

NCSX CLOSE OUT NOTE

TO: Larry Dudek
FROM: Erik D. Perry

SUBJECT: NCSX WBS 8220, Mothball NCSX Hardware

Date: December 26, 2008

Scope

This job covers the mothballing and storage of all NCSX hardware.

Status

All NCSX hardware has been stored in the NCSX Test Cell (CS building high bay area), the basement under the NCSX Test Cell, or on the concrete pad just inside the D-site NW gate. Attached are lists and photos showing where all of the hardware is located.

This hardware has property tag P28160 and is included on Master Equipment List item #812.

Costs

This activity has been completed within the time and budget allocated.

Conclusion:

All hardware for NCSX has been safely stored so it will be available should the project be re-started.

MASTER EQUIPMENT LIST MODIFICATION REQUEST FORM

Date: 10/9/08

1. Item Number (from existing Master Equipment List): MEL _812

Property tag or other ID number:

3. Description:: NCSX Parts Storage , P28160

4. Requester: Erik Perry

5. System: NCSX Parts (see attached)

6. Location: Storage of NCSX Parts

7. Disposition: Transfer ☐
leave in place ☒
remove and save for NSTX ☐
remove and save for others ☐
remove and scrap/excess ☐
remove to radwaste ☐

Note: If an item is being saved, a Justification to Save Worksheet must be attached.

Equipment Custodian comments: Erik Perry 10/9/08

Erik Perry

Designated NSTX Liaison comments: N/A

Designated D&D Liaison comments: N/A

Designated Collaborations Liaison comments: N/A

Designated Plasma Science Dept. Liaison comments: N/A

Designated Experiment Dept. Liaison comments: N/A

Designated Engineering Dept. Liaison comments: Phil Heitzenroeder

Phil Heitzenroeder

Designated Engineering Dept. Liaison comments: Larry Dudek

Larry Dudek

Head of Engineering and Technical Infrastructure Dept approval: Michael Williams

Michael Williams

Mothball NCSX Hardware			
Item	Qty	Size	Storage Location
Items from TFTR Test Cell			
Modular Coils	18		
3 pack on wedge	4	8.5' x 9.5'	NCTC
3 pack on pallet	2	8' x 9.5'	NCTC
Vacuum vessel segments	3	11' x 15'	NCTC
VV Spool piece crates	3		NCTC
Yellow wedge stands	2		NCTC
Wedge cover plates		8' x 9'	NCTC
5 ton lift beam	2		RESA
14 ton lift beam	1		RESA
Port extension crates (in RWSE)	6	4' x 10'	NCTC
MC Bolts	2	4' x 4'	NCTCB
Coil winding Station	1	10' x 16'	NCTC
Parts shelves with parts	12	3' x 7'	NCTC
Cabinets	3		NCTCB
Crates	10	2' x 4'	NCTCB
Crates	4	3' x 4'	NCTCB
VV diagnostic parts	1	4' x 4'	NCTCB
Autoclave			D-site pad
Portable AC units	3		C-site crib
Coil winding rooms			Dispose
Small shield block	4		TFTR Test Cell
Large shield block	1		D-site pad
Machine mock-up			NCTC
Welding machines	4		RESA
Tools			C-site crib
Measuring Equipment			S-110
Items from Mockup Bldg			
Equipment in machine shop			RESA
Items from TFTR Basement			
Shelves	1		NCTCB
Cabinets	3		NCTCB
Pallets			NCTCB
Spare coil conductor pallet	5	4' x 4'	NCTCB
Cryo pump skid	1		NCTCB
Cryostat	1		Dispose
Interlocked cryo room	1		Leave in place
Items from D-site yard			
Cable tray stack	10	4' x 15'	D-site pad
Pallet of tray covers	6	4' x 15'	D-site pad

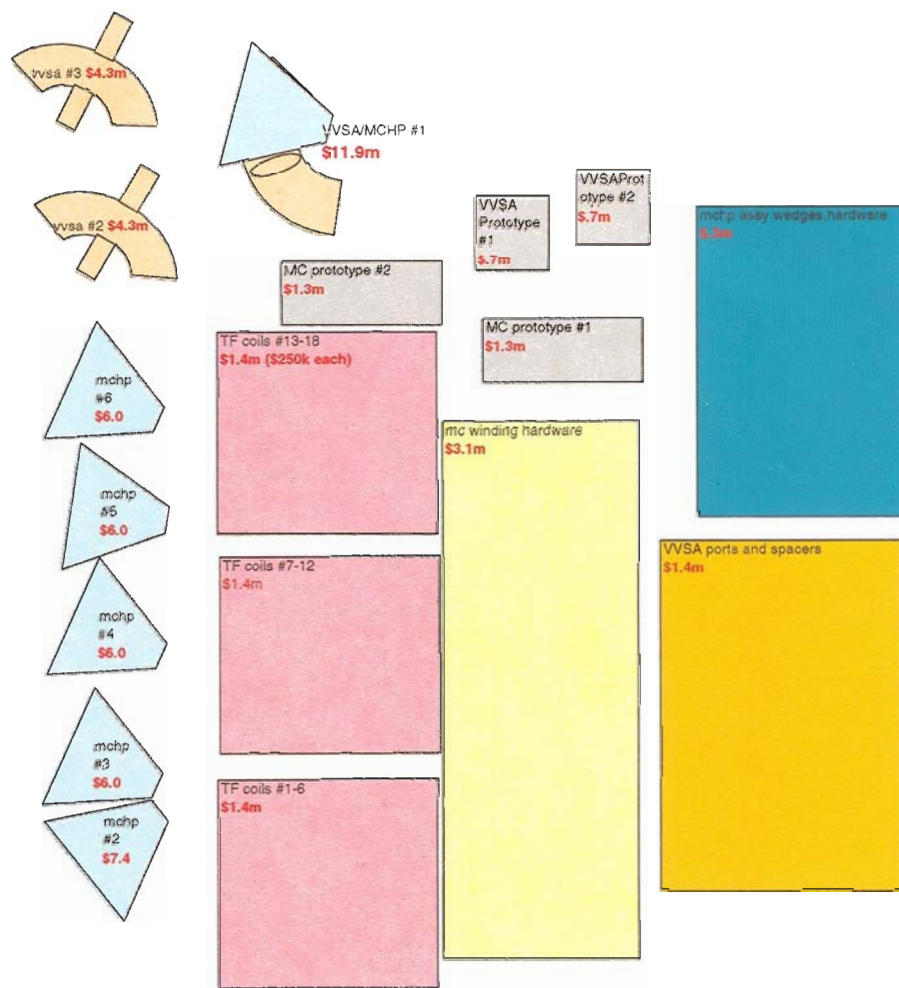
Pallet of brackets	3	4' x 4'	D-site pad	
Pallet of gnd jumpers/hardware	2	4' x 4'	D-site pad	
Items from NCTC/D-site MG				
TF coil crates	18	9'6" x 11'3"	NCTC	
Sta 3 fixture crates	2	7' x 7'	NCTC	
Items from CAS Bldg				
Aluminum I-beams for platform		6' x 4' x 24'	by CAS	
Aluminum tubes for platform		2' x 3' x 24'	by CAS	
Finished beams and columns		4' x 4' x 12'	by CAS	
Pallet of connector boxes			NCTC	
Column end plates			NCTC	
From other areas				
Spherical bearings (Dahlgren)	6	1' x 1' x 1'	NCTC	
Prototype castings	2	8' x 8'	NCTC	
Prototype VV cross sections	2		NCTC	
TF coil fabrication fixtures				
VPI fixture	1	11' x 13'	NCTC	
Mandrel	1	10' x 11' x 4'	NCTC	
Misc fixtures	1	8' x 4'	NCTC	
EDP 12/26/08				

PARTS STORED IN THE NCSX TEST CELL – 12/19/08

Modular Coils
Torroidal Coils (in crates)
Vacuum Vessel Sectors
TF WINDING PARTS – 2 BOXES
COIL FLANGE SHIMS – 2 BOXES
AL. FEET FOR COILS
MODULAR & TF COIL EPOXY SAMPLES
G-11CR BUSHING STOCK FOR COIL FLANGES
TF VPI MOLD
TF WEDGE MILLING FIXTURE
WINDING STATION MOTOR AND CONTROLS
TF COIL LIFT FIXTURE – LF-273
TF WINDING / LIFT FIXTURE
1 SPOOL TF CONDUCTOR
VVSA BOX #14
1 BOX FROM MATERIAL TEST LAB.
1 BOX AUTOCLAVE CONTROL AND JUNCTION BOXES
WIRE ROPE SLINGS
2 SPARE CASTINGS
2 VACUUM VESSEL MOCK-UP SECTIONS
1 BOX CASTING MATERIAL FOR WELD TESTING SAMPLES
1 BOX SPHERICAL BEARINGS
AUTOCLAVE BLOWER AND HEATER
INCH WORM
STANDS FOR V/V
CRYO SKID
COIL CONDUCTOR PAYOUT SPOOL
1 BOX SPACER & 2 BLANKS – SE121-020
VVSA BOX #4
VVSA BOX #5
P28349 CONTROLS FOR THE 3 ACTUATORS

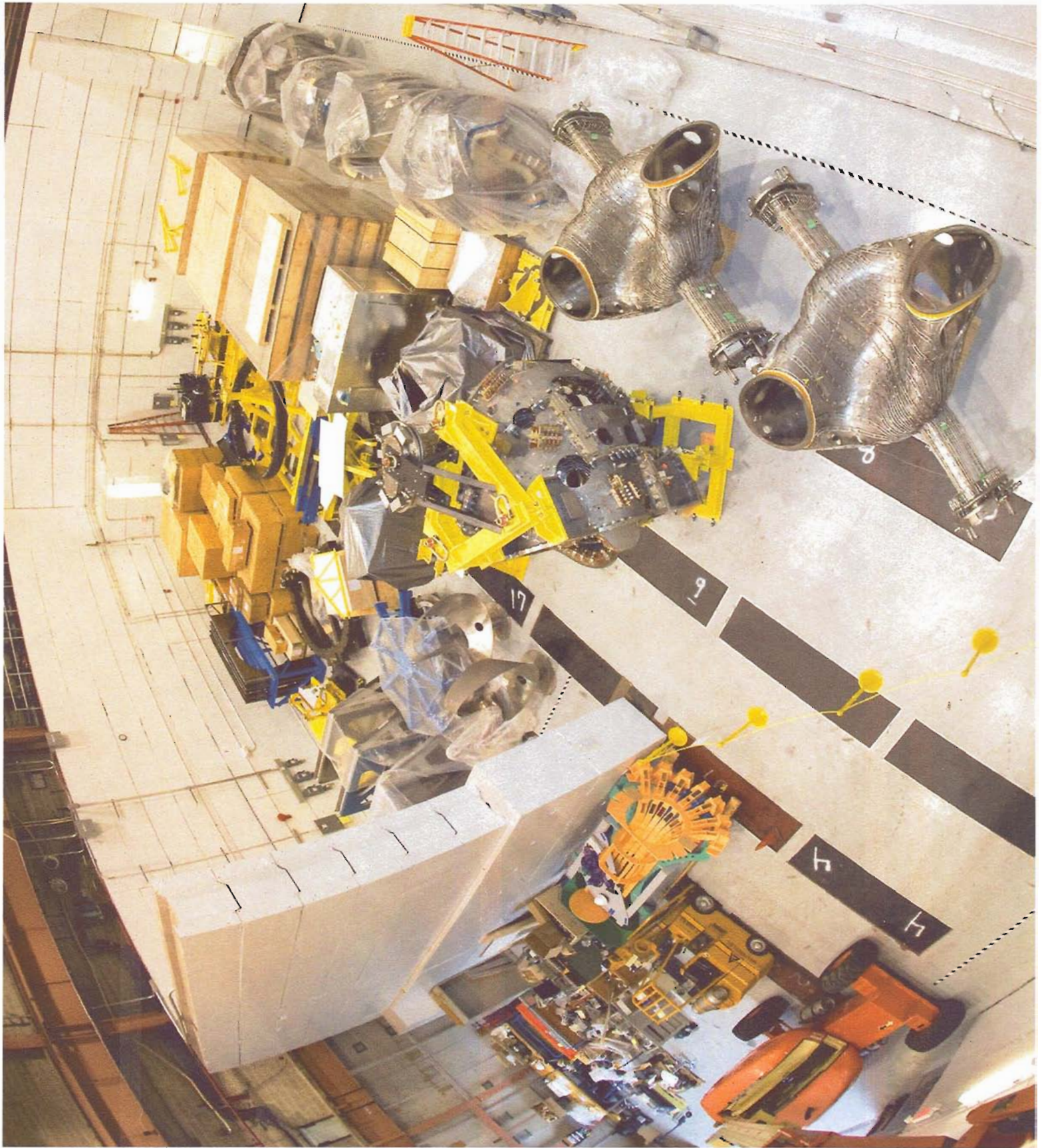
NCSX TEST CELL HARDWARE STORAGE INVENTORY SUMMARY

TOTAL \$65M INVENTORY
(cost includes design,
r&d,materials,Fab & assy.
Excludes management)



N

NCSX TEST CELL LOOKING TOWARD SE CORNER

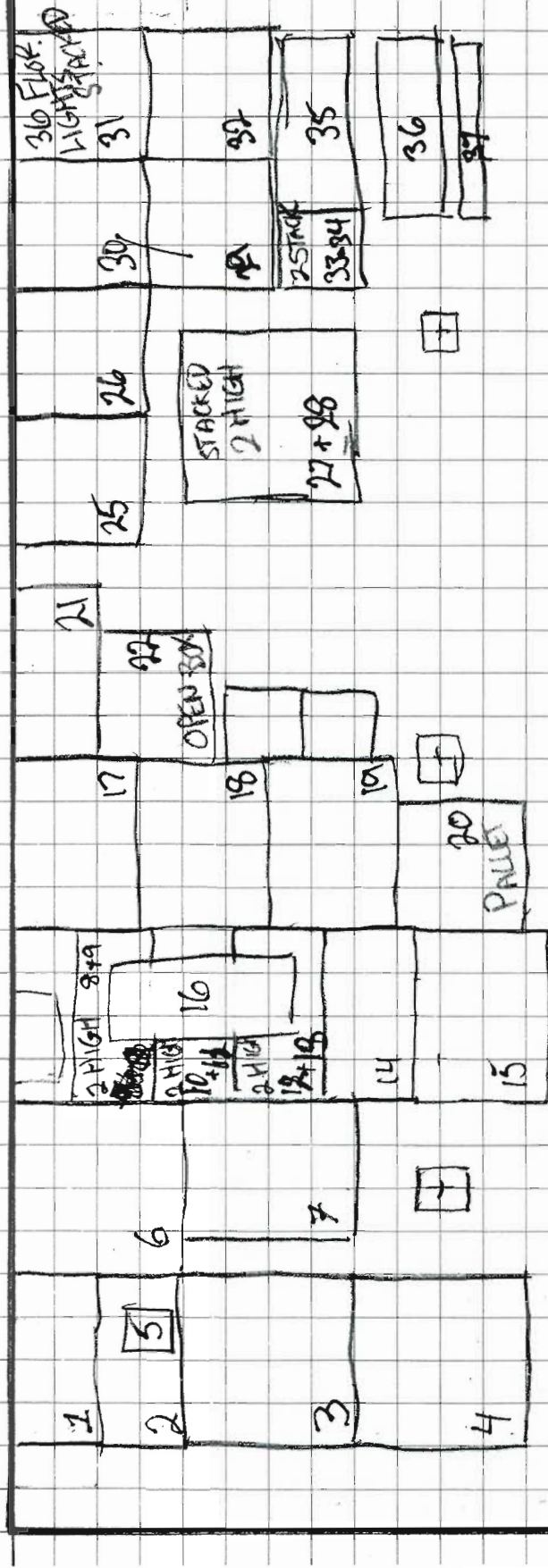


NCSX PARTS STORED IN CS BASEMENT NORTH END – 12/19/08

1. Coil alignment fixtures, stainless and aluminum shims, trial shear plate sets
2. Hillman rollers- coil to vessel, 2 piece aluminum bushings, stainless hex mounting
3. Coil winding parts
4. NCSX VV brackets
5. Small pallet 310# of spare copper for chill plates
6. Mounting brackets for turning wheels
7. Mounting brackets & turning fixture wheels
8. Delrin push pads, side bars, tees, winding tools, 1/4" tinned tubing, N₂ for tooling, VPI valve manifolds
9. Winding equipment (cannot read manifest)
10. VPI manifolds and fittings & valve assembly, manifold mounting bracket
11. Coil winding parts
12. Bonding glass types, ground-wrap, kapton tape
13. PF1A
14. Surveyed side bars and tees
15. Twisted race tracks
16. Autoclave manifolds (clean)
17. Turning Fixture motor & Gears controls
18. Counter weights for coil rings
19. VPI sideboards and tees
20. Heavy steel plates
21. Winding clamp, sidebars, shim washers, G10 Threaded Rod, G10 thread washers
22. Excess casting material
23. Romer Arm Stand
24. Romer Arm Stand
25. Electrical tray hardware, bolts and nuts, tray connectors
26. NCSX copper conductor 8 full spools
27. A, B, C style coil floor stands
28. NCSX VVSA
29. Partial copper conductor spools
30. Partial copper conductor spools
31. Partial copper conductor spools
32. Partial copper conductor spools
33. Winding fixture motor
34. Control box
35. Co-joined taping machine, G11 CR, jumper leads, ground-wrap, stud alignment tool
36. TF coil test mold, TF coil test bundles
37. Coil lacing test fixture
38. strain gauges, thermocouples, poloidal break stuff, shrink tube
39. FG tapes and G11 Fillers
40. FG tapes and Leads
41. University of Tennessee (small box)
42. Shim bags LN₂ cooling tubes, fittings and gauges
43. Grey Locker #1: final clamps
44. Grey Locker #2: hot plate, scale
45. Grey Locker #3: binks tank parts

NCSX TEST CELL BASMENT LOOKING TOWARD NW CORNER





NCSX HARDWARE STORED IN CS BLDG BASEMENT



GATE

1 BOX = APPROX 1 SQUARE FOOT

NCSX AUTOCLAVE STORED ON D-SITE PAD

12/19/08

