

NCSX Conceptual Design Review

Cost and Schedule Estimates

9450 Construction

11 - Plasma Facing Components

- 111 - First Wall Panels
- 116 - PFC Local I&C

12 - Vacuum Vessel Systems

- 121 - Vacuum Vessel Assembly
- 122 - Vacuum Vessel Thermal Insulation
- 123 - Vacuum Vessel Heating and Cooling Distrib
- 124 - Vacuum Vessel Supports
- 125 - Vacuum Vessel Local I&C

13 - TF Coils

- 131 - TF Windings
- 132 - TF Leads
- 133 - TF I&C

14 - PF Coils

- 141 - Central Colenoid Assy (PF1 PF2 & CS Struct
- 142 - PF3 Windings
- 143 - PF4 Windings
- 144 - PF5 Windings
- 145 - PF6 Windings
- 146 - PF Leads
- 147 - PF I&C

15 - Cryostat

- 151 - Cryostat Shell and Structure
- 152 - Cryostat Thermal Insulation
- 153 - VV/Cryostat Boots
- 154 - Cryostat Temp Control/Heating Sys
- 155 - Cryostat Local I&C

16 - Support Structure

- 161 - Machine Base Assy & Gravity Supports
- 162 - Coil Support Assembly
- 163 - Support Structure I&C

17 - Modular Coils

- 172 - Modular Coil Winding Form/Struct (castings)
- 171 - Modular Coil Windings &
- 173 - Modular Coil Leads
- 174 - Modular Coil Cooling System

18 - Trim Coils

19 - LN2 Distribution System

- 191 - Manifolds & Piping
- 192 - Flow Control
- 193 - Local I&C

21 - Fueling Systems

22 - Torus Vacuum Pumping Systems

23 - Wall Conditioning Systems

25 - Neutral Beam Injection System

- 251 - NB Systems Recommissioning
- 252 - NB Installation & Test

31 - Magnetic Diagnostics

35 - Profile Diagnostics

36 - Edge and Divertor Diagnostics

38 - Electron Beam (EB) Mapping

39 - Diagnostics Integration

41 - AC Power

- 411 - Auxiliary AC Power Systems
- 412 - Experimental AC Power Systems

42 - AC/DC Converters

43 - DC Systems

- 431 - C-Site DC Systems
- 432 - D-to-C Site DC Systems
- 433 - D-Site DC Systems

44 - Control and protection Systems

- 441 - Electrical Interlocks
- 442 - Kirk Key Interlocks
- 443 - Real Time Control Systems
- 444 - Instrument Systems
- 445 - Coil protection Systems
- 446 - Ground Fault Monitoring

45 - Power System Design and Integration

- 451 - System Design and Interfaces
- 452 - Electrical Systems Support
- 453 - System Testing (PTP's)

51 - TCP/IP Infrastructure Systems

52 - Central Instrumentation & Control

53 - Data Acquisition & Facility Computing

54 - Facility Timing & Synchronization

55 - Real Time Plasma & Power Supply Control Sys

56 - Central Safety Interlock Systems

57 - Control Room Facility

61 - Facility Modifications & Test Cell Prep

- 611 - Facility Modifications Outside Test Cell
- 613 - Seismic Modifications to Test Cell Walls

62 - Water Cooling Systems

- 622 - Neutral beam Water Cooling System
- 623 - Vacuum Pumping Water Cooling System
- 624 - Bakeout Water System
- 625 - Diagnostic Water Cooling System

63 - Cryogenic Systems

- 631 - LN2 - LHe Supply System
- 632 - LN2 Coil Cooling Supply
- 633 - GN2 Cryostat Cooling System

64 - Utility Systems

65 - Helium Bakeout System

66 - Facility Systems Integration

71 - Assembly Planning & Oversight Operations

- 711 - Planning Activities
- 712 - Construction Management

72 - On-site pre-assembly Operations

- 721 - Preparation of Pre-Assembly Area
- 722 - Receive Inspect Test Coils
- 724 - Receive Inspect Test Vacuum vessel
- 725 - Assemble Field periods

73 - Test Cell & Basement Assembly Operations

74 - Measurement Systems

75 - Platform Design & Fabrication

76 - Tooling Design & Fabrication

81 - Project Management and Control

82 - Project Engineering

84 - Project Physics

92 - Pre-Operational & Integrated Sys Test (TPC)

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08
cc 9450 - NCSX Fabrication											
1 - Stellarator Core Systems											
11 - Plasma Facing Components											
111 - First Wall Panels											
111-001	Title I design	01FEB06*	07APR06	26,265.10	1,495						
111-011	Title II design	10APR06	07JUL06	52,530.71	1,495						
111-021	In-house R&D	01FEB06*	07APR06	15,164.92	1,495						
111-031	Title III engr	10JUL06	05JAN07	19,423.57	1,495						
111-037	First Wall Panels Procurement	10JUL06	29SEP06	89,390.95	1,545						
111-041	In-house Fab/assy	02OCT06	27OCT06	11,644.16	1,545						
Subtotal		01FEB06	05JAN07	214,419.41	1,495						
116 - PFC Local I&C											
116-001	Title I design	01MAY06*	30JUN06	15,650.18	1,480						
116-011	Title II design	03JUL06	11AUG06	15,650.18	1,480						
116-031	Title III engr	14AUG06	26JAN07	3,620.33	1,480						
116-037	PFC Local I&C Procurement	14AUG06	03NOV06	4,882.93	1,520						
116-041	In-house Fab/assy	06NOV06	01DEC06	4,459.36	1,520						
Subtotal		01MAY06	26JAN07	44,262.98	1,480						
Subtotal		01FEB06	26JAN07	258,682.39	1,480						
12 - Vacuum Vessel Systems											
121 - Vacuum Vessel Assembly											
121-001	Title I design	01OCT02*	01MAY03	166,504.88	125						
121-011	Title II design	02MAY03	01DEC03	189,172.12	125						
121-031	Title III engr	02DEC03	29MAY06	256,824.93	1,654						
121-032	Select Vendors for R&D	01NOV02*	30JAN03	0.00	107						
121-033	Award 2 Vendors for R&D	31JAN03	20FEB03	0.00	107						
121-034	Vendor R&D (1/A)	21FEB03	30OCT03	654,123.59	107						
121-035	Prep and Issue RFP Package	31OCT03	25DEC03	0.00	107						

ORNLEM =171hr ; ORNLRM =13hr ; ■

ORNLEM =343hr ; ORNLRM =27hr ; ■

EM//SM =32hr ; ORNLEM =84hr ; ■

EA//EM =29hr ; ORNLEM =97hr ; ■

■ 41=68\$k ;

EM//SM =32hr ; EM//TB =96hr ; ■

ORNLEM =86hr ; ORNLRM =20hr ; ■

ORNLEM =86hr ; ORNLRM =20hr ; ■

EA//DM =16hr ; ORNLEM =12hr ; ■

■ 41=04\$k ;

EM//SM =04hr ; EM//TB =48hr ; ■

EA//EM =57hr ; ORNLEM =1287hr ; ORNLRM =76hr ;

EA//EM =63hr ; ORNLEM =1425hr ; ORNLRM =84hr ;

EA//EM =563hr ; ORNLEM =

EA//EM =308hr ; ORNLEM =1,132hr; 41=\$400k

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	Fiscal Year											
						FY03	FY04	FY05	FY06	FY07	FY08						
121-036	Procure Production Vendor	26DEC03	25MAR04	0.00	107												
121-037	Award Production Vendor	26MAR04	01APR04	0.00	107												
121-039	VV vendor phase funding 1 (E/A F/B)	02APR04	09DEC04	967,051.05	1,676												
121-040	VV vendor phase funding 2 (1/A)	10DEC04	18AUG05	898,330.13	1,676												
121-041	VV vendor phase funding 3 (1/A)	19AUG05	27APR06	913,038.33	1,676												
121-100	Mfg Planning/Design tooling & fixturing	02APR04	24JUN04	0.00	107												
121-110	Procure raw material ,purchased components&fixt	25JUN04	14OCT04	0.00	107												
121-120	Form Panels	15OCT04	11NOV04	0.00	107												
121-125	Fabricate & pre-machine port flanges	15OCT04	06JAN05	0.00	107												
121-130	Fabricate 60* periods	07JAN05	31MAR05	0.00	107												
121-140	Inspect profile	01APR05	07APR05	0.00	107												
121-150	Stress relieve anneal	08APR05	14APR05	0.00	107												
121-160	Sand blast smooth	15APR05	21APR05	0.00	107												
121-170	Electro Polish surfaces	22APR05	19MAY05	0.00	107												
121-180	Weld 120* periods	20MAY05	09JUN05	0.00	107												
121-190	Inspect Profile	10JUN05	16JUN05	0.00	107												
121-200	Machine Port openings	17JUN05	07JUL05	0.00	107												
121-210	Thermal cycle vessel	08JUL05	14JUL05	0.00	107												
121-220	Perform vacuum test at 150C	15JUL05	21JUL05	0.00	107												
121-230	Perform final dimensional inspection	22JUL05	11AUG05	0.00	107												
121-240	Touch-up polish inside surfaces & cleanup ext	12AUG05	15SEP05	0.00	107												
121-250	Clean part per cleaning procedure	16SEP05	06OCT05	0.00	107												
121-260	Final visual inspection/PPPL source witness	07OCT05	13OCT05	0.00	107												
121-270	Ship to PPPL	14OCT05	20OCT05	0.00	117												
121-280	Ports- Fabricate Port ext subassy & NB port assy	14OCT05*	12JAN06	0.00	107												
121-290	Inspect/clean	13JAN06	19JAN06	0.00	107												
121-300	Ship ports to PPPL	20JAN06	26JAN06	0.00	107												
Subtotal		01OCT02	29MAY06	4,045,045.03	1,654												

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08
122 - Vacuum Vessel Thermal Insulation											
122-001	Title I design	02MAY03	31JUL03	17,897.60	457	■ EA/EM =10hr ; ORNLEM =145hr ;					
122-011	Title II design	02DEC03	17MAY04	39,211.22	370		■ EA/EM =20hr ; ORNLEM =291hr ;				
122-031	Title III engr	18MAY04	02MAY05	22,966.91	1,934		■ EA/EM =34hr ; ORNLEM =136hr ;				
122-037	VV Insulation Procurement	18MAY04	01NOV04	38,300.70	370		■ 41=29\$k ; 35=02\$k ;				
Subtotal		02MAY03	02MAY05	118,376.43	1,934	■					
123 - Vacuum Vessel Heating and Cooling Distrib											
123-001	Title I design	02MAY03	12JUN03	12,479.36	552	■ EA/EM =10hr ; ORNLEM =97hr ;					
123-011	Title II design	09SEP03	01DEC03	26,602.83	490		■ EA/EM =20hr ; ORNLEM =194hr ;				
123-031	Title III engr	02DEC03	23AUG04	7,215.20	2,114		■ EA/EM =08hr ; ORNLEM =48hr ;				
123-037	VV Heating/Cooling Distr Procurement	02DEC03	23FEB04	27,714.77	490		■ 41=23\$k ;				
123-041	VV Heating/Cooling Fab/assy	24FEB04	17MAY04	67,246.44	490		■ EM/SM =162hr ; EM/TB =647hr ;				
Subtotal		02MAY03	23AUG04	141,258.60	2,114	■					
124 - Vacuum Vessel Supports											
124-001	Title I design	02MAY03	03JUL03	17,880.19	622	■ ORNLEM =158hr ;					
124-011	Title II design	21OCT03	01DEC03	19,613.09	545		■ ORNLEM =158hr ;				
124-031	Title III engr	02DEC03	19APR04	7,747.16	2,204		■ EA/EM =02hr ; ORNLEM =60hr ;				
124-037	VV Supports Procurement	02DEC03	23FEB04	16,520.41	545		■ 41=14\$k ;				
124-041	VV Supports Fab/assy	24FEB04	22MAR04	633.00	545		■ EM/SM =06hr ;				
Subtotal		02MAY03	19APR04	62,393.85	2,204	■					
125 - Vacuum Vessel Local I&C											
125-001	Title I design	01APR05*	07JUN05	10,393.42	139			■ ORNLEM =79hr ;			
125-011	Title II design	08JUN05	19JUL05	10,393.42	139			■ ORNLEM =79hr ;			
125-015	Title III design	20JUL05	12OCT05	2,379.04	1,817			■ ORNLEM =18hr ;			
125-037	Procurement	20JUL05	11OCT05	4,606.55	139			■ 41=04\$k ;			
Subtotal		01APR05	12OCT05	27,772.43	1,817			■			
Subtotal		01OCT02	29MAY06	4,394,846.34	1,654	■					

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08
13 - TF Coils											
131 - TF Windings											
131-001	Title I design	17MAR03	18JUL03	67,264.73	255						
131-011	Title II design	02DEC03	29APR04	70,288.04	257						
131-031	Title III engr	30APR04	27OCT05	115,766.69	1,806						
131-037	TF Coil Procurement (E/A F/B)	30APR04	28APR05	1,132,015.04	257						
Subtotal		17MAR03	27OCT05	1,385,334.50	1,806						
132 - TF Leads											
132-001	Title I design	02MAY03	08JUL03	21,605.23	643						
132-011	Title II design	02DEC03	06JAN04	23,649.62	539						
132-015	Title III design	07JAN04	25MAR04	4,457.52	2,221						
132-037	TF Leads Procurement	07JAN04	30MAR04	58,201.02	539						
Subtotal		02MAY03	30MAR04	107,913.39	2,218						
133 - TF I&C											
133-001	Title I design	01AUG05*	05OCT05	11,008.24	137						
133-011	Title II design	06OCT05	16NOV05	11,569.40	137						
133-037	TF I&C Procurement	17NOV05	08FEB06	7,331.00	137						
Subtotal		01AUG05	08FEB06	29,908.64	137						
Subtotal		17MAR03	08FEB06	1,523,156.53	1,732						
14 - PF Coils											
141 - Central Colenoid Assy (PF1,PF2 & CS Struct											
141-001	Title I design	02MAY03	04SEP03	84,614.52	486						
141-011	Title II design	02DEC03	29APR04	88,468.28	424						
141-031	Title III engr	30APR04	27OCT05	121,982.15	1,806						
141-037	PF OH Solenoid Procurement (E/A F/B)	30APR04	28APR05	225,460.47	424						
Subtotal		02MAY03	27OCT05	520,525.42	1,806						

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	Fiscal Year Breakdown												
						FY03	FY04	FY05	FY06	FY07	FY08							
142 - PF3 Windings																		
142-001	Title I design	02MAY03	04SEP03	31,990.11	398													
142-011	Title II design	02DEC03	29APR04	33,429.35	336													
142-031	Title III engr	30APR04	27OCT05	36,193.05	1,806													
142-037	PF 3 Procurement (E/A F/B)	30APR04	28APR05	183,771.52	336													
Subtotal		02MAY03	27OCT05	285,384.03	1,806													
143 - PF4 Windings																		
143-001	Title I design	02MAY03	04SEP03	31,990.11	398													
143-011	Title II design	02DEC03	29APR04	33,429.35	336													
143-031	Title III engr	30APR04	27OCT05	36,193.05	1,806													
143-037	PF 4 Procurement (E/A F/B)	30APR04	28APR05	225,158.71	336													
Subtotal		02MAY03	27OCT05	326,771.22	1,806													
144 - PF5 Windings																		
144-001	Title I design	02MAY03	04SEP03	31,990.11	398													
144-011	Title II design	02DEC03	29APR04	33,429.35	336													
144-031	Title III engr	30APR04	27OCT05	36,193.05	1,806													
144-037	PF 5 Procurement (E/A F/B)	30APR04	28APR05	190,138.78	336													
Subtotal		02MAY03	27OCT05	291,751.29	1,806													
145 - PF6 Windings																		
145-001	Title I design	02MAY03	04SEP03	31,990.11	398													
145-011	Title II design	02DEC03	29APR04	33,429.35	336													
145-031	Title III engr	30APR04	27OCT05	36,193.05	1,806													
145-037	PF 6 Procurement (E/A F/B)	30APR04	28APR05	143,445.54	336													
Subtotal		02MAY03	27OCT05	245,058.05	1,806													
146 - PF Leads																		
146-001	Title I design	01OCT04*	07DEC04	36,815.14	433													

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	Fiscal Year											
						FY03	FY04	FY05	FY06	FY07	FY08						
146-011	Title II design	08DEC04	18JAN05	36,815.14	433												
146-037	PF leads Procurement	19JAN05	12APR05	38,324.52	433												
Subtotal		01OCT04	12APR05	111,954.80	433												
147 - PF I&C																	
147-001	Title I design	01OCT04*	07DEC04	9,235.97	440												
147-011	Title II design	08DEC04	18JAN05	9,235.97	440												
147-037	PF Local I&C Procurement	19JAN05	12APR05	4,569.46	440												
Subtotal		01OCT04	12APR05	23,041.40	440												
Subtotal		02MAY03	27OCT05	1,804,486.21	1,806												
15 - Cryostat																	
151 - Cryostat Shell and Structure																	
151-001	Title I design	17MAR03	13JUN03	28,285.29	280												
151-011	Title II design	16JUN03	23SEP04	60,515.73	366												
151-031	Title III engr	12JUL05*	26JUN06	19,659.78	1,634												
151-037	Cryostat Procurement (1/A)	12JUL05*	26DEC05	138,636.19	159												
Subtotal		17MAR03	26JUN06	247,096.99	1,634												
152 - Cryostat Thermal Insulation																	
152-001	Title I design	24SEP04	04NOV04	6,220.69	516												
152-011	Title II design	05NOV04	02DEC04	6,269.72	516												
152-031	Title III engr	03DEC04	30DEC04	7,122.16	2,021												
152-037	Cryo Thermal Insulation Procurement	03DEC04	16DEC04	30,718.24	516												
152-041	Cryostat insulation Fab/assy	17DEC04	30DEC04	4,360.40	516												
Subtotal		24SEP04	30DEC04	54,691.21	2,021												
153 - VV/Cryostat Boots																	
153-001	Title I design	24SEP04	28OCT04	21,910.38	521												
153-011	Title II design	29OCT04	25NOV04	22,148.55	521												
153-031	Title III engr	26NOV04	23DEC04	7,122.16	2,026												
153-037	VV/Cryostat Boots Procurement	26NOV04	09DEC04	66,330.90	521												

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float						
						FY03	FY04	FY05	FY06	FY07	FY08
153-041	Cryostat/VV boots Fab/assy	10DEC04	23DEC04	4,360.40	521			EM//SM =40hr ;			
Subtotal		24SEP04	23DEC04	121,872.39	2,026						
154 - Cryostat Temp Control/Heating Sys											
154-001	Title I design	01OCT04*	01NOV04	12,043.84	497			EA//EM =15hr ; ORNLEM =73hr ;			
154-011	Title II design	02NOV04	01DEC04	12,043.84	497			EA//EM =15hr ; ORNLEM =73hr ;			
154-031	Title III engr	02DEC04	09FEB05	4,006.70	1,992			EA//EM =18hr ; ORNLEM =08hr ;			
154-037	Procurement	02DEC04	26JAN05	33,165.45	497			41=27\$k ;			
154-041	Cryo Temp Cntrl/Heating Fab/assy	27JAN05	09FEB05	1,744.16	497			EM//SM =16hr ;			
Subtotal		01OCT04	09FEB05	63,003.99	1,992						
155 - Cryostat Local I&C											
155-001	Title I design	01OCT04*	09DEC04	10,970.83	451			ORNLEM =84hr ;			
155-011	Title II design	10DEC04	20JAN05	10,970.83	451			ORNLEM =84hr ;			
155-037	Cryo Local I&C Procurement	21JAN05	14APR05	2,321.58	451			41=02\$k ;			
Subtotal		01OCT04	14APR05	24,263.24	451						
Subtotal		17MAR03	26JUN06	510,927.82	1,634						
16 - Support Structure											
161 - Machine Base Assy & Gravity Supports											
161-001	Title I design	01JUN04*	01SEP04	48,787.84	229			EA//DM =120hr ; EA//EM =76hr ; ORNLEM =196hr ;			
161-011	Title II design	02SEP04	06DEC04	50,355.61	229			EA//DM =120hr ; EA//EM =76hr ; ORNLEM =196hr ;			
161-031	Title III engr	07DEC04	04JUL05	42,926.16	1,889			EA//EM =60hr ; ORNLEM =252hr ;			
161-037	Machine Base&supports Procurement	07DEC04	11APR05	296,336.64	229			41=238\$k ; 35=02\$k ;			
Subtotal		01JUN04	04JUL05	438,406.25	1,889						
162 - Coil Support Assembly											
162-001	Title I design	01OCT03*	03FEB04	196,504.63	211			EA//DM =511hr ; EA//EM =283hr ; ORNLEM =794hr ;			
162-011	Title II design	04FEB04	02JUL04	196,504.63	211			EA//DM =511hr ; EA//EM =283hr ; ORNLEM =794hr ;			
162-031	Title III engr	05JUL04	30DEC05	159,086.67	1,760			EA//EM =270hr ; ORNLEM =874hr			
162-037	Coil Support Assy Procurement (E/A F/B)	05JUL04	01JUL05	1,141,152.27	211			41=500\$k ; 4E = 502 ; 35=00\$k ;			

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float						
						FY03	FY04	FY05	FY06	FY07	FY08
Subtotal		01OCT03	30DEC05	1,693,248.20	1,760						
163 - Support Structure I&C											
163-001	Title I design	03OCT05*	07DEC05	9,133.74	172				■ ORNLEM =66hr ;		
163-011	Title II design	08DEC05	18JAN06	9,133.74	172				■ ORNLEM =66hr ;		
163-015	Title III design	19JAN06	07APR06	3,874.92	1,690				■ ORNLEM =28hr ;		
163-037	Support Structure I&C Procurement/Fab	19JAN06	12APR06	5,786.22	172				■ 41=04\$k ;em/sm=8		
Subtotal		03OCT05	12APR06	27,928.62	1,687						
Subtotal		01OCT03	12APR06	2,159,583.07	1,687						
17 - Modular Coils											
172 - Modular Coil Winding Form/Struct (castings)											
172-001	Title I design	01OCT02*	14MAR03	157,391.44	79	■ EA/EM =60hr ; ORNLEM =1313hr ;					
172-011	Title II design	17MAR03	28AUG03	155,359.60	79	■ EA/EM =60hr ; ORNLEM =1295hr ;					
172-031	Title III engr	28NOV03	27DEC05	332,607.39	84				■ EA/EM =688hr ; ORNLEM =1,710hr		
172-037	Procurement (A/A 1/C)	28NOV03	27DEC05	4,484,941.07	84				■ 41=500\$k ; 4E=3,600 ; 35=48\$k ;		
C-000	Castings-RFP for Vendor R&D	01OCT02*	13DEC02	0.00	129	■					
C-001	Castings-Contract for Vendor R&D Placed	16DEC02		0.00	129	▼					
C-021	Castings-R&D casting tooling preparation	16DEC02	02MAY03	142,652.44	129	■ ea/em=185; orn=1013					
C-041	Castings-Produce R&D Casting (E/A F/B)	05MAY03	19JUN03	1,343,396.56	129	■ ea/em=43; orn=237; 41=500k 4E = 700K					
C-061	Castings-R&D Casting Received at PPPL		19JUN03	0.00	129	▼					
C-071	Procurement Lead Time	29AUG03	27NOV03	0.00	79	■					
C-081	Castings-Contract for Mfg. Placed	28NOV03		0.00	79	▼					
C-101	Castings-Production casting tooling preparation	28NOV03	25OCT04	0.00	79				■		
C-121	Castings-BA-1-1	26OCT04	04JAN05	0.00	79				■		
C-141	Castings-MI-2-1	05JAN05	25JAN05	0.00	84				■		
C-161	Castings-BU-3-1	26JAN05	15FEB05	0.00	84				■		
C-181	Castings-BA-4-1	16FEB05	08MAR05	0.00	84				■		
C-201	Castings-MI-5-1	09MAR05	29MAR05	0.00	84				■		
C-221	Castings-BU-6-1	30MAR05	19APR05	0.00	84				■		

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	Gantt Chart												
						FY03	FY04	FY05	FY06	FY07	FY08							
C-241	Castings- 1st field period castings complete		19APR05	0.00	84													
C-242	Castings- Ship last casting (BU-6-1) to PPPL	20APR05	26APR05	0.00	84													
C-261	Castings-BA-7-2	20APR05	10MAY05	0.00	84													
C-281	Castings-MI-8-2	11MAY05	31MAY05	0.00	84													
C-301	Castings-BU-9-2	01JUN05	21JUN05	0.00	84													
C-321	Castings-BA-10-2	22JUN05	12JUL05	0.00	84													
C-341	Castings-MI-11-2	13JUL05	02AUG05	0.00	84													
C-361	Castings-BU-12-2	03AUG05	23AUG05	0.00	84													
C-381	Castings- 2nd field period castings complete		23AUG05	0.00	84													
C-382	Castings- Ship last casting (BU-12-2) to PPPL	24AUG05	30AUG05	0.00	84													
C-401	Castings-BA-13-3	24AUG05	13SEP05	0.00	84													
C-421	Castings-MI-14-3	14SEP05	04OCT05	0.00	84													
C-441	Castings-BU-15-3	05OCT05	25OCT05	0.00	84													
C-461	Castings-BA-16-3	26OCT05	15NOV05	0.00	84													
C-481	Castings-MI-17-3	16NOV05	06DEC05	0.00	84													
C-501	Castings-BU-18-3	07DEC05	27DEC05	0.00	84													
C-521	Castings- 3rd field period castings complete		27DEC05	0.00	84													
C-522	Castings- Ship last casting (BU-18-3) to PPPL	28DEC05	03JAN06	0.00	84													
Subtotal		01OCT02	03JAN06	6,616,348.50	84													
171 - Modular Coil Windings & Coil Assembly																		
171-001	Title I design	01OCT02*	03MAR03	444,414.25	339													
171-011	Title II design	04MAR03	01AUG03	438,666.87	339													
171-021	In-house R&D (1/A)	01NOV02*	02JAN04	2,368,487.54	229													
171-031	Title III engr	01OCT03*	14MAR06	1,321,647.77	1,708													
171-037	Procurement (E/A F/B)	01JUL04*	03DEC04	1,840,018.45	101													
171-041	Modular Coil Winding (18 coils)	05JAN05	13MAR06	2,987,396.60	79													

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	Fiscal Year											
						FY03	FY04	FY05	FY06	FY07	FY08						
P1-001	Receive casting BA-1-1	05JAN05	11JAN05	0.00	79												
P1-011	Wind coil BA-1-1 Station 1	12JAN05	28FEB05	0.00	79			■									
P1-021	VPI & Ship	01MAR05	21MAR05	0.00	79			■									
P1-031	Receive casting MI-2-1	26JAN05	01FEB05	0.00	85												
P1-041	Wind coil MI-2-1 Station 2	02FEB05	11MAR05	0.00	85			■									
P1-051	VPI & Ship	22MAR05	11APR05	0.00	79			■									
P1-061	Receive casting BU-3-1	16FEB05	22FEB05	0.00	85												
P1-071	Wind coil BU-3-1 Station 1	01MAR05	07APR05	0.00	81			■									
P1-081	VPI & Ship	12APR05	02MAY05	0.00	79			■									
P1-091	Receive casting BA-4-1	09MAR05	15MAR05	0.00	85												
P1-101	Wind coil BA-4-1 Station 2	16MAR05	22APR05	0.00	85			■									
P1-111	VPI & Ship	03MAY05	23MAY05	0.00	79			■									
P1-121	Receive casting MI-5-1	30MAR05	05APR05	0.00	85												
P1-131	Wind coil MI-5-1 Station 1	08APR05	17MAY05	0.00	83			■									
P1-141	VPI & Ship	24MAY05	13JUN05	0.00	79			■									
P1-151	Receive casting BU-6-1	27APR05	03MAY05	0.00	84												
P1-161	Wind coil BU-6-1 Station 2	04MAY05	06JUN05	0.00	84			■									
P1-171	VPI & Ship	14JUN05	04JUL05	0.00	79			■									
P2-001	Receive casting BA-7-2	11MAY05	17MAY05	0.00	89												
P2-011	Wind coil BA-7-2 Station 1	18MAY05	20JUN05	0.00	89			■									
P2-021	VPI & Ship	05JUL05	25JUL05	0.00	79			■									
P2-031	Receive casting MI-8-2	01JUN05	07JUN05	0.00	85												
P2-041	Wind coil MI-8-2 Station 2	08JUN05	15JUL05	0.00	85			■									
P2-051	VPI & Ship	26JUL05	15AUG05	0.00	79			■									
P2-061	Receive casting BU-9-2	22JUN05	28JUN05	0.00	85												
P2-071	Wind coil BU-9-2 Station 1	29JUN05	05AUG05	0.00	85			■									
P2-081	VPI & Ship	16AUG05	05SEP05	0.00	79			■									
P2-091	Receive casting BA-10-2	13JUL05	19JUL05	0.00	85												

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	Fiscal Year											
						FY03	FY04	FY05	FY06	FY07	FY08						
P2-101	Wind coil BA-10-2 Station 2	20JUL05	26AUG05	0.00	85												
P2-111	VPI & Ship	06SEP05	26SEP05	0.00	79												
P2-121	Receive casting MI-11-2	03AUG05	09AUG05	0.00	85												
P2-131	Wind coil MI-11-2 Station 1	10AUG05	16SEP05	0.00	85												
P2-141	VPI & Ship	27SEP05	17OCT05	0.00	79												
P2-151	Receive casting BU-12-2	31AUG05	06SEP05	0.00	84												
P2-161	Wind coil BU-12-2 Station 2	07SEP05	10OCT05	0.00	84												
P2-171	VPI & Ship	18OCT05	07NOV05	0.00	79												
P3-001	Receive casting BA-13-3	14SEP05	20SEP05	0.00	89												
P3-011	Wind coil BA-13-3 Station 1	21SEP05	24OCT05	0.00	89												
P3-021	VPI & ship	08NOV05	28NOV05	0.00	79												
P3-031	Receive casting MI-14-3	05OCT05	11OCT05	0.00	85												
P3-041	Wind coil MI-14-3 Station 2	12OCT05	18NOV05	0.00	85												
P3-051	VPI & ship	29NOV05	19DEC05	0.00	79												
P3-061	Receive casting BU-15-3	26OCT05	01NOV05	0.00	85												
P3-071	Wind coil BU-15-3 Station 1	02NOV05	09DEC05	0.00	85												
P3-081	VPI & ship	20DEC05	09JAN06	0.00	79												
P3-091	Receive casting BA-16-3	16NOV05	22NOV05	0.00	85												
P3-101	Wind coil BA-16-3 Station 2	23NOV05	30DEC05	0.00	85												
P3-111	VPI & ship	10JAN06	30JAN06	0.00	79												
P3-121	Receive casting MI-17-3	07DEC05	13DEC05	0.00	85												
P3-131	Wind coil MI-17-3 Station 1	14DEC05	20JAN06	0.00	85												
P3-141	VPI & ship	31JAN06	20FEB06	0.00	79												
P3-151	Receive casting BU-18-3	04JAN06	10JAN06	0.00	84												
P3-161	Wind coil BU-18-3 Station 2	11JAN06	13FEB06	0.00	84												
P3-171	VPI & ship	21FEB06	13MAR06	0.00	79												
Subtotal		01OCT02	14MAR06	9,400,631.48	1,708												

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float						
						FY03	FY04	FY05	FY06	FY07	FY08
173 - Modular Coil Leads											
173-001	Title I design	01OCT03*	05DEC03	23,699.15	715		■ ORNLEM =191hr ;				
173-011	Title II design	08DEC03	16JAN04	23,699.15	715		■ ORNLEM =191hr ;				
173-015	Title III design	19JAN04	12APR04	5,324.26	2,209		■ ORNLEM =43hr ;				
173-037	Modular Coil Leads Procurement/Fab	19JAN04	09APR04	79,222.82	715		■ 41=48\$ k ;em/sm=202				
Subtotal		01OCT03	12APR04	131,945.38	2,209		■				
174 - Modular Coil I&C											
174-001	Title I design	01OCT03*	05DEC03	11,985.78	675		■ ORNLEM =97hr ;				
174-011	Title II design	08DEC03	16JAN04	11,985.78	675		■ ORNLEM =97hr ;				
174-015	Title III design	19JAN04	12APR04	3,219.32	2,209		■ ORNLEM =26hr ;				
174-037	Mod Coil Cooling System Procurement	19JAN04	09APR04	6,170.56	675		■ 41=04\$ k ;em/sm=16				
Subtotal		01OCT03	12APR04	33,361.44	2,209		■				
Subtotal		01OCT02	14MAR06	16,182,286.80	1,708	▼▼▼▼▼					
18 - Trim Coils											
181 - External Error Field Correction Coils											
184-001	Title I design	01JUN05*	16AUG05	30,735.14	255			■ ea//dm=133;ea//em=100			
184-011	Title II design	17AUG05	30SEP05	30,735.14	255			■ ea//dm=133; ea//em=100			
184-015	Title III design	03OCT05	26DEC05	8,954.78	1,764			■ ea//dm=38; ea//em=28			
184-037	Correction Coil Procurement/Fab	03OCT05	23DEC05	220,579.48	255			■ 41=56.80k ;em/sm=1,299			
Subtotal		01JUN05	26DEC05	291,004.54	1,764			■			
Subtotal		01JUN05	26DEC05	291,004.54	1,764			■			
19 - LN2 Distribution System											
191 - Manifolds & Piping											
191-001	Title I design	03OCT05*	11NOV05	26,202.76	145			■ EA//EM =40hr ; ORNLEM =140hr ;			
191-011	Title II design	14NOV05	03FEB06	52,405.51	145		EA//EM =80hr ; ORNLEM =281hr ;	■			
191-031	Title III engr	06FEB06	27OCT06	9,494.67	1,545		EA//EM =08hr ; ORNLEM =58hr ;	■			
191-037	Procurement	06FEB06	05MAY06	10,957.09	145			■ 41=08\$ k ;			
191-041	LN2 Manifolds & ppg Fab/assy	08MAY06	02JUN06	31,424.60	145		EM//SM =71hr ; EM//TB =284hr ;	■			

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	Fiscal Year											
						FY03	FY04	FY05	FY06	FY07	FY08						
Subtotal		03OCT05	27OCT06	130,484.63	1,545												
192 - Flow Control																	
192-001	Title I design	01AUG05*	07OCT05	11,523.13	149												
192-011	Title II design	10OCT05	02DEC05	12,033.35	149												
192-031	Title III engr	05DEC05	16JUN06	7,434.53	1,640												
192-037	Procurement	05DEC05	01MAY06	38,888.48	149												
192-041	LN2 Flow control Fab/assy	02MAY06	29MAY06	2,247.20	149												
Subtotal		01AUG05	16JUN06	72,126.69	1,640												
193 - Local I&C																	
193-001	Title I design	01DEC05*	08FEB06	3,653.50	147												
193-011	Title II design	09FEB06	22MAR06	3,653.50	147												
193-031	Title III engr	23MAR06	16AUG06	2,767.80	1,597												
193-037	LN2 local I&C Procurement/Fab	23MAR06	14JUN06	3,657.86	147												
Subtotal		01DEC05	16AUG06	13,732.66	1,597												
Subtotal		01AUG05	27OCT06	216,343.98	1,545												
Subtotal		01OCT02	26JAN07	27,341,317.68	1,480												

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
cc 9450 - NCSX Fabrication												
2 - Auxiliary Systems												
21 - Fueling Systems												
211 - Gas Fueling Systems												
211-001	Prelim Design	01OCT02*	30SEP03	1,533.50	1,435	■	EM//EM =10hr ;					
211-005	Final Design	01OCT03	30SEP05	6,480.00	1,435		■	EM//EM =40hr ;				
211-010	Design Gas Handling HW	01OCT04*	30SEP05	4,360.40	1,435			■	EM//SM =40hr ;			
211-015	Design PLC Controls	01OCT04*	30SEP05	26,388.00	1,435			■	EE//SM =240hr ;			
211-020	Design support during Installation (Title III)	03OCT05	30MAR07	5,109.60	1,435				■	EM//EM =30hr ;		
211-025	Install Gas Handling HW	03OCT05	29SEP06	82,665.50	1,435				■	EM//SM =40hr ; 41=60\$K ;		
211-030	Install PLC	03OCT05	29SEP06	9,066.40	1,435				■	EE//SM =80hr ;		
211-035	Integr System Test	02OCT06	30MAR07	9,124.00	1,435				■	EM//SM =40hr ; EE//SM =40hr ;		
Subtotal		01OCT02	30MAR07	144,727.40	1,435	■						
Subtotal		01OCT02	30MAR07	144,727.40	1,435	■						
22 - Torus Vacuum Pumping Systems												
220 - Torus Vacuum Pumping System												
220-001	Prelim Design	01OCT02*	30SEP03	6,134.00	100	■	EM//EM =40hr ;					
220-010	Final Design	01OCT03	30SEP04	15,935.00	100		■	EM//EM =100hr ;				
220-013	PLC Design & Drafting for Pumping Sys	01OCT04	30SEP05	61,003.20	100			■	EE//SM =320hr ; EA//DM =240hr ;			
220-015	Title III Design support	01OCT04	30MAR07	119,947.98	1,435				■	EM//EM =100hr ; 41=80\$K		
220-020	Maint/Repair mech pumping sys	01OCT04	30SEP05	8,720.80	100			■	EM//SM =80hr ;			
220-025	Electr/Mech Fab & Installation	03OCT05	07JUL06	67,726.40	100				■	EE//SM =320hr ; EM//SM =280hr ;		
220-030	Integr System Test	10JUL06	05SEP06	27,155.20	1,583				■	EM//EM =160hr ;		
Subtotal		01OCT02	30MAR07	306,622.58	1,435	■						
Subtotal		01OCT02	30MAR07	306,622.58	1,435	■						
23 - Wall Conditioning Systems												
231 - Glow Discharge Cleaning System												
231-001	Prelim Design	01OCT02*	30SEP03	4,600.50	1,697	■	EM//EM =30hr ;					
231-010	Final Design	01OCT04*	30SEP05	21,411.76	1,435			■	EM//EM =40hr ; EM//SM =136hr ;			
Run Date		15MAY02 10:37		NCSX				NXC2			Sheet 1 of 4	
				5/15/02								
© Primavera Systems, Inc.												

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
231-015	Design/Fab Pwr Supplies & PLC cntrls	03OCT05	29SEP06	48,051.92	1,565				██████████	EE//SM =424hr ;		
231-020	Title III Design	03OCT05	30MAR07	1,703.20	1,435				██████████	EM//EM =10hr ;		
231-025	Install Cables	03OCT05	29SEP06	17,606.10	1,435				██████████	EE//SM =80hr ; 41=07\$K ;		
231-030	Integr Systems test	02OCT06	30MAR07	11,442.40	1,435		EM//EM =40hr ;	EE//SM =40hr ;	██████████			
Subtotal		01OCT02	30MAR07	104,815.88	1,435	██████████	██████████	██████████	██████████			
Subtotal		01OCT02	30MAR07	104,815.88	1,435	██████████	██████████	██████████	██████████			
25 - Neutral Beam Injection System												
251 - NB Systems Recommissioning												
250-0201	Clean, hi-pot and test Accel rectifier	01OCT02*	30SEP03	32,771.20	2,348	██████████	EE//SM =320hr ;					
250-0301	AC Power maint. Pole Transformers	01OCT02*	30SEP03	16,385.60	2,348	██████████	EE//SM =160hr ;					
250-0401	Accel Rectifier Electronics startup	01OCT02*	30SEP03	65,542.40	2,348	██████████	EE//SM =640hr ;					
250-0501	Rehab Mods, Crowbars, Fault Detectors	01OCT02*	30SEP03	68,226.00	2,348	██████████	EE//SM =200hr ;	EE//EM =320hr ;				
250-0601	Drafting: Refurbishment	01OCT03*	30MAR07	224,985.60	1,435		██████████	██████████	EA//DM =2,080hr ;			
250-0701	Repair water leak in East source	01OCT04*	30SEP05	4,360.40	1,825			██████████	EM//SM =40hr ;			
250-0801	Fabricate and install all new filaments	03OCT05*	02OCT06	4,494.58	1,564				██████████	EM//SM =40hr ;		
250-0901	Replace calorimeter bearings and cables	01OCT04*	30SEP05	17,441.60	1,825			██████████	EM//SM =160hr ;			
250-1001	Maint. and reinstall cryogenic transfer sys	01OCT04*	30SEP05	8,720.80	1,825			██████████	EM//SM =80hr ;			
250-1201	Maintenance and repair of vacuum sys	01OCT04*	30SEP05	4,398.00	1,825			██████████	EE//SM =40hr ;			
250-1301	Water system maintenance and calib.	01OCT04*	30SEP05	8,796.00	1,825			██████████	EE//SM =80hr ;			
250-1401	Maint. & calib. of Auxiliary Pwr Supplies	01OCT04*	30SEP05	4,398.00	1,825			██████████	EE//SM =40hr ;			
250-1501	Upgrade,maint,calib telemetry,optical links&cntr	01OCT04*	30SEP05	17,592.00	1,825			██████████	EE//SM =160hr ;			
250-1601	Design PLC& perform oper test& calibr of PLC	01OCT04*	30SEP05	140,736.00	1,825			██████████	EE//SM =1,280hr ;			
250-1701	Fabr, install, test Main & Front Box N2 Cryopane	01OCT04*	30SEP05	148,253.60	1,825			██████████	EM//SM =1,360hr ;			
250-1801	Subsystem integrated testing	02OCT06*	30MAR07	2,061.72	1,435					██████████	EE//SM =18hr ;	
250-2101	Prelim Design-Sys Eng & Work Planning: Refurbish	01OCT02*	30SEP03	11,936.00	2,348	██████████	EE//EM =80hr ;					
250-2111	Final Design-Sys Eng & Work Planning: Refurbishm	01OCT03*	30SEP05	37,826.41	1,825		██████████	██████████	EE//EM =240hr ;			
250-2121	Fab/Install-Sys Eng & Work Planning: Refurbishme	03OCT05*	30MAR07	26,513.07	1,435				██████████	EE//EM =160hr ;		
250-2131	Sys Eng & Work Planning Procedures	03OCT05*	02OCT06	13,210.14	1,564				██████████	EE//EM =80hr ;		

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
250-3201	EAD analysis: platform support capability	01OCT02*	30SEP03	3,060.00	2,348		EA//EM =20hr ;					
250-7001	M&S during Refurbishment	30SEP03*	30SEP05	357,680.66	1,825				41=294\$k ;			
250-7002	M&S support services during refurbishment	01OCT03*	30SEP05	31,997.83	1,825				41=26.3\$k ;			
Subtotal		01OCT02	30MAR07	1,251,387.61	1,435							
252 - NB Installation & Test												
250-3101	Prelim Dsn -Sys Eng &Work Planning: Installation	01OCT02*	30SEP03	11,936.00	1,435		EE//EM =80hr ;					
250-3111	Final Dsn-Sys Eng &Work Planning: Installation	01OCT03*	30SEP05	37,826.41	1,435				EE//EM =240hr ;			
250-3121	Fab/Install-Sys Eng &Work Planning: Installation	03OCT05*	30MAR07	13,256.53	1,435					EE//EM =80hr ;		
250-3301	Fab BL alignment measurement fixt, obtain BL bas	03OCT05*	02OCT06	906.68	1,564					EE//SM =08hr ;		
250-3401	Fab bellows/elec break section of transition duc	03OCT05*	02OCT06	8,989.17	1,564					EM//SM =80hr ;		
250-3501	Perform alignment measurements	03OCT05*	02OCT06	906.68	1,564					EE//SM =08hr ;		
250-3601	Carpenter prep platform for base plate	03OCT05*	02OCT06	1,797.83	1,564					EM//SM =16hr ;		
250-3701	Relocate base plate to NCSX location	03OCT05*	02OCT06	7,253.42	1,564					EE//SM =64hr ;		
250-3801	Lift NB from Refurb Location to NCSX	03OCT05*	02OCT06	5,440.06	1,564					EE//SM =48hr ;		
250-3901	Enclose platform around base plate	03OCT05*	02OCT06	3,595.67	1,564					EM//SM =32hr ;		
250-4001	Engineer new Junction Box	03OCT05*	02OCT06	26,420.28	1,564					EE//EM =160hr ;		
250-4101	Fabricate and Install new Junction Box	03OCT05*	02OCT06	18,133.54	1,564					EE//SM =160hr ;		
250-4201	Hi-potting cable run and fixing problems	03OCT05*	02OCT06	9,066.77	1,564					EE//SM =80hr ;		
250-4301	Install Cable Trays	03OCT05*	02OCT06	36,267.08	1,564					EE//SM =320hr ;		
250-4401	Pulling heavy cables from Arc Room to Junction B	03OCT05*	02OCT06	72,534.17	1,564					EE//SM =640hr ;		
250-4501	Install welding cables Junction Box to Ion Sourc	03OCT05*	29SEP06	9,066.40	1,565					ee//sm=80		
250-4601	Connect BL to new foreline/exhaust manifold.	03OCT05*	29SEP06	3,595.52	1,565					em//sm=32		
250-4701	New PLC:Test with Vacuum system	03OCT05*	29SEP06	3,626.56	1,565					ee//sm=32		
250-4801	New Cryolines: Connect beamlines	03OCT05*	29SEP06	3,626.56	1,565					ee//sm=32		
250-4901	Crogenic Sys Controls: connect & test	03OCT05*	29SEP06	3,626.56	1,565					ee//sm=32		
250-5001	Pneumatic Air Sys :connect beamlines	03OCT05*	29SEP06	1,813.28	1,565					ee//sm=16		
250-5101	Water System	03OCT05*	29SEP06	26,966.40	1,565					em//sm=240		
250-5201	Fab & Install Water cooled aperture	03OCT05*	29SEP06	13,599.60	1,565					ee//sm=120		

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
250-5301	New PLC: Test Water system controls	03OCT05*	29SEP06	1,813.28	1,565				██████████	ee//sm=16		
250-5401	Install NB Diagnostic Control System	03OCT05*	30MAR07	1,819.73	1,435				██████████	ee//sm=16		
250-5601	Drafting: Installation	01OCT03*	30MAR07	51,919.75	1,435		██			EA//DM =480hr ;		
250-7003	M&S during installation	03OCT05*	02OCT06	28,644.92	1,564				██████████	41=21.8\$k ;		
250-7004	M&S during installation	03OCT05*	29SEP06	85,659.76	1,565				██████████	41=65\$k ;		
Subtotal		01OCT02	30MAR07	490,108.61	1,435	██						
Subtotal		01OCT02	30MAR07	1,741,496.22	1,435	██						
Subtotal		01OCT02	30MAR07	2,297,662.08	1,435	██						

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
cc 9450 - NCSX Fabrication												
3 - Diagnostics												
31 - Magnetic Diagnostics												
310 - Magnetic Diagnostics												
310-001	Preliminary Design	03MAR03*	30SEP04	35,432.71	1,435							
310-010	Final Design	01OCT04	30SEP05	207,880.80	1,435							
310-015	Fab/Assembly/Installation	03OCT05	30MAR07	382,315.20	1,435							
310-020	Fabricate Integrator Modules	03OCT05	29SEP06	197,070.00	1,565							
310-025	Misc. Procurements	03OCT05	29SEP06	91,440.48	1,565							
Subtotal		03MAR03	30MAR07	914,139.19	1,435							
Subtotal		03MAR03	30MAR07	914,139.19	1,435							
35 - Profile Diagnostics												
350 - Profile Diagnostics												
350-001	Preliminary Design	01JUN05*	30DEC05	8,121.23	1,435							
350-010	Final Design	02JAN06	30JUN06	65,180.20	1,435							
350-015	Fab/Assy/Installation	03JUL06	30MAR07	146,043.51	1,435							
Subtotal		01JUN05	30MAR07	219,344.94	1,435							
Subtotal		01JUN05	30MAR07	219,344.94	1,435							
36 - Edge and Divertor Diagnostics												
360 - Edge and Divertor Diagnostics												
361-001	Preliminary Design	01JUN05*	30DEC05	17,962.49	1,435							
361-010	Final Design	02JAN06	30JUN06	78,476.40	1,435							
361-015	Fab/Assy/Installation	03JUL06	30MAR07	209,431.73	1,435							
Subtotal		01JUN05	30MAR07	305,870.62	1,435							

R///RM2 =160hr ; EE//EM =80hr ;
R///RM2 =220hr ; EE//EM =560hr ;
EM//EM =200hr ; EA//DM =360hr ;
EM//SM =120hr ;
EE//EM =340hr ; EM//EM =180hr ;
EE//SM =2,200hr ; EM//SM =400hr ;
41=150\$k ;
41=70\$k ;
R///RM2 =10hr ; EE//EM =20hr ;
EM//EM =20hr ;
R///RM2 =40hr ; EE//EM =160hr ;
EM//EM =100hr ; EA//DM =140hr ;
R///RM2 =60hr ; EE//EM =140hr ;
EM//EM =90hr ; EM//SM =220hr ;
EE//SM =280hr ; 41=31\$k ;
R///RM2 =30hr ; EM//EM =80hr ;
EM//EM =200hr ; EA//DM =280hr ;
EM//SM =120hr ;
R///RM2 =310hr ; EM//EM =40hr ;
EC//EM =20hr ; EM//SM =580hr ;
41=63\$k ;

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
Subtotal		01JUN05	30MAR07	305,870.62	1,435							
38 - Electron Beam (EB) Mapping												
380 - Electron Beam (EB) Mapping												
380-001	Preliminary Design	01JUN05*	30DEC05	33,995.37	1,435							
380-010	Final Design	02JAN06	30JUN06	145,648.40	1,435							
380-015	Fab/Assy/Installation	03JUL06	30MAR07	358,499.80	1,435							
Subtotal		01JUN05	30MAR07	538,143.57	1,435							
Subtotal		01JUN05	30MAR07	538,143.57	1,435							
39 - Diagnostics Integration												
390 - Diagnostics Integration												
390-001	LOE Support FY03	01OCT02*	30SEP03	58,868.16	2,348							
390-010	LOE Support FY04	01OCT03*	30SEP04	61,168.64	2,086							
390-015	LOE Support FY05	01OCT04*	30SEP05	168,820.70	1,825							
390-020	LOE Support FY06	03OCT05*	02OCT06	174,017.41	1,564							
390-025	LOE Support FY07	02OCT06*	30MAR07	87,984.43	1,435							
Subtotal		01OCT02	30MAR07	550,859.34	1,435							
Subtotal		01OCT02	30MAR07	550,859.34	1,435							
Subtotal		01OCT02	30MAR07	2,528,357.66	1,435							

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
cc 9450 - NCSX Fabrication												
4 - Electrical Power Systems												
41 - AC Power												
411 - Auxiliary AC Power Systems												
411-001	Test Cell AC Power Distrib - Prelim Dsn	01OCT02*	30SEP03	23,960.00	2,348							
411-011	Test Cell AC Power Distrib - Final Dsn	01OCT03*	31MAR05	25,170.85	1,956							
411-021	Test Cell AC Power Distrib - Procurements	01APR04*	30SEP05	65,115.99	1,825							
411-031	Test Cell AC Power Distrib - Installation	01OCT04*	02OCT06	70,731.87	1,564							
411-041	Test Cell AC Power Distrib - Commission	03APR06*	31OCT06	39,817.60	1,543							
411-101	Ex Test Cell AC Pwr Distrib - Prelim Dsn	01OCT02*	30SEP03	9,575.20	2,348							
411-111	Ex Test Cell AC Pwr Distrib - Final Dsn	01OCT03*	31MAR05	12,585.43	1,956							
411-121	Ex Test Cell AC Pwr Distrib - Procurements	01APR04*	31MAR06	11,193.91	1,695							
411-131	Ex Test Cell AC Pwr Distrib - Installation	01OCT04*	30JUN06	59,895.57	1,630							
411-141	Ex Test Cell AC Pwr Distrib - Commission	03APR06*	02OCT06	38,833.33	1,564							
411-201	Standby Pwr f/Cryo Sys - Prelim Dsn	01OCT02*	30SEP03	5,388.80	2,348							
411-211	Standby Pwr f/Cryo Sys - Final Dsn	01OCT03*	31AUG05	5,688.30	1,847							
411-221	Standby Pwr f/Cryo Sys - Procurements	01APR04*	30NOV05	19,676.19	1,782							
411-231	Standby Pwr f/Cryo Sys - Installation	01OCT04*	31MAY06	30,440.87	1,652							
411-241	Standby Pwr f/Cryo Sys - Commission	03APR06*	02OCT06	23,333.74	1,564							
411-301	Grounding - Prelim Dsn	01OCT02*	30SEP03	5,388.80	2,348							
411-311	Grounding - Final Dsn	01OCT03*	30SEP05	5,692.40	1,825							
411-321	Grounding - Procurements	01NOV04*	31JUL06	6,344.13	1,609							
411-331	Grounding - Installation	01OCT04*	29SEP06	30,533.67	1,565							
411-341	Grounding - Commission	03APR06*	02OCT06	9,703.42	1,564							
Subtotal		01OCT02	31OCT06	499,070.07	1,543							

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
412 - Experimental AC Power Systems												
412-001	D-Site Pulsed AC Pwr Distrib - Prelim Dsn	01OCT02*	30SEP03	4,186.40	2,348							
412-011	D-Site Pulsed AC Pwr Distrib - Final Dsn	01OCT03*	30SEP05	4,422.30	1,825							
412-021	D-Site Pulsed AC Pwr Distrib - Procurements	01APR04*	28MAR06	6,216.82	1,698							
412-031	D-Site Pulsed AC Pwr Distrib - Installation	01OCT04*	30MAY06	17,242.20	1,653							
412-041	D-Site Pulsed AC Pwr Distrib - Commission	03APR06*	02OCT06	11,044.01	1,564							
Subtotal		01OCT02	02OCT06	43,111.73	1,564							
Subtotal		01OCT02	31OCT06	542,181.80	1,543							
42 - AC/DC Converters												
422 - D-Site AC/DC Converters												
422-041	Coil Pwr Supplies - Commission	03APR06*	02OCT06	14,574.79	1,564							
Subtotal		03APR06	02OCT06	14,574.79	1,564							
Subtotal		03APR06	02OCT06	14,574.79	1,564							
43 - DC Systems												
431 - C-Site DC Systems												
431-001	Coil DC Cabling to DLS - Prelim Dsn	01OCT02*	30SEP03	26,177.60	2,348							
431-011	Coil DC Cabling to DLS - Final Dsn	02FEB04*	30SEP05	27,743.70	1,825							
431-021	Coil DC Cabling to DLS - Procurements	01APR04*	31MAR06	81,839.95	1,695							
431-031	Coil DC Cabling to DLS - Installation	01OCT04*	31MAY06	60,220.12	1,652							
431-101	DC Cabling to Coils in TC - Prelim Dsn	01OCT02*	30SEP03	21,869.00	2,348							
431-111	DC Cabling to Coils in TC - Final Dsn	01OCT03*	30SEP05	23,100.96	1,825							
431-121	DC Cabling to Coils in TC - Procurements	01APR04*	28APR06	83,256.35	1,675							
431-131	DC Cabling to Coils in TC - Installation	01OCT04*	31MAY06	41,272.04	1,652							
Subtotal		01OCT02	31MAY06	365,479.72	1,652							
432 - D-to-C Site DC Systems												
432-001	D to C Site DC Cabling - Prelim Dsn	01OCT02*	31DEC03	21,009.32	2,282							

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
432-011	D to C Site DC Cabling - Final Dsn	02JUN03*	31DEC04	21,603.29	2,020				EE//EM =88hr ; EA//DM =77hr ;			
432-021	Dc Cabling to C-Site - 1000mcm 5kvcable	01APR04*	30DEC05	146,872.45	1,760				41=119\$K ;			
432-022	Dc Cabling to C-Site - misc procurements	01APR04*	30DEC05	15,299.21	1,760				41=12\$K ;			
432-031	Dc Cabling to C-Site - Installation Supports	01JAN04*	30SEP05	429,300.15	1,825				EE//EM =120hr ; 41=315\$K ; EE//SM =80hr ; EE//TB =60hr ; EM//TB =60hr ;ea/dm=77			
432-032	Dc Cabling to C-Site - Installation Cable	01OCT04*	30MAR06	677,018.36	1,696				41=500\$K ;4E = 45.6			
Subtotal		01OCT02	30MAR06	1,311,102.78	1,696							
433 - D-Site DC Systems												
433-001	DC Cabling D-Site - Prelim Dsn	01OCT02*	30SEP03	27,558.40	2,348				EE//EM =88hr ; EA//DM =144hr ;			
433-011	DC Cabling D-Site - Final Dsn	01JUL03*	30SEP05	28,936.93	1,825				EE//EM =88hr ; EA//DM =144hr ;			
433-021	DC Cabling D-Site - Procurements	01APR04*	30MAY06	125,522.83	1,653				41=101\$K ;			
433-031	DC Cabling D-Site - Installation	01OCT04*	30JUN06	58,529.24	1,630				EE//EM =120hr ; EE//SM =120hr ; EE//TB =60hr ; EM//TB =60hr ;ea/d			
433-101	DC Current Limiting Reactors - Prelim Dsn	01OCT02*	30SEP03	7,680.20	2,348				EE//EM =32hr ; EA//DM =29hr ;			
433-111	DC Current Limiting Reactors - Final Dsn	01DEC03*	30SEP05	8,124.83	1,825				EE//EM =32hr ; EA//DM =29hr ;			
433-121	DC Current Limiting Reactors - Procurements	01OCT04*	30DEC05	48,570.12	1,760				41=39\$K ;			
433-131	DC Current Limiting Reactors - Installation	01OCT04*	30MAR06	31,336.02	1,696				EE//EM =48hr ; 41=06\$K ; EE//SM =48hr ; EE//TB =52hr ; EM//TB =52hr ;ea/dm=19			
433-141	DC Current Limiting Reactors - Commission	03APR06*	02OCT06	24,504.82	1,564				EE//EM =48hr ; EE//SM =48hr ; EE//TB =104hr ;ea/dm=19			
433-201	Coil Pwr Supplies TF - Prelim Dsn	01OCT02*	30SEP03	6,486.60	2,348				EE//EM =24hr ; EA//DM =29hr ;			
433-211	Coil Pwr Supplies TF- Final Dsn	01OCT03*	28SEP05	6,851.62	1,827				EE//EM =24hr ; EA//DM =29hr ;			
433-231	Coil Pwr Supplies TF- Installation	01OCT04*	02OCT06	28,211.34	1,564				EE//EM =16hr ; 41=15\$K ; EE//SM =40hr;ea/dm=19			
433-241	Coil Pwr Supplies TF- Commission	03APR06*	02OCT06	5,724.25	1,564				EE//EM =8hr ; EE//SM =8hr ; EE//TB =16hr ;ea/dm=19			
433-251	Coil Pwr Supplies OH PS - Prelim Dsn	01OCT02*	30SEP03	6,486.60	2,348				EE//EM =24hr ; EA//DM =29hr ;			
433-261	Coil Pwr Supplies OH PS- Final Dsn	01OCT03*	30SEP05	6,852.05	1,825				EE//EM =24hr ; EA//DM =29hr ;			
433-271	Coil Pwr Supplies OH PS- Installation	01OCT04*	30JUN06	28,096.96	1,630				EE//EM =16hr ; 41=15\$K ; EE//SM =40hr;ea/dm=19			
433-281	Coil Pwr Supplies OH PS- Commission	03APR06*	02OCT06	5,724.25	1,564				EE//EM =8hr ; EE//SM =8hr ; EE//TB =16hr ;ea/dm=19			
433-321	Isolating Switch - Procurements	03MAR03*	29APR05	157,010.55	1,935				41=130\$K ;			

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
433-331	Isolating Switch - Installation	01OCT04*	30MAR06	106,661.30	1,696				EE//EM =120hr ; 41=50\$K ; EE//SM =160hr ; EE//TB =40hr ; EM//TB =40hr ;			
Subtotal		01OCT02	02OCT06	718,868.91	1,564							
Subtotal		01OCT02	02OCT06	2,395,451.41	1,564							
44 - Control and protection Systems												
441 - Electrical Interlocks												
441-001	C-Site Interlocks - Prelim Dsn	01OCT02*	30SEP03	48,856.00	2,348		EE//EM =220hr ; EA//DM =160hr ;					
441-011	C-Site Interlocks - Final Dsn	01JUL03*	30JUN05	51,154.48	1,891		EE//EM =220hr ; EA//DM =160hr ;					
441-021	C-Site Interlocks - Procurements	01APR04*	31JAN06	37,074.95	1,738		41=30\$K ;					
441-031	C-Site Interlocks - Installation	01OCT04*	30MAR06	178,657.37	1,696		EE//EM =264hr ; EE//SM =320hr ; EE//TB =500hr ; EM//TB =500hr ; ea//dm=					
441-101	D-to-C Site Interlocks - Prelim Dsn	01OCT02*	30SEP03	9,575.20	2,348		EE//EM =40hr ; EA//DM =36hr ;					
441-111	D-to-C Site Interlocks - Final Dsn	01JUL03*	31MAR05	9,989.42	1,956		EE//EM =40hr ; EA//DM =36hr ;					
441-121	D-to-C Site Interlocks - Procurements	01APR04*	30DEC05	6,169.04	1,760		41=05\$K ;					
441-131	D-to-C Site Interlocks - Installation	01OCT04*	30MAR06	26,804.86	1,696		EE//EM =40hr ; EE//SM =40hr ; EE//TB =80hr ; EM//TB =80hr ; ea//dm=					
441-141	D-to-C Site Interlocks - Commission	03APR06*	02OCT06	20,747.46	1,564		EE//EM =40hr ; EE//SM =40hr ; EE//TB =80hr ; ea//dm=24					
441-201	D-Site Interlocks - Prelim Dsn	01OCT02*	30SEP03	26,407.80	2,348		EE//EM =132hr ; EA//DM =67hr ;					
441-211	D-Site Interlocks - Final Dsn	01JUL03*	30SEP05	27,729.17	1,825		EE//EM =132hr ; EA//DM =67hr ;					
441-221	D-Site Interlocks - Procurements	01APR04*	31MAR06	17,363.01	1,695		41=14\$K ;					
441-231	D-Site Interlocks - Installation	01OCT04*	30MAR06	83,045.54	1,696		EE//EM =120hr ; EE//SM =200hr ; EE//TB =220hr ; EM//TB =220hr ; ea//dm=					
441-241	D-Site Interlocks - Commission	03APR06*	02OCT06	41,162.21	1,564		EE//EM =80hr ; EE//SM =80hr ; EE//TB =160hr ; ea//dm=45					
Subtotal		01OCT02	02OCT06	584,736.51	1,564							
442 - Kirk Key Interlocks												
442-001	Kirk Keys - Prelim Dsn	01OCT02*	30SEP03	12,559.20	2,348		EE//EM =60hr ; EA//DM =36hr ;					
442-011	Kirk Keys - Final Dsn	01AUG03*	30JUN05	13,177.27	1,891		EE//EM =60hr ; EA//DM =36hr ;					
442-021	Kirk Keys - Procurements	02FEB04*	30NOV05	12,275.33	1,782		41=10\$K ;					
442-031	Kirk Keys - Installation	01OCT04*	30MAR06	34,176.24	1,696		EE//EM =24hr ; EE//SM =40hr ; EE//TB =140hr ; EM//TB =140hr ; ea//dm=					
442-041	Kirk Keys - Commission	03APR06*	02OCT06	24,220.94	1,564		EE//EM =40hr ; EE//SM =40hr ; EE//TB =120hr ; ea//dm=24					

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
Subtotal		01OCT02	02OCT06	96,408.98	1,564							
443 - Real Time Control Systems												
443-001	Develop Control Algorithms	03OCT05*	02OCT06	39,630.42	1,564							
Subtotal		03OCT05	02OCT06	39,630.42	1,564							
444 - Instrument Systems												
444-001	DC Current Transducers - Prelim Dsn	01OCT02*	30SEP03	5,388.80	2,348							
444-011	DC Current Transducers - Final Dsn	02JUN03*	30SEP04	5,546.78	2,086							
444-021	DC Current Transducers - Procurements	01APR04*	30SEP05	175,758.26	1,825							
444-031	DC Current Transducers - Installation	01OCT04*	30MAR06	37,267.09	1,696							
444-041	DC Current Transducers - Commission	03APR06*	02OCT06	18,878.17	1,564							
444-101	DC Shunts - Prelim Dsn	01OCT02*	30SEP03	5,388.80	2,348							
444-111	DC Shunts - Final Dsn	01OCT03*	31MAR05	5,661.15	1,956							
444-121	DC Shunts - Procurements	01APR04*	31JAN06	79,198.82	1,738							
444-131	DC Shunts - Installation	01OCT04*	30MAR06	37,267.09	1,696							
444-141	DC Shunts - Commission	03APR06*	02OCT06	18,878.17	1,564							
444-201	Signal Conditioning - Prelim Dsn	01OCT02*	30SEP03	23,292.80	2,348							
444-211	Signal Conditioning - Final Dsn	01OCT03*	31MAR05	24,470.50	1,956							
444-221	Signal Conditioning - Procurements	01APR04*	30DEC05	11,104.27	1,760							
444-231	Signal Conditioning - Installation	01OCT04*	30MAR06	31,453.36	1,696							
444-241	Signal Conditioning - Commission	03APR06*	02OCT06	22,992.10	1,564							
444-301	DC Potential transducers - Prelim Dsn	01OCT02*	30SEP03	10,777.60	2,348							
444-311	DC Potential transducers - Final Dsn	01OCT03*	30JUN05	11,357.79	1,891							
444-321	DC Potential transducers - Procurements	01APR04*	31MAR06	24,875.37	1,695							
444-331	DC Potential transducers - Installation	01OCT04*	30MAR06	37,634.88	1,696							
444-341	DC Potential transducers - Commission	03APR06*	02OCT06	20,652.56	1,564							
Subtotal		01OCT02	02OCT06	607,844.36	1,564							

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
445 - Coil protection Systems												
445-001	Overload Protection - Prelim Dsn	01OCT02*	30SEP03	41,864.00	2,348		EE//EM =200hr ; EA//DM =120hr ;					
445-011	Overload Protection - Final Dsn	01OCT03*	31MAR05	43,980.20	1,956		EE//EM =200hr ; EA//DM =120hr ;					
445-021	Overload Protection - Procurements	01APR04*	30DEC05	49,352.30	1,760		41=40\$sk ;					
445-031	Overload Protection - Installation	01OCT04*	30MAR06	68,948.72	1,696		EE//EM =64hr ; EE//SM =240hr ; EE//TB =140hr ; EM//TB =140hr ; ea//dm=					
445-041	Overload Protection - Commission	03APR06*	02OCT06	32,656.42	1,564		EE//EM =80hr ; EE//SM =32hr ; EE//TB =80hr ; ea//dm=80					
Subtotal		01OCT02	02OCT06	236,801.64	1,564							
446 - Ground Fault Monitoring System												
445-101	Ground Fault Protection - Prelim Dsn	01OCT02*	30SEP03	8,372.80	2,348		EE//EM =40hr ; EA//DM =24hr ;					
445-111	Ground Fault Protection - Final Dsn	01OCT03*	31MAR05	8,796.04	1,956		EE//EM =40hr ; EA//DM =24hr ;					
445-121	Ground Fault Protection - Procurements	01APR04*	30MAR06	7,461.80	1,696		41=06\$sk ;					
445-131	Ground Fault Protection - Installation	01OCT04*	30MAR06	20,432.08	1,696		EE//EM =32hr ; EE//SM =32hr ; EE//TB =60hr ; EM//TB =60hr ; ea//dm=					
445-141	Ground Fault Protection - Commission	03APR06*	02OCT06	13,464.30	1,564		EE//EM =32hr ; EE//SM =32hr ; EE//TB =32hr ; ea//dm=16					
Subtotal		01OCT02	02OCT06	58,527.02	1,564							
Subtotal		01OCT02	02OCT06	1,623,948.93	1,564							
45 - Power System Design and Integration												
451 - System Design and Interfaces												
451-001	Design Drawings,changes,as-builts	01OCT02*	30MAY07	254,711.28	1,392		EE//EM =960hr ; EA//DM					
451-011	PDR Power Systems	01OCT02*	30MAY03	9,976.00	2,435		EE//EM =40hr ; EA//DM =40hr ;					
451-021	FDR D-Site	01DEC03*	22DEC03	10,365.60	2,289		EE//EM =40hr ; EA//DM =40hr ;					
451-031	FDR C-Site	01JUN04*	21JUN04	10,365.60	2,159		EE//EM =40hr ; EA//DM =40hr ;					
451-041	FDR Cabling D-Site	01OCT03*	30SEP04	10,365.60	2,086		EE//EM =40hr ; EA//DM =40hr ;					
451-051	FDR Cabling C-Site	02FEB04*	30NOV04	10,434.08	2,043		EE//EM =40hr ; EA//DM =40hr ;					
451-061	FDR DC Transmission	01JAN03*	31MAR04	10,132.56	2,217		EE//EM =40hr ; EA//DM =40hr ;					
451-071	FDR AC Auxiliaries & Grounding	01OCT02*	30APR03	9,976.00	2,457		EE//EM =40hr ; EA//DM =40hr ;					
451-081	Calculations	01OCT03*	02OCT06	52,096.17	1,564		EE//EM =320hr ; EA//DM =08hr					
Subtotal		01OCT02	30MAY07	378,422.89	1,392							

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
452 - Electrical Systems Support												
452-001	Diagnostics AC Pwr Distrib - Prelim Dsn	01OCT02*	30SEP03	25,206.40	2,348				EE//EM =40hr ; EA//DM =192hr ;			
452-011	Diagnostics AC Pwr Distrib - Final Dsn	01OCT03*	31MAY06	26,941.60	1,652				EE//EM =40hr ; EA//DM =192hr ;			
452-021	Diagnostics AC Pwr Distrib - Procurements	01APR04*	30JUN06	11,263.71	1,630				41=09\$;			
452-031	Diagnostics AC Pwr Distrib - Installation	01OCT04*	30JUN06	89,127.22	1,630				EE//EM =80hr ; EE//SM =80hr ; EE//TB =320hr ; EM//TB =320hr;ea//			
452-041	Diagnostics AC Pwr Distrib - Commission	03APR06*	02OCT06	43,761.49	1,564				EE//EM =40hr ; EE//SM =80hr ; EE//TB =160hr ;ea/dm=128			
452-101	Diagnostics Sensor Cabling - Prelim Dsn	01OCT02*	30SEP03	38,968.00	2,348				EE//EM =100hr ; EA//DM =240hr ;			
452-111	Diagnostics Sensor Cabling - Final Dsn	01OCT03*	29JUL05	41,099.35	1,870				EE//EM =100hr ; EA//DM =240hr ;			
452-121	Diagnostics Sensor Cabling - Procurements	01APR04*	31JAN06	22,274.67	1,738				41=18\$;			
452-131	Diagnostics Sensor Cabling - Installation	01OCT04*	30MAR06	120,982.31	1,696				EE//EM =120hr ; EE//SM =160hr ; EE//TB =400hr ; EM//TB =400hr;ea/dm			
452-141	Diagnostics Sensor Cabling - Commission	03APR06*	02OCT06	47,310.26	1,564				EE//EM =40hr ; EE//SM =80hr ; EE//TB =160hr ;ea/dm=160			
Subtotal		01OCT02	02OCT06	466,935.01	1,564							
453 - System Testing (PTP's)												
453-001	Procedures	01OCT04*	30SEP05	42,844.80	1,825				EE//EM =160hr ; EA//DM =160hr ;			
453-111	PTP's & ISTEP's	03APR06*	01JAN07	89,590.07	1,499				EE//EM =288hr ; EE//SM =80hr ; EE//TB =376hr ;			
453-112	PTP's & ISTEP's Test Equipt	03APR06*	01JAN07	33,255.82	1,499				41=25\$;			
Subtotal		01OCT04	01JAN07	165,690.69	1,499							
Subtotal		01OCT02	30MAY07	1,011,048.59	1,392							
Subtotal		01OCT02	30MAY07	5,587,205.52	1,392							

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
cc 9450 - NCSX Fabrication												
5 - Central I&C Systems												
51 - TCP/IP Infrastructure Systems												
510 - TCP/IP Infrastructure Systems												
51-001	Preliminary Design (Title I)	06MAR06*	05MAY06	12,412.00	1,471							
51-005	Final Design (Title II)	08MAY06	06JUN06	24,824.00	1,471							
51-010	Lab Fab/Assy/Installation (Title III)	07JUN06	08FEB07	389,058.15	1,471							
51-015	Hardware/Material	07JUN06	10NOV06	126,439.82	1,535							
51-016	Ethernet hubs and port modules	07JUN06	10NOV06	153,240.29	1,535							
51-2003	Llevel of Effort FY03	01OCT02*	29SEP03	3,364.56	2,349							
51-2004	Level of Effort FY04	01OCT03*	28SEP04	3,496.08	2,088							
51-2005	Level of Effort FY05	01OCT04*	29SEP05	3,612.48	1,826							
Subtotal		01OCT02	08FEB07	716,447.38	1,471							
Subtotal		01OCT02	08FEB07	716,447.38	1,471							
52 - Central Instrumentation & Control												
520 - Central Instrumentation & Control Systems												
52-001	Preliminary Design (Title I)	01DEC05*	03APR06	77,575.00	1,446							
52-005	Final Design (Title II)	04APR06	01AUG06	239,763.52	1,446							
52-010	Lab Fab/Assy/Installation (Title III)	02AUG06	15MAR07	347,662.64	1,446							
52-015	Hardware/Material	02AUG06	03NOV06	148,489.14	1,540							
52-016	I/O Purchases	02AUG06	03NOV06	154,215.63	1,540							
52-2003	Level of Effort FY03	01OCT02*	29SEP03	3,364.56	2,349							
52-2004	Level of Effort FY04	01OCT03*	28SEP04	3,496.08	2,088							
52-2005	Level of Effort FY05	01OCT04*	29SEP05	3,612.48	1,826							
Subtotal		01OCT02	15MAR07	978,179.05	1,446							
Subtotal		01OCT02	15MAR07	978,179.05	1,446							

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
53 - Data Acquisition & Facility Computing												
530 - Data Acquisition & Facility Computing Sys												
53-001	Preliminary Design (Title I)	01DEC05*	03APR06	49,648.00	1,446							
53-005	Final Design (Title II)	04APR06	01AUG06	56,686.52	1,446							
53-010	Lab Fab/Assy/Installation (Title III)	02AUG06	15MAR07	165,237.64	1,446							
53-015	Hardware/Material	02AUG06	03NOV06	208,950.19	1,540							
53-016	I/O Purchases	02AUG06	03NOV06	149,820.88	1,540							
53-2003	Level of Effort FY03	01OCT02*	29SEP03	3,364.56	2,349							
53-2004	Level of Effort FY04	01OCT03*	28SEP04	3,496.08	2,088							
53-2005	Level of Effort FY05	01OCT04*	29SEP05	3,612.48	1,826							
Subtotal		01OCT02	15MAR07	640,816.35	1,446							
Subtotal		01OCT02	15MAR07	640,816.35	1,446							
54 - Facility Timing & Synchronization												
540 - Facility Timing and synchronization System												
54-001	Preliminary Design (Title I)	01JUN05*	01MAR06	97,965.58	1,446							
54-005	Final Design (Title II)	02MAR06	01JUN06	77,991.26	1,446							
54-010	Lab Fab/Assy/Installation (Title III)	02JUN06	15MAR07	428,889.29	1,446							
54-015	Hardware/Material	02JUN06	19OCT06	64,446.84	1,551							
54-2003	Level of Effort FY03	01OCT02*	29SEP03	3,364.56	2,349							
54-2004	Level of Effort FY04	01OCT03*	28SEP04	3,496.08	2,088							
Subtotal		01OCT02	15MAR07	676,153.61	1,446							
Subtotal		01OCT02	15MAR07	676,153.61	1,446							
55 - Real Time Plasma & Power Supply Control Sys												
550 - Real Time Plasma & Power Supply Control												
55-001	Preliminary Design (Title I)	01MAR06*	01JUN06	24,824.00	1,446							
55-005	Final Design (Title II)	02JUN06	01SEP06	24,824.00	1,446							
55-010	Lab Fab/Assy/Installation (Title III)	04SEP06	15MAR07	242,974.64	1,446							
55-015	Hardware/Material	04SEP06	19OCT06	71,229.95	1,551							

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
55-2003	Level of Effort FY03	01OCT02*	29SEP03	3,364.56	2,349							
55-2004	Level of Effort FY04	01OCT03*	28SEP04	3,496.08	2,088							
55-2005	Level of Effort FY05	01OCT04*	29SEP05	3,612.48	1,826							
Subtotal		01OCT02	15MAR07	374,325.71	1,446							
Subtotal		01OCT02	15MAR07	374,325.71	1,446							
56 - Central Safety Interlock Systems												
560 - Central Safety Interlock Systems												
56-001	Preliminary Design (Title I)	01MAR06*	01JUN06	24,824.00	1,446							
56-005	Final Design (Title II)	02JUN06	29SEP06	24,824.00	1,446							
56-010	Lab Fab/Assy/Installation (Title III)	02OCT06	15MAR07	225,622.50	1,446							
56-015	Hardware/Material	02JUN06	10NOV06	123,357.12	1,535							
56-2003	Level of Effort FY03	01OCT02*	29SEP03	3,364.56	2,349							
56-2004	Level of Effort FY04	01OCT03*	28SEP04	3,496.08	2,088							
56-2005	Level of Effort FY05	01OCT04*	29SEP05	3,612.48	1,826							
Subtotal		01OCT02	15MAR07	409,100.74	1,446							
Subtotal		01OCT02	15MAR07	409,100.74	1,446							
57 - Control Room Facility												
570 - Control Room Facility												
57-001	Preliminary Design (Title I)	01MAY06*	01JUN06	12,412.00	1,560							
57-005	Final Design (Title II)	02JUN06	01SEP06	12,412.00	1,560							
57-010	Lab Fab/Assy/Installation (Title III)	04SEP06	06OCT06	172,182.94	1,560							
57-015	Hardware/Material	04SEP06	06OCT06	112,634.96	1,560							
57-2003	Level of Effort FY03	01OCT02*	29SEP03	3,364.56	2,349							
57-2004	Level of Effort FY04	01OCT03*	28SEP04	3,496.08	2,088							
57-2005	Level of Effort FY05	01OCT04*	29SEP05	3,612.48	1,826							
Subtotal		01OCT02	06OCT06	320,115.02	1,560							
Subtotal		01OCT02	06OCT06	320,115.02	1,560							

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
Subtotal		01OCT02	15MAR07	4,115,137.86	1,446							

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
cc 9450 - NCSX Fabrication												
6 - Site and Facilities												
61 - Facility Modifications & Test Cell Prep												
611 - Facility Modifications Outside Test Cell												
611.001	Preliminary Design	01APR03*	31JUL03	52,548.60	1,956							
611.005	Final Design	01AUG03	31MAR04	55,668.58	1,956							
611.010	Lab Fab/Assy/Installation	01APR04	31MAR05	135,411.68	1,956							
611.015	Procured Hardware/Material	01APR04	31MAR05	57,911.36	1,956							
Subtotal		01APR03	31MAR05	301,540.22	1,956							
613 - Seismic Modifications to Test Cell Walls												
613.001	Preliminary Design	01APR03*	21MAY03	12,576.00	609							
613.005	Final Design	22MAY03	25JUL03	30,384.00	609							
613.010	Modify Test Cell Walls	28JUL03	27OCT03	340,995.22	609							
613.015	Procured Hardware/Material	28JUL03	27OCT03	95,666.57	609							
Subtotal		01APR03	27OCT03	479,621.79	609							
Subtotal		01APR03	31MAR05	781,162.01	1,956							
62 - Water Cooling Systems												
622 - Neutral beam Water Cooling System												
622.001	Preliminary design	02JAN06*	01MAY06	36,026.40	1,534							
622.011	Final Design	02MAY06	24JUL06	22,448.80	1,534							
622.021	Assembly/Fabrication/Installation	25JUL06	13NOV06	131,157.55	1,534							
Subtotal		02JAN06	13NOV06	189,632.75	1,534							
623 - Vacuum Pumping Water Cooling System												
623.001	Preliminary design	01SEP05*	22NOV05	15,485.79	163							
623.011	Final Design	23NOV05	14FEB06	11,224.40	163							
632.021	Assembly/Fabrication/Installation	15FEB06	11APR06	0.00	163							
Subtotal		01SEP05	11APR06	26,710.19	163							

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
624 - Bakeout Water System												
624.001	Preliminary design	12JUN06*	17AUG06	12,265.60	1,526				■ em//em=20; ea//dm=80			
624.011	Final Design	18AUG06	28SEP06	12,265.60	1,526				■ em//em=20; ea//dm=80			
624.021	Assembly/Fabrication/Installation	29SEP06	23NOV06	13,602.64	1,526				■ em//em=40; em//tb=42; 41=\$2.38k			
Subtotal		12JUN06	23NOV06	38,133.84	1,526				■			
625 - Diagnostic Water Cooling System												
625.001	Preliminary design	01FEB06*	21APR06	11,224.40	1,578				■ em//em=40; ea//dm=40			
625.011	Final Design	24APR06	18JUL06	11,224.40	1,578				■ em//em=40; ea//dm=40			
625.021	Assembly/Fabrication	19JUL06	12SEP06	15,289.66	1,578				■ em//em=40; em//tb=60; 41=\$2.7k			
Subtotal		01FEB06	12SEP06	37,738.46	1,578				■			
Subtotal		01SEP05	23NOV06	292,215.24	1,526				■			
63 - Cryogenic Systems												
631 - LN2 - LHe Supply System												
631-001	Preliminary Design	19JAN04*	16JUL04	14,182.15	255		■ EM//EM =89hr ;					
631-010	Final Design	19JUL04*	14JAN05	20,402.19	255		■ EM//EM =89hr ; EA//DM =56hr ;					
631-015	Fab/Assy/Installation	18JUL05*	13JAN06	74,498.75	255			■ EM//EM =89hr ; EM//SM =130hr ; EM//TB =554hr ;				
631-020	Procurement	17JAN05*	15JUL05	55,767.09	255			■ 41=45\$k ;				
Subtotal		19JAN04	13JAN06	164,850.18	255			■				
632 - LN2 Coil Cooling Supply												
632-001	Preliminary Design	21JUL03*	16JAN04	13,968.55	255		■ EM//EM =89hr ;					
632-010	Final Design	01MAR04*	27AUG04	26,675.35	355		■ EM//EM =89hr ; EA//DM =120hr ;					
632-015	Fab/Assy/Installation	01JUN05*	29NOV05	106,232.78	288			■ EM//EM =89hr ; EM//SM =70hr ; EM//TB =1,035hr ;				
632-020	Procurement	01OCT04*	31MAR05	105,392.43	331			■ 41=86\$k ;				
Subtotal		21JUL03	29NOV05	252,269.11	288			■				
633 - GN2 Cryostat Cooling System												
633-001	Preliminary Design	21JUL03*	16JAN04	13,968.55	255		■ EM//EM =89hr ;					
633-010	Final Design	01MAR04*	27AUG04	22,510.95	355		■ EM//EM =89hr ; EA//DM =80hr ;					
633-015	Fab/Assy/Installation	01JUN05*	29NOV05	176,589.77	288			■ EM//EM =89hr ; EM//TB =2,000hr ;				

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
633-020	Procurement	01OCT04*	31MAR05	98,206.58	331			■ 41=80\$ k ;				
Subtotal		21JUL03	29NOV05	311,275.85	288	■	■	■	■			
Subtotal		21JUL03	13JAN06	728,395.14	255	■	■	■	■			
64 - Utility Systems												
640 - Utility Systems												
640.001	Preliminary design	28NOV05*	17FEB06	20,095.60	1,625				■ em//em=40; ea//dm=120			
640.011	Final Design	20FEB06	12MAY06	11,224.40	1,625				■ em//em=40; ea//dm=40			
640.021	Assembly/Fabrication	15MAY06	07JUL06	64,159.00	1,625				■ em//em=40; em//tb=418; 41=\$17.40k			
Subtotal		28NOV05	07JUL06	95,479.00	1,625				■			
Subtotal		28NOV05	07JUL06	95,479.00	1,625				■			
65 - Helium Bakeout System												
650 - Helium Bakeout System												
650.001	Preliminary Design	02MAY03	02JUL03	36,592.40	2,152				■ ea//em=160; ee//sm=40; ea//dm=80			
650.005	Final Design	02DEC03	01MAR04	108,908.80	2,044				■ ea//em=160; ee//sm=80; ea//dm (mech)=400; ea//dm (elect)=320			
650.010	Lab Fab/Assy/Installation	02MAR04	30AUG04	255,577.80	2,109				■ ea//em=210; ee//sm=160; em//sm=240 em//tb(mech)=1600; em//tb (elect)=720			
650.012	Procured Hardware/Material	02MAR04	29NOV04	154,519.73	2,044				■ 41=\$127.7k			
650.015	Procured Installation/Assy	01NOV06*	29DEC06	10,900.80	1,500					■ 41=\$8.0k		
Subtotal		02MAY03	29DEC06	566,499.53	1,500	■	■	■	■	■		
Subtotal		02MAY03	29DEC06	566,499.53	1,500	■	■	■	■	■		
66 - Facility Systems Integration												
660 - Facility System Integration												
660.101	LOE FY03	01OCT02*	30SEP03	52,905.75	2,348	■			em//em=345			
660.102	LOE FY04	01OCT03*	30SEP04	54,975.75	2,086		■		em//em=345			
660.103	LOE FY05	01OCT04*	30SEP05	56,807.70	1,825			■	em//em=345			
Subtotal		01OCT02	30SEP05	164,689.20	1,825	■	■	■	■			
Subtotal		01OCT02	30SEP05	164,689.20	1,825	■	■	■	■			
Subtotal		01OCT02	29DEC06	2,628,440.12	1,500	■	■	■	■	■		

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float						
						FY03	FY04	FY05	FY06	FY07	FY08
cc 9450 - NCSX Fabrication											
7 - Machine Assembly											
71 - Assembly Planning & Oversight Operations											
711 - Planning Activities											
711.010	LOE FY03	01OCT02*	30SEP03	78,330.00	2,348	ea//em=250;ea//dm=400					
711.020	LOE FY04	01OCT03*	30SEP04	60,567.00	2,086	ea//em=250;ea//dm=200					
711.030	LOE FY05	01OCT04*	30SEP05	103,651.00	1,825	ea//em=500;ea//dm=200					
711.040	LOE FY06	03OCT05*	02OCT06	22,178.90	1,564	ea//dm=200					
Subtotal		01OCT02	02OCT06	264,726.90	1,564						
712 - Construction Management											
714.010	LOE FY05	01OCT04*	30SEP05	284,203.16	1,825	em//em=1726					
714.020	LOE FY06	03OCT05*	02OCT06	682,980.26	1,564	em//em=3452;em//sm=864					
714.030	LOE FY07	02OCT06*	30MAR07	394,159.36	1,435	em//em=1726;em//sm=864					
Subtotal		01OCT04	30MAR07	1,361,342.78	1,435						
Subtotal		01OCT02	30MAR07	1,626,069.68	1,435						
72 - On-site pre-assembly Operations											
721 - Preparation of Pre-Assembly Area											
721.010	Area preparations	01OCT04*	20DEC04	92,593.44	2,029	em//sm=144; em//tb=960					
Subtotal		01OCT04	20DEC04	92,593.44	2,029						
722 - Receive, Inspect, Test Coils											
722.010	Receive/Inspect TF & Mod Coils	01JUN04*	01JUN06	38,952.37	1,651	em//sm=144; em//tb=288					
Subtotal		01JUN04	01JUN06	38,952.37	1,651						
724 - Receive,Inspect, Test Vacuum vessel											
724.010	Receive/Inspect VV	01OCT01	27APR06	48,734.72	1,676	em//sm=120; em//tb=480					
Subtotal		01OCT01	27APR06	48,734.72	1,676						
725 - Assemble Field periods											
725.001	Assemble Field Period #1 (summary task)	11NOV05	22MAR06	263,961.60	107	em//sm=768; em//tb=2152					
725.101	Assemble Field Period #2 (summary task)	11JAN06	21APR06	228,553.60	104	em//sm=688; em//tb=1832					
725.201	Assemble Field Period #3 (summary task)	14MAR06	23JUN06	228,553.60	79	em//sm=688; em//tb=1832					

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	Fiscal Year											
						FY03	FY04	FY05	FY06	FY07	FY08						
P1-180	Attach cooling tubes & Insul to VV 1st Period	21OCT05	10NOV05	0.00	117												
P1-181	Assemble 1st. Field Period - coils/VV	11NOV05	12JAN06	0.00	117												
P1-191	Position and weld port assemblies	27JAN06	16FEB06	0.00	107												
P1-201	Bakeout vessel segment to 150 degrees C	17FEB06	23FEB06	0.00	107												
P1-211	Perform vacuum leak check of welded assemblies	24FEB06	09MAR06	0.00	107												
P1-221	Prepare field period for shipment	10MAR06	16MAR06	0.00	107												
P1-231	Ship 1st. Field period	17MAR06	21MAR06	0.00	107												
P1-241	Field period 1 ready for installation	22MAR06	22MAR06	0.00	107												
P2-180	Attach cooling tubes & Insul to VV 2nd Period	21DEC05*	10JAN06	0.00	104												
P2-181	Assemble 2nd. Field Period- coils/ VV	11JAN06	28FEB06	0.00	104												
P2-191	Position and weld port assemblies	01MAR06	21MAR06	0.00	104												
P2-201	Bakeout vessel segment to 150 degrees C	22MAR06	28MAR06	0.00	104												
P2-211	Perform vacuum leak check of welded assemblies	29MAR06	11APR06	0.00	104												
P2-221	Prepare field period for shipment	12APR06	18APR06	0.00	104												
P2-231	Ship 2nd. Field period	19APR06	21APR06	0.00	104												
P2-241	Field Period 2 ready for installation	24APR06	24APR06	0.00	104												
P3-180	Attach cooling tubes & Insul to VV 3rd Period	14FEB06*	06MAR06	0.00	84												
P3-181	Assemble 3rd. Field Period - coils/ VV	14MAR06	01MAY06	0.00	79												
P3-191	Position and weld port assemblies	02MAY06	22MAY06	0.00	79												
P3-201	Bakeout vessel segment to 150 degrees C	23MAY06	30MAY06	0.00	79												
P3-211	Perform vacuum leak check of welded assemblies	31MAY06	13JUN06	0.00	79												
P3-221	Prepare field period for shipment	14JUN06	20JUN06	0.00	79												
P3-231	Ship 3rd. Field Period	21JUN06	23JUN06	0.00	79												
P3-241	3rd. Period ready for installation	26JUN06	26JUN06	0.00	79												
Subtotal		21OCT05	26JUN06	721,068.80	79												
Subtotal		01OCT01	26JUN06	901,349.33	1,634												

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float										
						FY03	FY04	FY05	FY06	FY07	FY08				
73 - Test Cell & Basement Assembly Operations															
730 - Test Cell & Basement Assembly Operations															
730.1000	Begin Assembly Activities	01JUN05*		0.00	193										
730.1020	Install & Level Support Base Plates	01JUN05	21JUN05	34,352.80	193										
730.1030	Install/Level Machine Support Columns	22JUN05	26JUL05	51,529.20	193										
730.1040	Install Platform	27JUL05	11OCT05	217,627.00	193	41+\$20k;									
730.1050	Install Lighting, Fire Det/Supprs under platform	12OCT05	23MAY06	67,362.48	193	41=\$6k;									
730.1060	Install Lower Cryostat Floor	27DEC05	02JAN06	17,704.00	159										
730.1070	Install Lower PF 3,4,5&6 into prelim position	03JAN06	09JAN06	17,704.00	159										
730.1080	Install 1st Field Period Assembly	23MAR06*	19APR06	17,704.00	107										
730.1090	Install 2nd Field Period Assembly	25APR06	22MAY06	17,704.00	104										
730.1100	Install 3rd Field Period Assembly	27JUN06	24JUL06	53,112.00	79										
730.1110	Restore Shield Wall Area & complete platform	25JUL06	14AUG06	53,112.00	144										
730.1120	Install Neutral Beams (WBS 250-5401?)	25JUL06	11SEP06	0.00	124										
730.1130	Make Final Vacuum Pump Connections to VV	25JUL06	07AUG06	35,408.00	79										
730.1140	PTP Pumpdown & leak check VV (WBS 220-025)	08AUG06	21AUG06	44,580.80	79										
730.1150	Raise lower PF-3,4,5&6 coils into final position	22AUG06	24AUG06	11,065.00	79										
730.1151	Install Trim Coils	22AUG06	11SEP06	58,476.00	84										
730.1170	Install PF Solenoid into position (U/L 1&2 PF)	25AUG06	30AUG06	13,278.00	79										
730.1175	Install Upper PF-3,4,5 & 6 coils	31AUG06	04SEP06	11,065.00	79										
730.1180	Install Bus connections to coil sys (WBS 431-131)	12SEP06	06NOV06	0.00	84										
730.1185	Install External Cryostat Walls and Ceiling	05SEP06	18SEP06	0.00	79										
730.1190	Connect Bakeout System (WBS 650.010)	19SEP06	30OCT06	0.00	79										
730.1200	Connect Cryo System (WBS 633-015)	19SEP06	30OCT06	0.00	79										
730.1210	Connect Cooling System (WBS 624.021)	19SEP06	30OCT06	0.00	79										
730.1230	Complete Bus connections (WBS 4 to 6)	19SEP06	13NOV06	35,700.64	79										
730.1240	PTP Cryostat System Test	31OCT06	13NOV06	35,971.20	79										
730.1250	Power Tests	05MAR07*	30MAR07	0.00	0										
730.9000	First Plasma		30MAR07	0.00	0										

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	Fiscal Year					
						FY03	FY04	FY05	FY06	FY07	FY08
Subtotal		01JUN05	30MAR07	793,456.12	0						
Subtotal		01JUN05	30MAR07	793,456.12	0						
74 - Measurement Systems											
740 - Measurement Systems											
740.010	Final Design	02JUN03*	30JAN04	79,162.03	2,086						
740.020	Lab Fab/Assy/Installation	02FEB04	30SEP04	47,888.00	2,086						
740.030	Procured Hardware/Material	02FEB04	30SEP04	30,124.75	2,086						
Subtotal		02JUN03	30SEP04	157,174.78	2,086						
Subtotal		02JUN03	30SEP04	157,174.78	2,086						
75 - Platform Design & Fabrication											
750 - NCSX Platform Design and Fabrication											
712.010	Final Design	01JUL03*	30SEP03	51,529.00	2,216						
712.020	Lab Fab/Assy/Installation	01OCT03	01APR04	93,374.20	2,216						
712.030	Procured Hardware/Material	01OCT03	01APR04	42,174.65	2,216						
Subtotal		01JUL03	01APR04	187,077.85	2,216						
Subtotal		01JUL03	01APR04	187,077.85	2,216						
76 - Tooling Design & Fabrication											
760 - Tooling Design and Fabrication											
713.010	Final Design	02JUN03*	30JAN04	169,716.78	1,435						
713.020	Lab Fab/Assy/Installation	02FEB04	30SEP04	160,478.00	2,086						
713.030	Tooling,assy fixtures,misc equipt	02FEB04	30MAR07	305,161.78	1,435						
713.040	General procurements	02FEB04	30MAR07	38,145.22	1,435						
713.050	Welding tools, materials & equipt	02FEB04	30MAR07	63,575.37	1,435						
Subtotal		02JUN03	30MAR07	737,077.15	1,435						
Subtotal		02JUN03	30MAR07	737,077.15	1,435						
Subtotal		01OCT01	30MAR07	4,402,204.91	1,435						

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
cc 9450 - NCSX Fabrication												
8 - Project Oversight and Support												
81 - Project Management and Control												
810 - Project Management & Control												
810.001	Project Management Office FY03	01OCT02*	29SEP03	690,202.58	2,349							
									R///RM3 =1,960hr ; FC//EM =1,150hr ; FC//AM =350hr ; B///CB =630hr ; 41=08\$k ; 35=08\$k ;			
810.002	Project Management Office FY04	01OCT03*	28SEP04	637,646.34	2,088							
									R///RM3 =1,610hr ; FC//EM =1,150hr ; FC//AM =350hr ; B///CB =520hr ; 41=08\$k ; 35=08\$k ;			
810.003	Project Management Office FY05	01OCT04*	29SEP05	619,138.10	1,826							
									R///RM3 =1,430hr ; FC//EM =1,150hr ; FC//AM =350hr ; B///CB =520hr ; 41=08\$k ; 35=08\$k ;			
810.004	Project Management Office FY06	03OCT05*	29SEP06	634,261.44	1,565							
									R///RM3 =1,430hr ; FC//EM =1,150hr ; FC//AM =350hr ; B///CB =520hr ; 41=05\$k ; 35=08\$k ;			
810.005	Project Management Office FY07	02OCT06*	30MAR07	332,185.72	1,435							
									R///RM3 =890hr ; FC//EM =440hr ; FC//AM =180hr ; B///CB =210hr ; 41=02\$k ; 35=04\$k ;			
810.101	Project Management Office FY03	01OCT02*	29SEP03	77,399.40	2,349							
									ORNLRM =180hr ; ORNLEM =360hr ; ORNL41 =03\$; ORNL35 =04\$;			
810.102	Project Management Office FY04	01OCT03*	28SEP04	83,208.60	2,088							
									ORNLRM =180hr ; ORNLEM =360hr ; ORNL41 =03\$; ORNL35 =04\$;			
810.103	Project Management Office FY05	01OCT04*	29SEP05	87,433.07	1,826							
									ORNLRM =180hr ; ORNLEM =360hr ; ORNL41 =03\$; ORNL35 =04\$;			
810.104	Project Management Office FY06	03OCT05*	29SEP06	65,099.57	1,565							
									ORNLRM =180hr ; ORNLEM =180hr ; ORNL41 =1.5\$; ORNL35 =04\$			
810.105	Project Management Office FY07	02OCT06*	30MAR07	35,477.34	1,435							
									ORNLRM =90hr ; ORNLEM =90hr ; ORNL41 =01\$; ORNL35 =02\$;			
Subtotal		01OCT02	30MAR07	3,262,052.16	1,435							
Subtotal		01OCT02	30MAR07	3,262,052.16	1,435							
82 - Project Engineering												
820 - Project Engineering												
820.001	Proj engr,Sys Integr.,Designers, Deputy PM FY03	01OCT02*	29SEP03	466,557.80	2,349							
									EA//EM =2,250hr ; EA//DM =1,050hr ; 35=10\$k ;			
820.002	Proj engr,Sys Integr.,Designers, Deputy PM FY04	01OCT03*	28SEP04	470,053.20	2,088							
									EA//EM =2,160hr ; EA//DM =1,050hr ; 35=10\$k ;			

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
820.003	Proj engr,Sys Integr.,Designers, Deputy PM FY05	01OCT04*	29SEP05	481,774.20	1,826				EA//EM =2,160hr ; EA//DM =1,050hr ; 35=08\$K ;			
820.004	Proj engr,Sys Integr.,Designers, Deputy PM FY06	03OCT05*	29SEP06	490,963.85	1,565				EA//EM =2,160hr ; EA//DM =1,050hr ; 35=05\$K ;			
820.005	Proj engr,Sys Integr.,Designers, Deputy PM FY07	02OCT06*	30MAR07	261,380.62	1,435			EA//EM =1,035hr ; EA//DM =690hr ; 35=04\$K ;				
820.101	Purchased Design Services FY03	01OCT02*	29SEP03	35,763.90	2,349		41=30\$K ;					
820.102	Purchased Design Services FY03	01OCT03*	28SEP04	36,149.70	2,088			41=30\$K ;				
Subtotal		01OCT02	30MAR07	2,242,643.27	1,435							
Subtotal		01OCT02	30MAR07	2,242,643.27	1,435							
84 - Project Physics												
840 - Project Physics												
840.201	Project Physics/Engr Analysis FY03	01OCT02*	29SEP03	235,977.16	2,349			R///RM2 =900hr ; EA//EM =520hr ; EE//EM =85hr ; 41=8\$K ; 35=4\$K				
840.202	Project Physics/Engr Analysis FY04	01OCT03*	28SEP04	112,572.16	2,088			R///RM2 =540hr ; EA//EM =175hr ; EE//EM =00hr ; 41=3\$K ; 35=01\$K ;				
840.203	Project Physics/Engr Analysis FY05	01OCT04*	29SEP05	32,783.25	1,826			R///RM2 =180hr ; EA//EM =00hr ; EE//EM =00hr ; 41=3\$K ; 35=01\$K ;				
840.204	Project Physics/Engr Analysis FY06	03OCT05*	29SEP06	33,890.83	1,565			R///RM2 =180hr ; EA//EM =00hr ; EE//EM =00hr ; 41=3\$K ; 35=01\$K ;				
840.205	Project Physics/Engr Analysis FY07	02OCT06*	30MAR07	20,441.06	1,435			R///RM2 =90hr ; EA//EM =00hr ; EE//EM =00hr ; 41=2\$K ; 35=02\$K ;				
840.301	Project Physics/Engr Analysis FY03	01OCT02*	05SEP03	67,710.30	2,365			ORNLRM = 270HRS; ORNLEM = 180HRS; ORNL35 = \$1.6K ORN41 = \$1.3k				
840.302	Project Physics/Engr Analysis FY04	01OCT03*	28SEP04	26,819.10	2,088			ORNLRM = 90HRS; ORNLEM = 90HRS				
840.303	Project Physics/Engr Analysis FY05	01OCT04*	29SEP05	0.00	1,826							
840.304	Project Physics/Engr Analysis FY06	03OCT05*	29SEP06	0.00	1,565							
840.305	Project Physics/Engr Analysis FY07	02OCT06*	30MAR07	1,766.53	1,435						ORN35 = \$1.6K	
Subtotal		01OCT02	30MAR07	531,960.39	1,435							
Subtotal		01OCT02	30MAR07	531,960.39	1,435							

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
Subtotal		01OCT02	30MAR07	6,036,655.82	1,435							

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
cc 9450 - NCSX Fabrication												
9 - Preparations for Operations (TPC)												
92 - Pre-Operational & Integrated Sys Test (TPC)												
920 - Pre-Operational & Integr Systems Testing												
920.001	Final Design	01JUN06*	29DEC06	80,726.97	1,414							
920.005	Lab Fab/Assy/Installation	01JAN07*	30APR07	408,144.00	1,414							
Subtotal		01JUN06	30APR07	488,870.97	1,414							
Subtotal		01JUN06	30APR07	488,870.97	1,414							
Subtotal		01JUN06	30APR07	488,870.97	1,414							
Allocations												
PPPL Allocations												
PPPL Allocations												
99.03	PPPL Allocations FY03	01OCT02*	29SEP03	170,978.00	2,349							
99.04	PPPL Allocations FY04	01OCT03*	28SEP04	173,409.00	2,088							
99.05	PPPL Allocations FY05	01OCT04*	29SEP05	174,900.00	1,826							
99.06	PPPL Allocations FY06	03OCT05*	29SEP06	263,944.50	1,565							
99.07	PPPL Allocations FY07	02OCT06*	30MAR07	130,183.50	1,435							
Subtotal		01OCT02	30MAR07	913,415.00	1,435							
Subtotal		01OCT02	30MAR07	913,415.00	1,435							
Subtotal		01OCT02	30MAR07	913,415.00	1,435							
Contingency												
Contingency												
Contingency												
99.103	Contingency FY03	01OCT02*	29SEP03	1,368,100.00	2,349							
99.104	Contingency FY04	01OCT03*	28SEP04	2,500,000.00	2,088							
99.105	Contingency FY05	01OCT04*	29SEP05	4,500,000.00	1,826							
99.106	Contingency FY06	03OCT05*	29SEP06	4,800,000.00	1,565							
99.107	Contingency FY07	02OCT06*	30MAR07	2,500,000.00	1,435							

ee//em=240; em//em=240
em//em=672; ee//em=672; ee//sm=288
em//sm=288; ee//tb=672; em//tb=672

81=100\$k ;
81=100\$k ;
81=100\$k ;
81=150\$k ;
81=75\$k ;

81=1,368.1 \$k ;
81=2,500 \$k ;
81=4,500\$k ;
81=4,800 \$k ;
81=2,500 \$k ;

Activity ID	Activity Description	Early Start	Early Finish	Budgeted Cost	Total Float	FY03	FY04	FY05	FY06	FY07	FY08	FY09
Subtotal		01OCT02	30MAR07	15,668,100.00	1,435							
Subtotal		01OCT02	30MAR07	15,668,100.00	1,435							
Subtotal		01OCT02	30MAR07	15,668,100.00	1,435							