: 8,11,94
    RW Truitt Date: 8,11,94
14. ASSIGNED TO: Jeff Martin. Planned Release Date: 9/30/94 Phone No. 702/295/0252

IMPLEMENTATION

15. SOLUTION COMMENTS: [ ] See Attached [ ] ECN _____ [ ] None
    Installed & Tested per ATP-082
16. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
    ~~MotorTest~~ V3.00
17. CHANGE INSTALLED: RW Truitt 1/10/95 Date: 1/10/94 Phone No. 376-2590
18. VERIFIED BY: ~~V 3.00~~ Date: 1/10/9 Phone No. 373-1779
19. RELEASE VERSION: Motor Strategy V.3.00
20. CLOSED BY: Ruben Mendoza Date: 1/10/95 Phone No. 373-2007

Form #: HMTP-SCR-1 (6-19-94)

original.

DACS FORMS

System Change Request and Problem Report (SCR)

SCR No.: 359 Sheet 1 of 1

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: TEST STRATEGY
2. VERSION/REVISION: ~~3.00 upgrade~~ 2.26
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [✓] Enhancement [ ] Other DATE: 9-30-94.
4. ORIGINATOR'S PRIORITY: [4] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: REMOVE 2-HOUR AVERAGE
6. DESCRIPTION OF CHANGE: [ ] See Attached Remove GC3 H2 Two Hour Average (GC3-2HR) from strategy and from manual abort screen, alarms removed also
7. JUSTIFICATION FOR CHANGE: [ ] See Attached No longer needed or used
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [ ] ATP [ ] SDD [✓] CSDD [ ] Test Procedure [ ] AOP [✓] ARP [✓] I/O Channel List [✓] DACS Software [ ] Drawings
   Other/Name
9. ORIGINATOR: Ross Trivit Date: 8/11/94 Phone No.: 376-2590

CCB

10. DISPOSITION:
    [✓] Approve [ ] Approve/Modify
    [ ] Reject [ ] Cancel
    [ ] Defer
11. CHANGE PRIORITY:
    [ ] Emergency
    [ ] Urgent
    [✓] Routine
12. WHEN TO IMPLEMENT CHANGE:
    [✓] Upon completion of change
    [ ] Prepare change and wait for approval
    [ ] At next mandatory change
    ATP REQUIRED ?
    [ ] Yes
    [✓] No
13. APPROVAL:
    Gregory Frank Date: 8/11/94.
    Samuel O. Smith Date: 8/11/94
    Kim W. Vinett Date: 8/11/94
14. ASSIGNED TO: Jeff Martin Planned Release Date: 9/30/94 Phone No. 702, 295, 2990

IMPLEMENTATION

15. SOLUTION COMMENTS: [✓] See Attached [ ] ECN _____ [ ] None
16. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
17. CHANGE INSTALLED: S O Smith Date: 15 Sep 94 Phone No. 373-6977
18. VERIFIED BY: Carlos Mendoza Date: 9/15/94 Phone No. 373-2007
19. RELEASE VERSION: TEST V2.27
20. CLOSED BY: Greg Frank Date: 9/22/94 Phone No. 373-1779.

Form #: HMTP-SCR-1 (6-19-94)

Attached: TEST Strategy & displays were modified to remove all GC3-H_2 two hour averaging capabilities.

original.

DACS FORMS

System Change Request and Problem Report (SCR)

SCR No.: 360 Sheet 1 of 1

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS TEST STRATEGY
2. VERSION/REVISION: 2.26
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [✓] Enhancement [ ] Other DATE: 9-30-94
4. ORIGINATOR'S PRIORITY: [ ] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: ADD FTE50003 TO HISTORY FILES
6. DESCRIPTION OF CHANGE: [ ] See Attached FTE 50003 IS CURRENTLY DISPLAYED ONLY. THE TAG NEEDS TO BE ADDED TO ONE OF THE HISTORY FILES.
7. JUSTIFICATION FOR CHANGE: [ ] See Attached THIS INFORMATION WILL BE USED WITH THE AMMONIA MONITOR (PHOTO) TO DETERMINE THE VOLUME OF AMMONIA GAS RELEASED FROM SY-FARM
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:

[ ] FDC [ ] ATP [ ] SDD [✓] CSDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [✓] DACS Software [ ] Drawings

Other/Name

9. ORIGINATOR: RW TRUITT Date: 8/11/94 Phone No.: 376-2590

CCB

10. DISPOSITION: [✓] Approve [ ] Approve/Modify [ ] Reject [ ] Cancel [ ] Defer
11. CHANGE PRIORITY: [ ] Emergency [ ] Urgent [✓] Routine
12. WHEN TO IMPLEMENT CHANGE: [✓] Upon completion of change [ ] Prepare change and wait for approval [ ] At next mandatory change
ATP REQUIRED ? [ ] Yes [✓] No
13. APPROVAL:

Date: 8/11/94

Date: 8/11/94

Date: 8/11/94

14. ASSIGNED TO: Jeff Martin. Planned Release Date: 9/30/94 Phone No. 702 295 1025

IMPLEMENTATION

15. SOLUTION COMMENTS: [✓] See Attached [ ] ECN _____ [ ] None
16. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
17. CHANGE INSTALLED: Date: 9/15/94 Phone No. 373-6977
18. VERIFIED BY: Date: 9/15/94 Phone No. 373-2007
19. RELEASE VERSION: TEST V2.27
20. CLOSED BY: Date: 9/22/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (6-19-94)

Attached: the TEST strategy has been modified to accomodate data logging of FTE 50003.

ORIGINAL

DACS FORMS

System Change Request and Problem Report (SCR)

SCR No.: 361 Sheet 1 of 4

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: PLC Ladder Logic
2. VERSION/REVISION: DACS203
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [✓] Problem [ ] Enhancement [ ] Other DATE: 9-30-94
4. ORIGINATOR'S PRIORITY: [1] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: TBS Thermocouple Module Initialization
6. DESCRIPTION OF CHANGE: [ ] See Attached One of the changes for DACS203 (installed 9/15/94) involved changing drop 17 to address 13. The TBS T/c's are on this drop, and the status bits were inadvertantly left addressed to drop 17.
7. JUSTIFICATION FOR CHANGE: [ ] See Attached Coils 462, 471, and 480 are currently disabled to enable valid data to be logged for the TBS T/Cs. Enabling them causes all data to be 80.006 (low range Geresis value).
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:

[ ] FDC [ ] ATP [ ] SDD [ ] CSDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [✓] DACS Software [ ] Drawings

Other/Name

9. ORIGINATOR: RW Truitt Date: 9/22/94 Phone No.: 376-2590

CCB

10. DISPOSITION:
[✓] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

11. CHANGE PRIORITY:
[ ] Emergency
[✓] Urgent
[ ] Routine

12. WHEN TO IMPLEMENT CHANGE:
[✓] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED ?
[ ] Yes
[✓] No

13. APPROVAL:
Ruben Mendoza Date: 9/22/94
Samuel O. Smith Date: 22 Sep 94
R. W. Truitt Date: 9/22/94

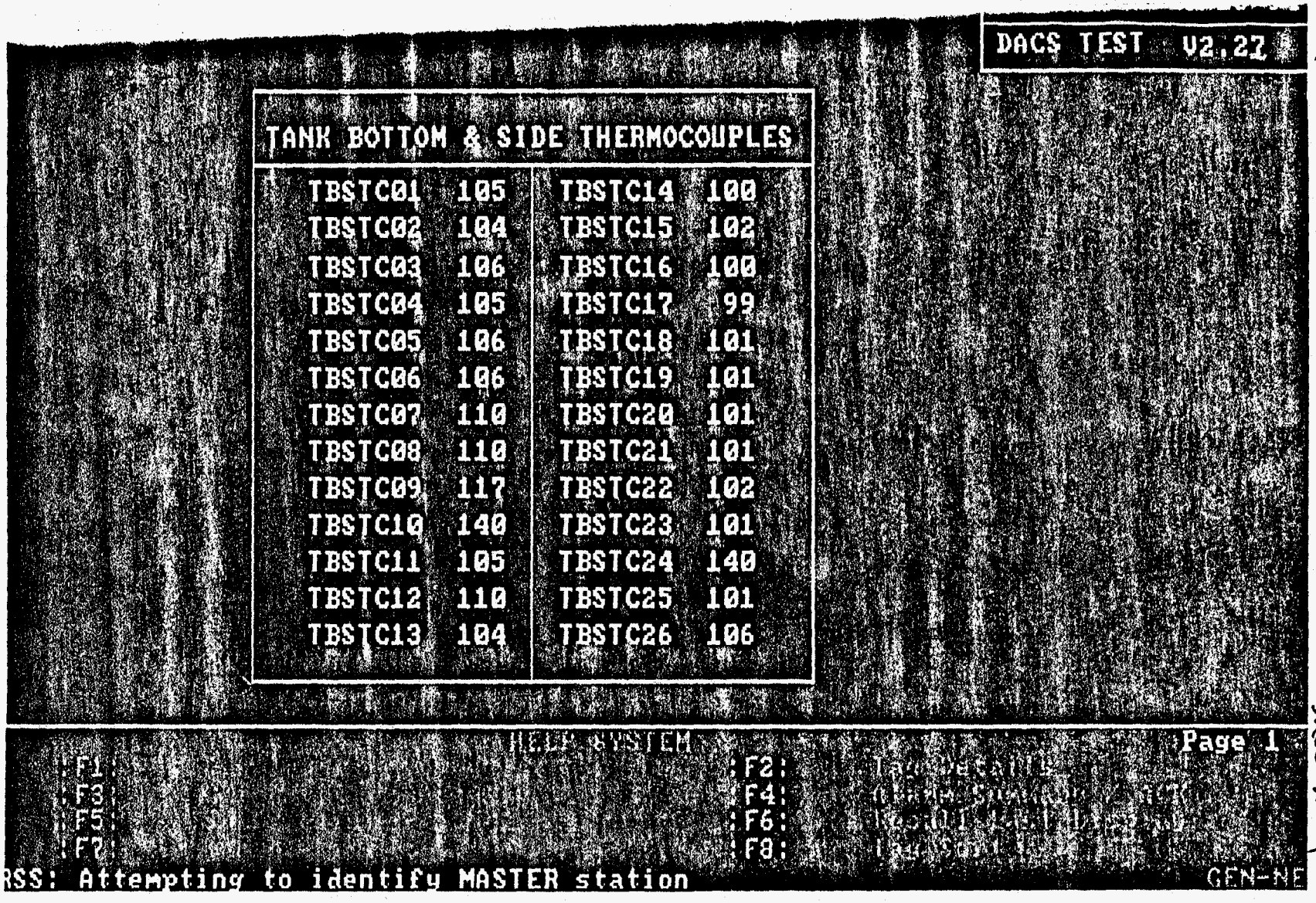
14. ASSIGNED TO: RW Truitt. Planned Release Date: 9/30/94 Phone No. 376-2590

IMPLEMENTATION

15. SOLUTION COMMENTS: [✓] See Attached [ ] ECN _____ [ ] None
16. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
17. CHANGE INSTALLED: S O Smith Date: 23 Sep 94 Phone No. 373-6977
18. VERIFIED BY: Ruben Mendoza Date: 9/23/94 Phone No. 373-2007
19. RELEASE VERSION: DACS204
20. CLOSED BY: S O Smith Date: 11/3/94 Phone No. 373-1779

Form #: HMTP-SCR-1 (6-19-94)

Attached: Verified appropriate tank bottom T/C readings (See Attachment 1) Displayed coils 462, 471, 480 as enabled - online, which is the correct state because the status table was changed to read Drop 13 (Decimal 77 see Attachments 2 & 3).



ORIGINAL

SCR No: 361
Solution Comments
Sheet 2 of 4

ORIGINAL

SCR No: 361
Solution Comments
Sheet 3 of 4

14.8 The S908 Status Table

The 277 words in the S908 status table are organized in three sections—the first 11 words for controller status, the next 160 words for I/O module health, and the last 106 words for I/O communication health:

DECIMAL WORD		HEX WORD
1	Controller Status	01
2	Hot Standby Status	02
3	Controller Status	03
4	RIO Status	04
5	Controller Stop State	05
6	Number of Ladder Logic Segments	06
7	End-of-logic Pointer Address	07
8	RIO Redundancy and Timeout / Memory Sizing Word for Panel (in the 984-145 Compact Controller)	08
9	ASCII Message Status	
10	Run/Load/Debug Status	09
11	Not used	0A 0B
12	Drop 1, Rack 1	
13	Drop 1, Rack 2	0C
14	Drop 1, Rack 3	0D
15	Drop 1, Rack 4	0E
16	Drop 1, Rack 5	0F
17	Drop 2, Rack 1	10
18	Drop 2, Rack 2	11
	. . . . .	12
170	Drop 32, Rack 4	
171	Drop 32, Rack 5	AA AB
172	S908 Startup Error Code	AC
173...175	Cable A Errors	AD...AF
176...178	Cable B Errors	B0...B2
179...181	Global Communication Errors	B3...B5
182...184	Drop 1 Errors / Health Status and Retry Counters (in the Compact 984 Controllers)	B6...B8
185...187	Drop 2 Errors	B9...BB
188...190	Drop 3 Errors	BC...BE
272...274	Drop 31 Errors	110...112
275...277	Drop 32 Errors	113...115

Binary - 0001111000
Drop 13 Rack 1 = Decimal - 77
Hex -

SCR No: 361
Solution Comment
Sheet 4 of 4

ORIGINAL

```
Utility          Hex      Dec      Bin      Goto                    Quit
F1-------F2-------F3-------F4-- DX Zoom Editor -------F7-Lev 8-F8-OFF--F9-------
                      STAT: Read Controller Status Table          Page 12 /55

  5908 I/O Module Health Status
    Bits 1 to 11 represent status of slots 1 to 11
       (1 = healthy) Bits 12 to 16 are reserved

          Drop 13 Rack 1                01:11 = 00011111000
          Drop 13 Rack 2                01:11 = 00000000000
          Drop 13 Rack 3                01:11 = 00000000000
          Drop 13 Rack 4                01:11 = 00000000000
          Drop 13 Rack 5                01:11 = 00000000000
          Drop 14 Rack 1                01:11 = 00011100000
          Drop 14 Rack 2                01:11 = 00111110000
          Drop 14 Rack 3                01:11 = 00000000000
          Drop 14 Rack 4                01:11 = 00000000000
          Drop 14 Rack 5                01:11 = 00000000000
          Drop 15 Rack 1                01:11 = 00011110000
          Drop 15 Rack 2                01:11 = 00000000000
          Drop 15 Rack 3                01:11 = 00000000000
          Drop 15 Rack 4                01:11 = 00000000000
          Drop 15 Rack 5                01:11 = 00000000000
```

ORIGINAL

DACS FORMS

System Change Request and Problem Report (SCR)

SCR No.: 362 Sheet 1 of 1

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Temporary Data Logger for Tank Bottom Thermocouples
2. VERSION/REVISION: N/A
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [✓] Development [ ] Problem [ ] Enhancement [ ] Other DATE: 10-13-94.
4. ORIGINATOR'S PRIORITY: [2] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: INSTALL/REMOVE TEMPORARY DATA LOGGER FOR TBS THERMOCOUPLES.
6. DESCRIPTION OF CHANGE: [ ] See Attached Install a temporary datalogger in the 241-SY-271 instrument building to record 12 tank bottom/side thermocouples to .01 °F resolution. Remove data logger after no longer required.
7. JUSTIFICATION FOR CHANGE: [ ] See Attached PNL would like to record TBS thermocouples to .01 °F resolution to help out with analysis of excavation testing.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:

[ ] FDC [ ] ATP [ ] SDD [ ] CSDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [ ] DACS Software [ ] Drawings

Other/Name NONE

9. ORIGINATOR: RW Truitt Date: 9/22/94 Phone No.: 376-2590

CCB

10. DISPOSITION:
[✓] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

11. CHANGE PRIORITY:
[ ] Emergency
[✓] Urgent
[ ] Routine

12. WHEN TO IMPLEMENT CHANGE:
[✓] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED ?
[ ] Yes
[✓] No

13. APPROVAL:
(signature) Date: 9/22/94
(signature) Date: 22/Sep/94
(signature) Date: 9/22/94

14. ASSIGNED TO: RW Truitt Planned Release Date: 10/13/94 Phone No. 376-2590

IMPLEMENTATION

15. SOLUTION COMMENTS: [ ] See Attached [ ] ECN ______ [ ] None
Installed and removed by ECN and Work Package.
16. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
N/A
17. CHANGE INSTALLED: (signature) Date: 1/10/95 Phone No. 376-2590
18. VERIFIED BY: (signature) Date: 1/10/95 Phone No. 373-1779
19. RELEASE VERSION: NA.
20. CLOSED BY: (signature) Date: 1/10/95 Phone No. 373-2007

Form #: HMTP-SCR-1 (6-19-94)

ORIGINAL

HYDROGEN MITIGATION TEST PROJECT
SYSTEM CHANGE REQUEST (SCR)

SCR No.: 363
Sheet 1 of

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: DACS
2. VERSION/REVISION: Test Strategy V. 3.00
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [ ] Problem [X] Enhancement [ ] Other DATE: 11/30/94.
4. ORIGINATOR'S PRIORITY: [2] 1 = Critical 2 = High 3 = Medium 4 = Low
5. SYSTEM NAME/TITLE: Scan Rate Change to Test Strategy for Dome Pressure
6. DESCRIPTION OF CHANGE: [ ] See Attached
   Change the scan rate for tags PIR17BØ4 and PIR11BØ1 from 6 sec. to 2 seconds.
   CANCELLED 9.28.95
7. JUSTIFICATION FOR CHANGE: [ ] See Attached
   Faster scan rate required to support pump removal.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:
   [ ] FDC [ ] ATP [ ] SDD [ ] Test Procedure [ ] AOP [ ] ARP [X] I/O Channel List [X] DACS Software [ ] Drawings
   [ ] Other/Name
9. ORIGINATOR: RE Mendoza Date: 10/20/94 Phone No.: 373-2007

CCB

10. DISPOSITION:
    [X] Approve [ ] Approve/Modify
    [ ] Reject [ ] Cancel
    [ ] Defer
11. WHEN TO IMPLEMENT CHANGE:
    [X] Upon completion of change
    [ ] Prepare change and wait for approval
    [ ] At next mandatory change
    ATP REQUIRED? [ ] Yes [X] No
12. APPROVAL: Ruben Mendoza Date: 10/20/94
    signed for R. Truitt Date: 10/25/94
    signed for S.O. Smith Date: 10/25/94
13. ASSIGNED TO: R. Truitt Phone No.: 376 2590 Planned Release Date: 11/30/94.

14. SOLUTION COMMENTS: [ ] See Attached [ ] None
    (SEE ACTIVATED SYSTEM CHANGE REQUEST #370).
15. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [ ] None
16. CHANGE INSTALLED: Date: / / Phone No.
17. VERIFIED BY: Date: / / Phone No.
18. RELEASE VERSION:
19. CLOSED BY: Date: / / Phone No.

Form #: HMTP-SCR-1 (4-20-94)

ORIGINAL

DACS FORMS

System Change Request and Problem Report (SCR)

SCR No.: 364 Sheet 1 of 6

ORIGINATOR

1. HARDWARE/SOFTWARE/DOCUMENT NAME: Modicon B875 Modules
2. VERSION/REVISION: N/A
3. SCR TYPE AND REQUESTED CLOSE-OUT DATE: [ ] Development [✓] Problem [ ] Enhancement [ ] Other DATE: 12/1/94
4. ORIGINATOR'S PRIORITY: [2] 1=Critical 2=High 3=Medium 4=Low
5. SYSTEM NAME/TITLE: Hardware averaging for vent header flowmeter signals.
6. DESCRIPTION OF CHANGE: [✓] See Attached IMPLEMENT 64-SAMPLE MOVING AVERAGE FOR B875 MODULE CHANNELS FOR FTE50001, FTE50002, AND FTE50003.
7. JUSTIFICATION FOR CHANGE: [ ] See Attached SPURIOUS NOISE PROBLEMS FROM FTE50001, FTE50002, AND FTE50003 CAUSE INADVERTENT ABORTS DURING RAINY-DAY PUMP RUNS (DUE TO HEPA CLOGGING). THIS ALSO CAUSES PROBLEMS FOR CALCULATING THE 2/3 FLOW VALUE.
8. HARDWARE, SOFTWARE, OR DOCUMENTS AFFECTED:

[ ] FDC [ ] ATP [ ] SDD [ ] CSDD [ ] Test Procedure [ ] AOP [ ] ARP [ ] I/O Channel List [ ] DACS Software [✓] Drawings

Other/Name See attached. This information will be included in the upcoming drawings.

9. ORIGINATOR: RW Truitt Date: 12/1/94 Phone No.: 376-2590

CCB

10. DISPOSITION:
[✓] Approve [ ] Approve/Modify
[ ] Reject [ ] Cancel
[ ] Defer

11. CHANGE PRIORITY:
[ ] Emergency
[✓] Urgent
[ ] Routine

12. WHEN TO IMPLEMENT CHANGE:
[✓] Upon completion of change
[ ] Prepare change and wait for approval
[ ] At next mandatory change

ATP REQUIRED ?
[ ] Yes
[✓] No

13. APPROVAL:

(signature) Date: 12/1/94

(signature) Samuel O. Smith Date: 12/1/94

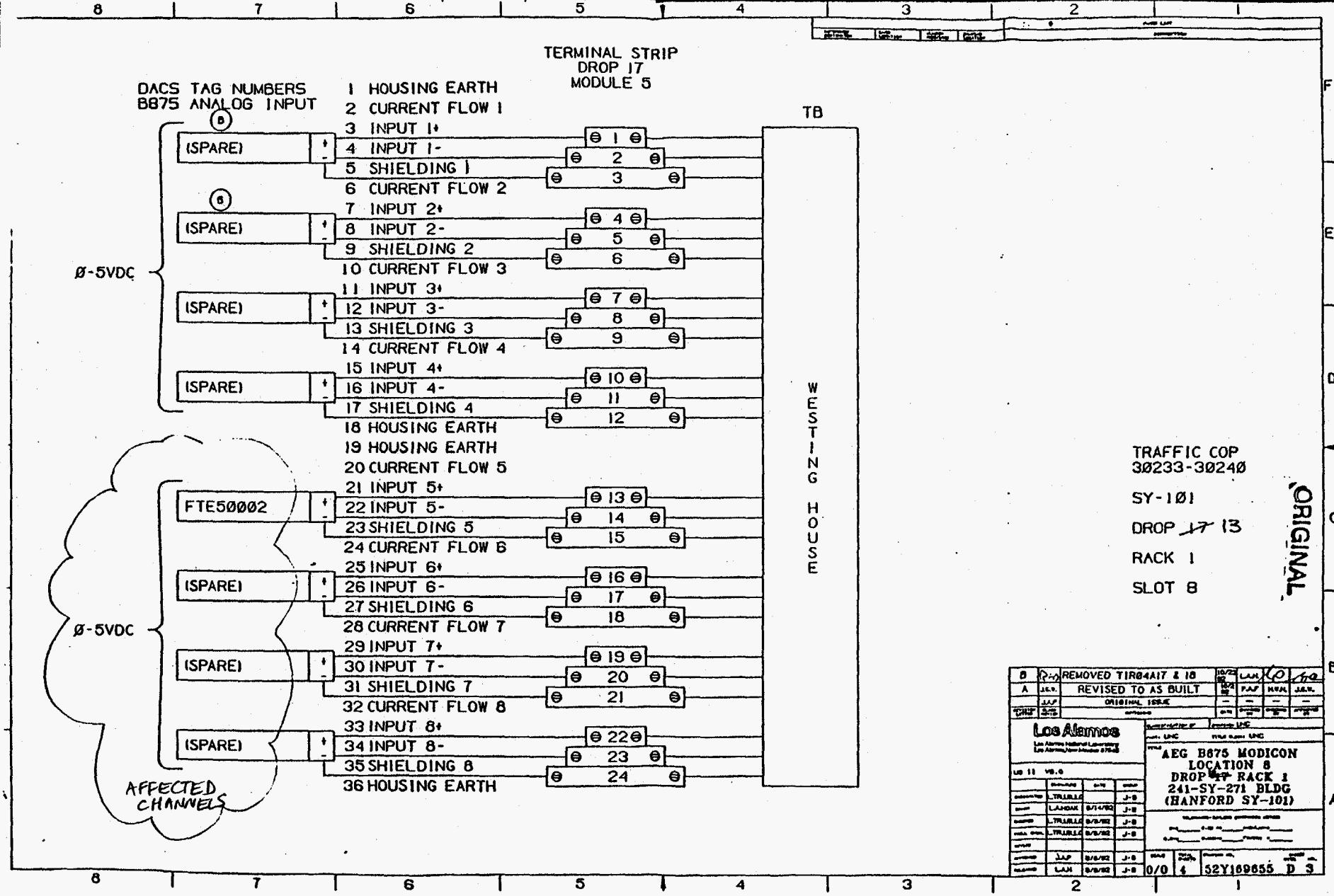
(signature) Date: 12/7/94

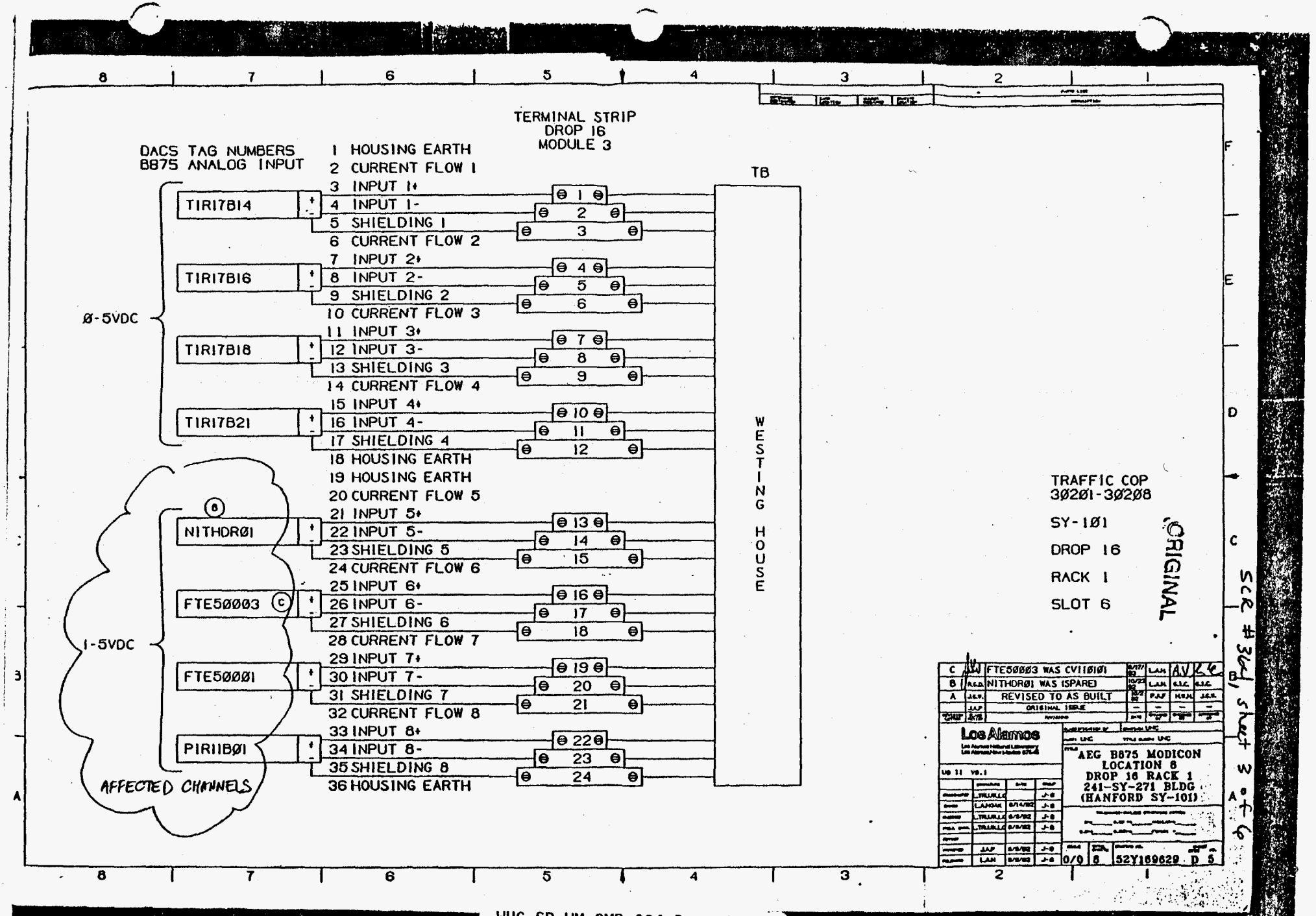
14. ASSIGNED TO: RW Truitt Planned Release Date: 12/7/94 Phone No. 376-2590

IMPLEMENTATION

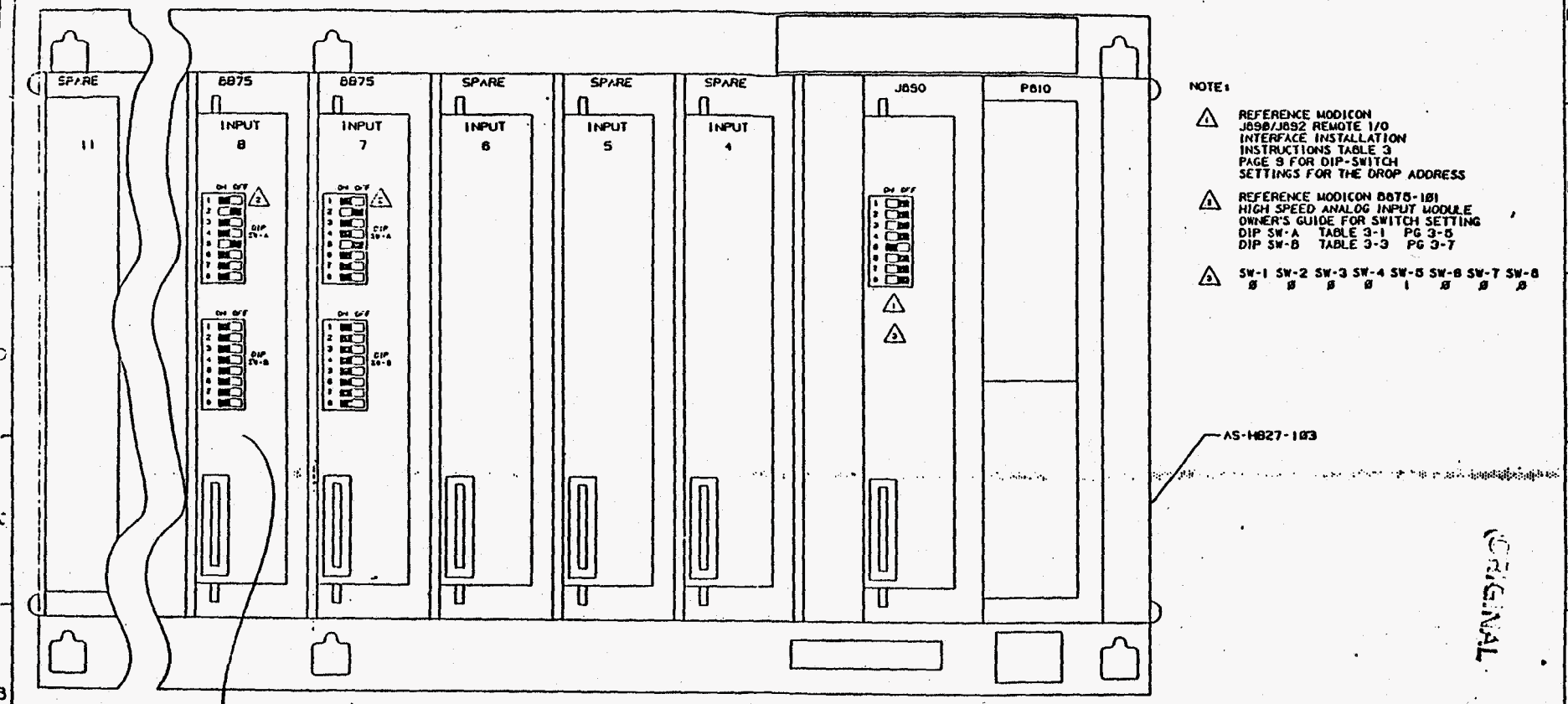
15. SOLUTION COMMENTS: [ ] See Attached [ ] ECN [ ] None
Performed by Mike Erhart, instrument technician 12/7/94 @ 10:35 A.m.
16. SOFTWARE PROGRAMS, MODULES, OR FILES AFFECTED: [ ] See Attached [✓] None
17. CHANGE INSTALLED: R.W. Truitt (signature) Date: 12/7/94 Phone No. 376-2590
18. VERIFIED BY: (signature) Date: 12/7/94 Phone No. 373-4745
19. RELEASE VERSION: N/A
20. CLOSED BY: (signature) Date: 12/7/94 Phone No. 373-1779

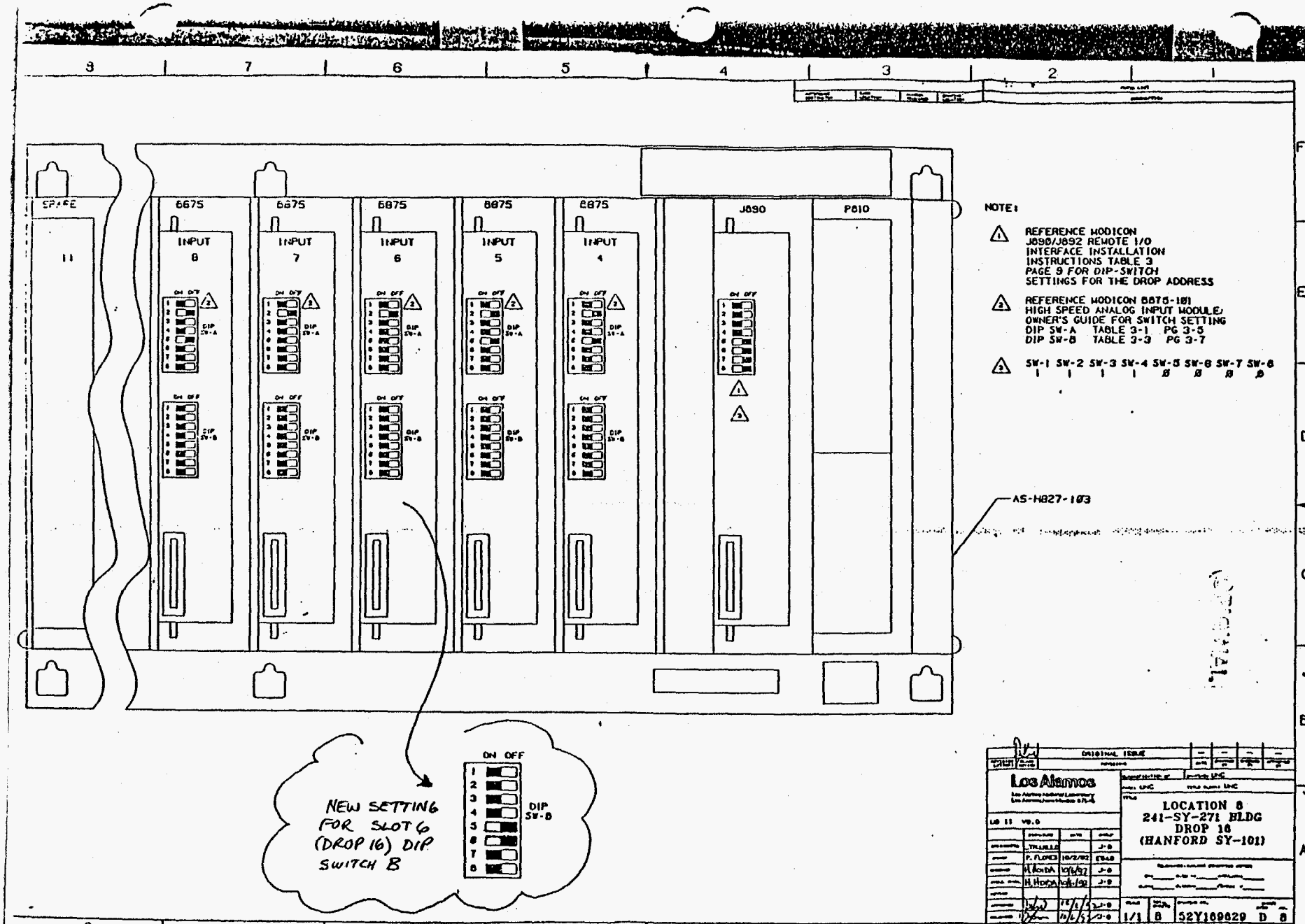
Form #: HMTP-SCR-1 (6-19-94)


TERMINAL STRIP
DROP 17
MODULE 5
DACS TAG NUMBERS
B875 ANALOG INPUT
1 HOUSING EARTH
2 CURRENT FLOW 1
3 INPUT 1+
4 INPUT 1-
5 SHIELDING 1
6 CURRENT FLOW 2
7 INPUT 2+
8 INPUT 2-
9 SHIELDING 2
10 CURRENT FLOW 3
11 INPUT 3+
12 INPUT 3-
13 SHIELDING 3
14 CURRENT FLOW 4
15 INPUT 4+
16 INPUT 4-
17 SHIELDING 4
18 HOUSING EARTH
19 HOUSING EARTH
20 CURRENT FLOW 5
21 INPUT 5+
22 INPUT 5-
23 SHIELDING 5
24 CURRENT FLOW 6
25 INPUT 6+
26 INPUT 6-
27 SHIELDING 6
28 CURRENT FLOW 7
29 INPUT 7+
30 INPUT 7-
31 SHIELDING 7
32 CURRENT FLOW 8
33 INPUT 8+
34 INPUT 8-
35 SHIELDING 8
36 HOUSING EARTH
(SPARE)
FTE50002
Ø-5VDC
AFFECTED CHANNELS
TB
WESTING HOUSE
TRAFFIC COP
30233-30240
SY-101
DROP 17 13
RACK 1
SLOT 8
ORIGINAL
REMOVED TIR84A17 & 18
REVISED TO AS BUILT
ORIGINAL ISSUE
Los Alamos
AEG B875 MODICON
LOCATION 8
DROP 17 RACK 1
241-SY-271 BLDG
(HANFORD SY-101)
52Y169655 D 3
SCR #364 / Sheet 20 of



SCR #364, sheet 3 of 6


SPARE
11
8875
INPUT
8
8875
INPUT
7
SPARE
INPUT
6
SPARE
INPUT
5
SPARE
INPUT
4
J890
P810
AS-H827-103
NOTE:
1 REFERENCE MODICON J890/J892 REMOTE I/O INTERFACE INSTALLATION INSTRUCTIONS TABLE 3 PAGE 8 FOR DIP-SWITCH SETTINGS FOR THE DROP ADDRESS
2 REFERENCE MODICON 8875-101 HIGH SPEED ANALOG INPUT MODULE OWNER'S GUIDE FOR SWITCH SETTING DIP SW-A TABLE 3-1 PG 3-5 DIP SW-B TABLE 3-3 PG 3-7
3 SW-1 SW-2 SW-3 SW-4 SW-5 SW-6 SW-7 SW-8
0 0 0 0 1 0 0 0
NEW SETTING FOR SLOT 8 (DROP 13) DIP SWITCH 8
ON OFF
DIP SW-B
ORIGINAL ISSUE
Los Alamos
LOCATION 8
241-SY-271 BLDG
DROP 13
(HANFORD SY-101)
52Y109655 D 4
ORIGINAL
SCR #364, Sheet 4 of 6



SCC # 3641 sheet 5 of 6

Table 3-3

Sw-B Settings For All Periods of Input Averaging (8 Ckts)

8 Input Circuit Configuration

Inp 1 - 4 (GrpA) ON	Inp 1 - 4 (GrpA) OFF	# Samples Averaged
B-1	—	1 Sample
B-2	—	
B-3	—	
—	B-1	2 Samples
B-2	—	
B-3	—	
B-1	—	4 Samples
—	B-2	
B-3	—	
—	B-1	8 Samples
—	B-2	
B-3	—	
B-1	—	16 Samples
B-2	—	
—	B-3	
—	B-1	32 Samples
B-2	—	
—	B-3	
B-1	—	64 Samples
—	B-2	
—	B-3	

Inp 5 - 8 (GrpB) ON	Inp 5 - 8 (GrpB) OFF	# Samples Averaged
B-4	—	1 Sample
B-5	—	
B-6	—	
—	B-4	2 Samples
B-5	—	
B-6	—	
B-4	—	4 Samples
—	B-5	
B-6	—	
—	B-4	8 Samples
—	B-5	
B-6	—	
B-4	—	16 Samples
B-5	—	
—	B-6	
—	B-4	32 Samples
B-5	—	
—	B-6	
B-4	—	64 Samples
—	B-5	
—	B-6	

OLD SETTING →

NEW SETTING →