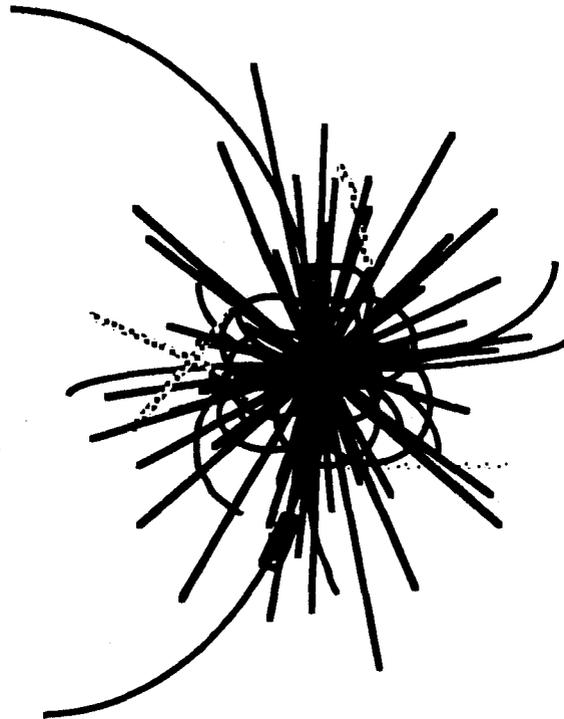


SSCL #355

SUPERCONDUCTING SUPER COLLIDER LABORATORY



**SSC PROJECT
MONTHLY PROGRESS REPORT**

JUNE 1991



INTRODUCTION

The June 1991 Monthly Progress Report contains divisional status reports which include: Division Identifiers, Summary Status, Narrative Highlights, Significant Problems, Variance Analyses and Milestone Logs. Technical Parameters will be included upon approval of the Technical Director.

The Monthly Progress Reports are being distributed electronically. For all authorized SSCL personnel, distribution is via a locked folder on the PMO server. All DOE recipients will receive a copy via QuickMail. The various other Laboratories and Universities that receive hard copy, will be sent a "Macintosh" version of the Laboratory Overview (pages 1-15 approx.) via the VAX. Those personnel who are PC based or do not have computers for E-mail will be provided with hard copies. We are in the process of developing a PC version for electronic distribution. All authorized personnel will be receiving instructions regarding retrieval of the report. Retrieving, printing, and security of the Monthly Progress Report will become the responsibility of the approved recipients.

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PROJECT MANAGER'S STATUS REPORT											
DESIGN <input checked="" type="checkbox"/>		PRODUCTION <input checked="" type="checkbox"/>									
CONSTRUCTION <input checked="" type="checkbox"/>		RESEARCH & DEVELOPMENT <input checked="" type="checkbox"/>	PART I								
1. IDENTIFIERS:											
1a. PROJECT TITLE/NUMBER SUPERCONDUCTING SUPER COLLIDER LABORATORY		1b. REPORTING PERIOD June 1991									
1c. MANAGING DIVISION Project Manager's Overview		1f. PERFORMING ORGANIZATION(S) Accelerator Design & Operations Division Accelerator Systems Division Magnet Systems Division Conventional Construction Division Physics Research Division Project Management Division Laboratory Technical Services Division Administration Division Directorate									
1d. OFFICE CONTACT Robert Morse											
1e. PROJECT MANAGER Paul Reardon											
2 DIVISION MANAGER'S PERSONAL ASSESSMENT:											
2a. Summary Status											
<p>Green</p> <div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto; text-align: center; line-height: 30px;">G</div>	<p>Yellow</p> <div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto; background-color: #ffff00; text-align: center; line-height: 30px;">Y</div>	<p>Red</p> <div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); text-align: center; line-height: 30px;">R</div>	<table border="1" style="margin: 0 auto;"> <tr><td style="text-align: center;">COST</td></tr> <tr><td style="text-align: center;">SCHEDULE</td></tr> <tr><td style="text-align: center;">TECHNICAL</td></tr> <tr><td style="text-align: center;">OVERALL PROJECT</td></tr> </table>	COST	SCHEDULE	TECHNICAL	OVERALL PROJECT				
COST											
SCHEDULE											
TECHNICAL											
OVERALL PROJECT											
		LAST PERIOD	THIS PERIOD								
		<table border="1" style="margin: 0 auto;"> <tr><td style="text-align: center;">G</td></tr> <tr><td style="text-align: center;">R</td></tr> <tr><td style="text-align: center;">G</td></tr> <tr><td style="text-align: center;">G</td></tr> </table>	G	R	G	G	<table border="1" style="margin: 0 auto;"> <tr><td style="text-align: center;">G</td></tr> <tr><td style="text-align: center;">Y</td></tr> <tr><td style="text-align: center;">G</td></tr> <tr><td style="text-align: center;">G</td></tr> </table>	G	Y	G	G
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G											

PROJECT STATUS REPORT PART I		REPORTING DIVISION: PROJECT MANAGER'S OVERVIEW
2b. PROJECT MANAGER'S NARRATIVE HIGHLIGHTS		(See item 5 for details on problems and variances)
WBS		
1.1.2.1.12	Radio Frequency System	Received bids for RF System for the Linear Accelerator.
1.1.7	Test Beams	Developed a workable 200 GeV/2 TeV layout for Beamline and Calibration Hall.
1.2.3.1	Collider Dipole Magnets	Awarded formal contracts to Westinghouse and General Dynamics.
1.2.3.3	Collider Quadrupole Magnets	Awarded formal contract to Babcock and Wilcox.
2.1.6.26	Exploratory Shaft (IR1)	Awarded shaft drilling subcontract.
4.2.1	Low Energy Booster	Completed Title I design specification.
4.2.1.1.10	Spool Pieces	Completed Critical Design Review for all Spool Piece units for the Accelerator Systems String Test (ASST).
4.2.2	Magnet R&D	Assembled ASST quadrupole coils.

PROJECT STATUS REPORT PART I			REPORTING DIVISION: PROJECT MANAGER'S OVERVIEW
5. SIGNIFICANT PROBLEMS/VARIANCE ANALYSIS			
5a. PROBLEMS, IMPACT ON PROJECT, CORRECTIVE ACTION			RESPONSIBLE GROUP
PROBLEM IDENTIFICATION	IMPACT	CORRECTIVE ACTION	
2.2.2.1.1 IR4 Underground Hall and Shaft Structure - Rescoping of mechanical and electrical systems and underground design requirements.	Potential increases in scope from baseline could have cost and schedule impact.	Composite CCB package in process to address scope changes for Interaction Regions (IR1, IR4, IR5, IR8).	CCD, PB/MK, ADOD
3.1.2, 3.1.3 Cost & Scheduling - Development of Collider, Test Beam Area, and Infrastructure schedules and development of new Work Breakdown Structure (WBS).	Current schedule will not support mid-July 1991 Integrated Project Schedule completion. Potential delay in implementation of WBS.	Continuing priority scheduling efforts in CCD and ASD. Finalization of proposed WBS in process. Evaluating need for additional staffing to assist in development of schedules.	CCD, ASD, PMO
4.2.1 ASST - Building Construction.	Current schedule projects a 2 week delay in the Beneficial Occupancy Date (BOD) of ASST Building.	Working on partial BOD - Contractor is currently ahead of revised plan.	CCD, ADOD, PB/MK
4.2.1.6 Collider - Relocation of utility shaft resulted in increased system complexity.	Increased peak voltage as a result of power feed locations.	Proposed reduced spacing of niches and increased number of voltage dumps will improve system reliability. Cost estimate and schedule development underway. CCB package to be submitted.	ADOD
5b. ITEMS REQUIRING PMO/DIRECTORATE/DOE ACTION			
N/A	N/A	N/A	N/A

PROJECT STATUS REPORT PART II		REPORTING DIVISION: PROJECT MANAGER'S OVERVIEW	
8. MILESTONE LOG			
SIGNIFICANT MILESTONES ACCOMPLISHED SINCE LAST REPORT		BASELINE DATE	ACTUAL DATE
WBS			
1.2.3.1	Start assembly of Dipole Magnets at FNAL	June 91	June 91
1.2.3.3	Award Collider Quadrupole Magnets Contract	April 91	June 91
3.1.5	Approval of the SSC Mitigation Action Plan (MAP)	N/A	June 91
SIGNIFICANT MILESTONES OPEN		BASELINE DATE	FORECAST DATE
2.4.2	Start Magnet Test Lab Construction	June 91	August 91
KEY MILESTONES UPCOMING - NEXT THREE MONTHS		BASELINE DATE	FORECAST DATE
2.1.6.25	ASST Beneficial Occupancy	September 91	October 91
2.4.22	MDL Partial BOD	February 91	Aug 91

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SUMMARY PROJECT SCHEDULES

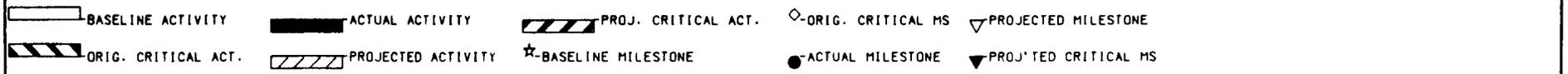
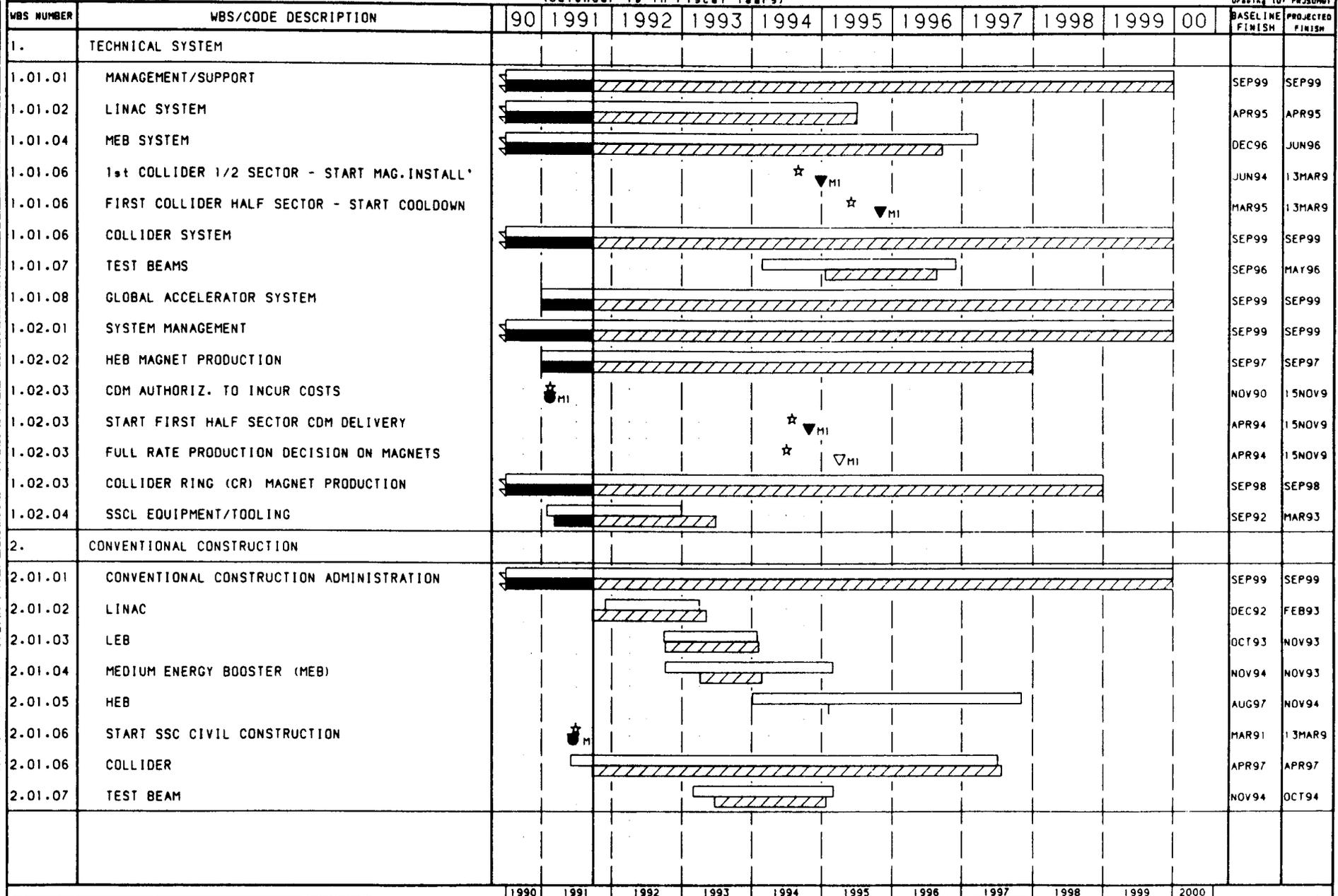
(Under separate file, see Prjsumwk1.pict, Prjsumwk2.pict, and Prjsumwk3.pict)

Superconducting Super Collider
 Network Status Date: 23JUN91
 Graphic Produced by PMO on 25JUL91

COMPARATIVE SUMMARY BARCHART
 PROJECT SUMMARY LEVEL, PART 1
 (Calendar is in Fiscal Years)

Baseline Master Scheduler Ver. 12, Rev. 7
 SSCL MONTHLY PROGRESS REPORT BY WBS

Drawing ID: PRJSUM1

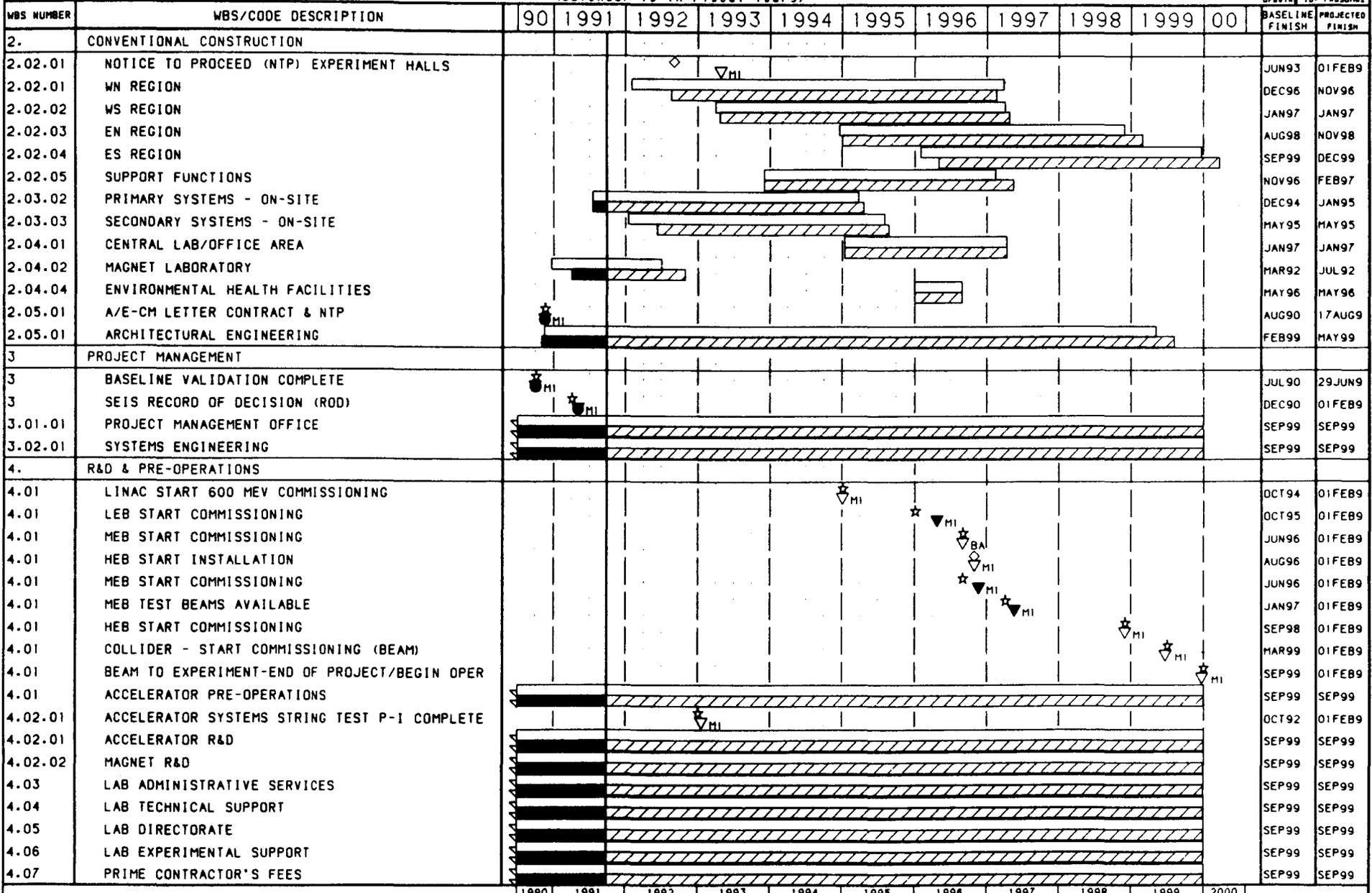


Superconducting Super Collider
 Network Status Date: 23JUN91
 Graphic Produced by PMO on 25JUL91

COMPARATIVE SUMMARY BARCHART
 PROJECT SUMMARY LEVEL, PART 2
 (Calendar is in Fiscal Years)

Baseline Master Schedule: Ver. 12, Rev. 7
 SSCL MONTHLY PROGRESS REPORT BY WBS

Drawing ID: PRJSSUM2



[White Box] BASELINE ACTIVITY [Black Box] ACTUAL ACTIVITY [Hatched Box] PROJ. CRITICAL ACT. ◇-ORIG. CRITICAL MS ▽-PROJECTED MILESTONE
 [Diagonal Hatched Box] ORIG. CRITICAL ACT. [Horizontal Hatched Box] PROJECTED ACTIVITY ★-BASELINE MILESTONE ●-ACTUAL MILESTONE ▽-PROJ'ED CRITICAL MS

Superconducting Super Collider
 Network Status Date: 23JUN91
 Graphic Produced by PMO on 25JUL91

COMPARATIVE SUMMARY BARCHART
PROJECT SUMMARY LEVEL, PART 3
 (Calendar is in Fiscal Years)

Baseline Master Schedule: Ver. 12, Rev. 7
 SSCL MONTHLY PROGRESS REPORT BY WBS

Drawing ID: PRJSUMM3

WBS NUMBER	WBS/CODE DESCRIPTION	90	1991	1992	1993	1994	1995	1996	1997	1998	1999	00	BASELINE FINISH	PROJECTED FINISH
5	EXPERIMENTAL SYSTEMS													
5	BOD LARGE EXPERIMENT HALLS							▽ _{MI}					JAN96	01MAR99
5	EXPERIMENTAL SYSTEMS		■										SEP91	SEP91
5.01	EXPERIMENTAL SYSTEM R&D	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	SEP99	SEP99
5.02	BEGIN CONCEPTUAL DESIGN FOR DETECTORS		★ _{MI}										FEB91	01MAR99
5.02	WEST DETECTORS - START COMMISSIONING										▽ _{MI}		MAR99	01MAR99
5.02	DETECTORS	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	SEP99	NOV99
5.03	EXPERIMENTAL SYSTEM COMPUTERS	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	SEP99	SEP99

1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000

[] BASELINE ACTIVITY [■] ACTUAL ACTIVITY [▨] PROJ. CRITICAL ACT. [◇] ORIG. CRITICAL MS [▽] PROJECTED MILESTONE
 [▨] ORIG. CRITICAL ACT. [▨] PROJECTED ACTIVITY [★] BASELINE MILESTONE [●] ACTUAL MILESTONE [▽] PROJECTED CRITICAL MS

WBS	DESCRIPTION	BASELINE (DEC 90)	PROJECTED* (A indicates actual date)	EXTENDED DESCRIPTION
3.0	Baseline Validation Complete	JUL90	1 JUL90 A	Completion of documents and briefings on Baseline Cost Estimate & Schedule and Supplemental Concept Design Report.
2.5.1	A-E/CM Letter Contract & NTP	AUG90	17 AUG90 A	DOE Approval and release of a letter contract, pending a full contract, for PB/MK to begin formal design & construction work.
1.2.3	CDM Authorization to Incur Costs	NOV90	15 NOV90 A	DOE permission for the CDM contractors to incur costs toward their contract in beginning the Collider Dipole Magnet industrial program.
3.0	SEIS Record of Decision (ROD)	JAN91	1 FEB91 A	Secretary signature and formal filing of the Environmental Record of Decision. This allows non-reversible project construction to begin.
5.2	Begin Conceptual Design for Detectors	FEB91	1 MAR91 A	Start the detector concept design and Title I conventional facilities design effort.
2.1.6	Start SSC Civil Construction	MAR91	13MAR91A	The first construction notice to proceed after the SEIS ROD. The first facility is the E1 Infrastructure.
2.2.1	Notice to Proceed (NTP) Experimental Halls	JUN93 ¹	APR93 ¹	The first notice to proceed for construction of the experimental (interaction region) halls; IR-4 and IR-1. ¹
4.2.1	Accelerator System String Test (Phase I)Complete	OCT92	OCT92	Cooldown, power up and testing of the 1/2 cell with accelerator components including the string test of 5 Collider Dipole magnets of industrial fabrication.
1.2.3	Full-rate Production Contract Awarded on Collider Magnets	APR94 ²	JAN95	SSCL awarded the full rate production contract(s) for collider magnets. Requires prior DOE approval.

¹ = Forthcoming CCB request to reconcile dates.

² = CCB Request in process to modify baseline schedule.

WBS	DESCRIPTION	BASELINE (DEC 90)	PROJECTED* (A indicates actual date)	EXTENDED DESCRIPTION
1.2.3	Start First Half Sector CDM Delivery from vendor plant	APR94 ²	JUL94	Start Delivery of the first contractor production magnet (CDM) from the contractor's dock to the MAAS.
1.1.6	First Collider Half Sector - Start Magnet Installation	JUN94 ²	SEP94	Start magnet and spool installation after completion of tunnel finish-out including power, lights & ventilation and primary technical components e.g. piping, electrical components cryogenics, etc.
4.1	LINAC Start Commissioning (600 MeV)	OCT94	OCT94	Start commission with beam of the full 600 MEV LINAC and signoff after suitable checkout of engineering and safety systems.
1.1.6	First Collider Half Sector - Start Cooldown	MAR95 ²	AUG95	Cooldown of the first complete half sector (E1-F1) and the concurrent power safety check of a full half sector. Requires last magnetic component (472 15M, 8 13M, 96 CQM & 96 spools) delivered to tunnel 4 months prior to this date.
4.1	LEB Start Commissioning	OCT95	OCT95	Beginning of the LEB beam commissioning installation and suitable checkout of the subsystems and safety signoff. Requires the LINAC to be able to provide test beam.
5.0	Beneficial Occupancy of Large Experimental Halls	JAN96	JAN96	Beneficial occupancy of the experimental (interaction region) halls. This BOD includes lighting, power & ventilation, etc. and is 9 months after the first BOD where just the unfinished chamber is turned over for technical survey.
4.1	MEB Start Commissioning	JUN96	JUN96	Beginning of the MEB commissioning after installation and suitable checkout of the subsystems and safety signoff. Requires the LEB to be able to provide test beam.

¹ = Forthcoming CCB request to reconcile dates.

² = CCB Request in process to modify baseline schedule.

WBS	DESCRIPTION	BASELINE (DEC 90)	PROJECTED* (A indicates actual date)	EXTENDED DESCRIPTION
1.1.5	HEB Start Installation	AUG96	AUG96	HEB installation of major technical components after completion of tunnel out fitting (e.g. power, lights, ventilation) technical components include piping, electrical components cryogenic components, spools, magnets etc.
1.1.4	MEB Test Beams Available	JAN97	JAN97	Completion of the MEB and test beam commissioning activity so that beam for detector component testing is available some fraction of the time.
4.1	HEB Start Commissioning	SEP98	SEP98	Beginning of the HEB commissioning after installation and suitable checkout of the subsystems and safety sign off. Requires the MEB to be able to provide test beam.
5.2	West Detectors - Start Commissioning	MAR99	MAR99	Beginning of the Detector commissionings. Includes operable beamline through detectors to support Collider commissioning.
* These dates are current projected dates from schedule updates and pending Change Control Board proposals.				
4.1	Collider - Start Commissioning (Beam)	MAR99	MAR99	Beginning of the full Collider beam commissioning after sector testing is successfully completed. Requires the HEB to be able to provide beam. Requires accelerator components to be previously installed and checked in both IR halls.
4.1	Beam to Exp. (End of Project/Begin Operations Phase)	SEP99	SEP99	Completion of the Collider and West detectors and Collider commissioning activities. The SSC is now ready to perform experiments in two experiment (interaction regions) halls.

1 = Forthcoming CCB request to reconcile dates.

1 = CCB Request in process to modify baseline schedule.

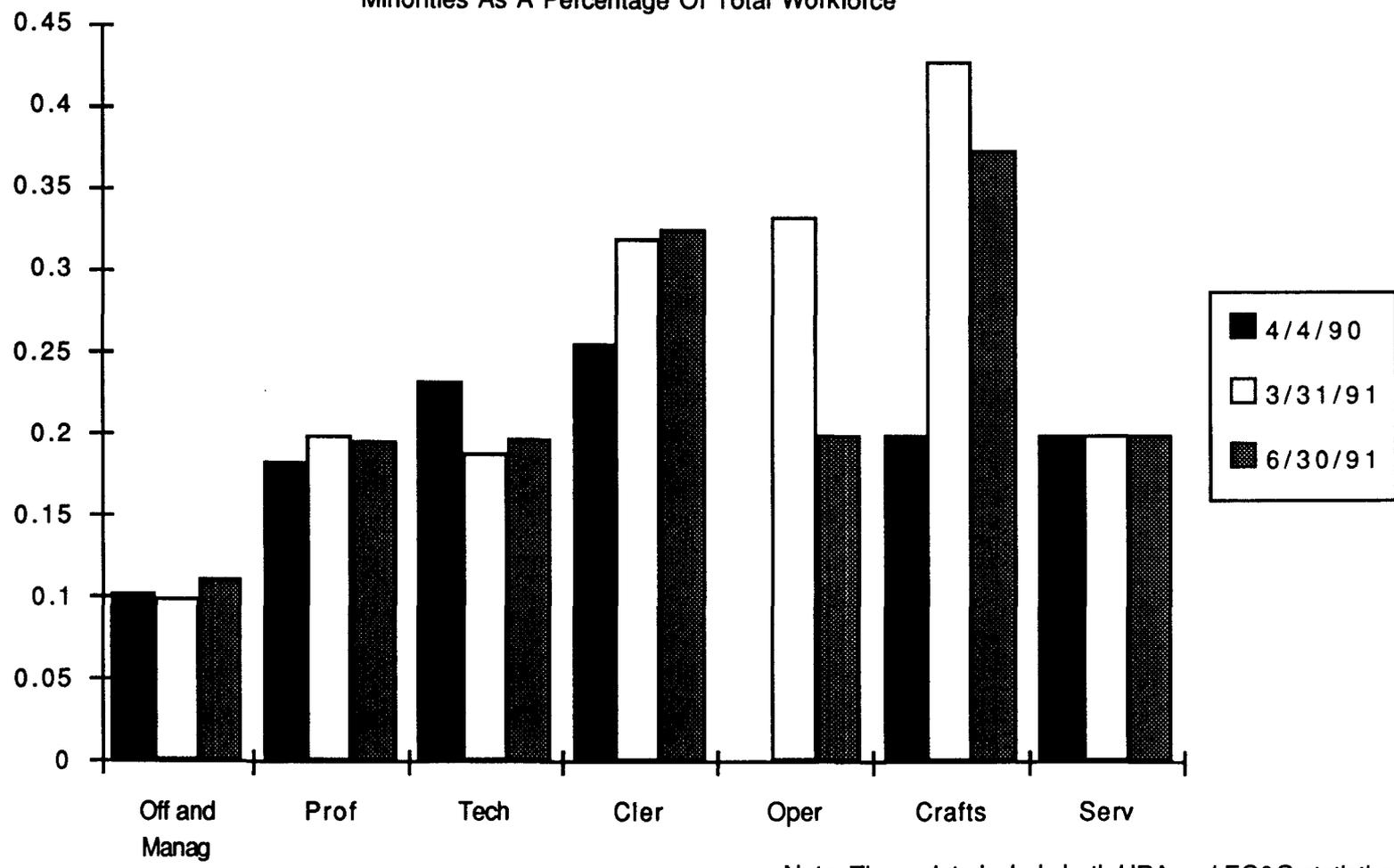
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EEO/SDB/WOB

**ADMINISTRATION DIVISION
EEO Status For SSC Laboratory As Of 6/30/91**

Goal	To ensure the laboratory meets or exceeds its Affirmative Action and Equal Employment Opportunity responsibilities.		
WBS Elements 4.3.5	Description	Personnel, various, Laboratory-wide	
Accomplishments	The Laboratory recruiting function, in cooperation with hiring managers, continues to attract and hire well-qualified women and minorities. Overall, the Laboratory's activities in this area are very good. However, constant monitoring and affirmative actions are necessary to ensure we continue to attract these candidates. Laboratory senior management continues its strong support in this area and this support is evidenced in the excellent results to date. The OFCCP recently gave both employers (URA & EG&G) a letter citing us as having "no evidence of discrimination in (our) hiring and promotion practices." This was as a result of a one-year intensive investigation of our hiring and promotion activities.		
Issues and Concerns	No major issues to discuss at this time.		
Corrective Action: Condition:	Continue monitoring the Laboratory's progress on a regular basis. Green		
POC:	Douglas Kreitz	Date: 15 July 91	SIGNATURE <u>/S/Douglas Kreitz</u>

Minorities As A Percentage Of Total Workforce



Note: These data include both URA and EG&G statistics

SDB/WOB Status For SSC Laboratory As Of 6/30/91

Goal To ensure the Laboratory maximizes SDB/WOB awards

WBS Elements **Description**
4.3.5 Procurement

Accomplishments The Laboratory and its lower tier subcontractors have awarded \$23,996,514 to SDB/WOB through the 3rd Quarter FY91, or 92.4% of the P.L. 101-514 subcontracting goal.

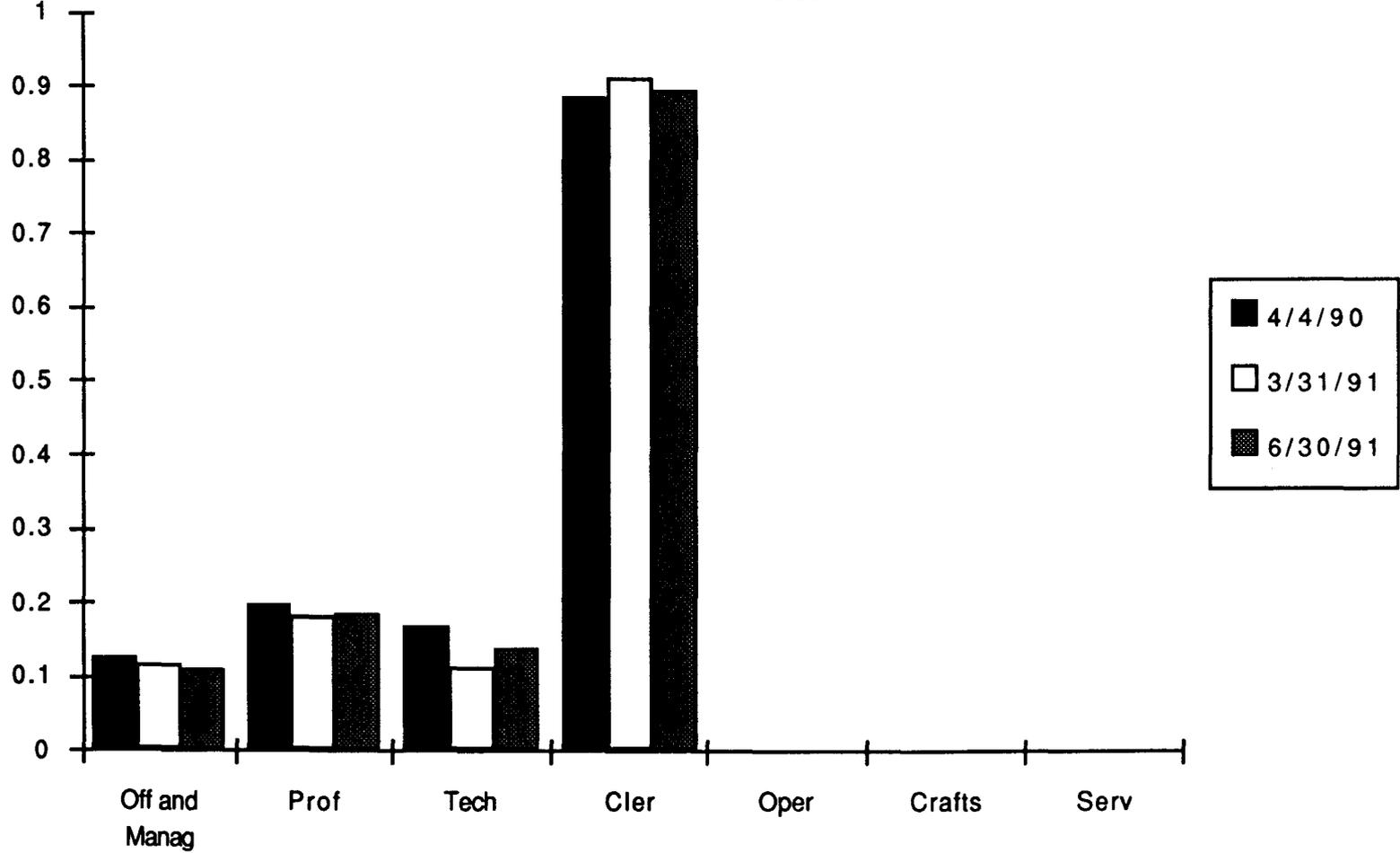
Issues and Concerns

1. Identification of high-tech SDB/WOB firms.
2. Developing set-asides where feasible.
3. Making the SSCL known to SDB/WOB.

Corrective Action: Continue strong efforts to identify qualified firms, set-aside opportunities and outreach.
Condition: Green

POC: Richard Russell **Date:** 15 July 91 **SIGNATURE** /S/Richard Russell

Women As A Percent Of Total Workforce



Note: These data include both URA and EG&G statistics

**PROCUREMENT
DISADVANTAGED BUSINESS ACTIVITY
THROUGH 3RD QUARTER FY 1991**

	AMOUNT
TOTAL DOE FUNDING	259,654,000
PUBLIC LAW 101-514 SUBCONTRACTING GOAL	25,965,400
TOTAL SSCL SUBCONTRACTS THROUGH 6/30/91	198,938,478
SDB/WOB AWARDS:	
URA	10,918,013
LOWER TIER SUBCONTRACTORS	<u>13,078,501</u>
SSCL TOTAL	23,996,514
PERCENTAGE OF ANNUAL GOAL	92.4%

LABORATORY FINANCIAL OVERVIEW
Projected FY91 Funding vs YTD Contract Summary

Goal TO RECEIVE FUNDING IN A MANNER THAT DOES NOT IMPEDE THE TIMELY PLACEMENT OF PROCUREMENTS.

WBS Elements Description

Accomplishments CONTRACT MODIFICATIONS THUS FAR HAVE KEPT PACE WITH SSCL COMMITMENTS. THE TRANSFER OF COSTS AND COMMITMENTS RELATED TO TEXAS SCHEDULE 1 EFFORT HAS BEEN COMPLETED.

Issues and Concerns AVAILABLE TEXAS FUNDING DOES NOT MATCH RECENTLY TRANSFERRED COSTS AND COMMITMENTS BY FUND TYPE.

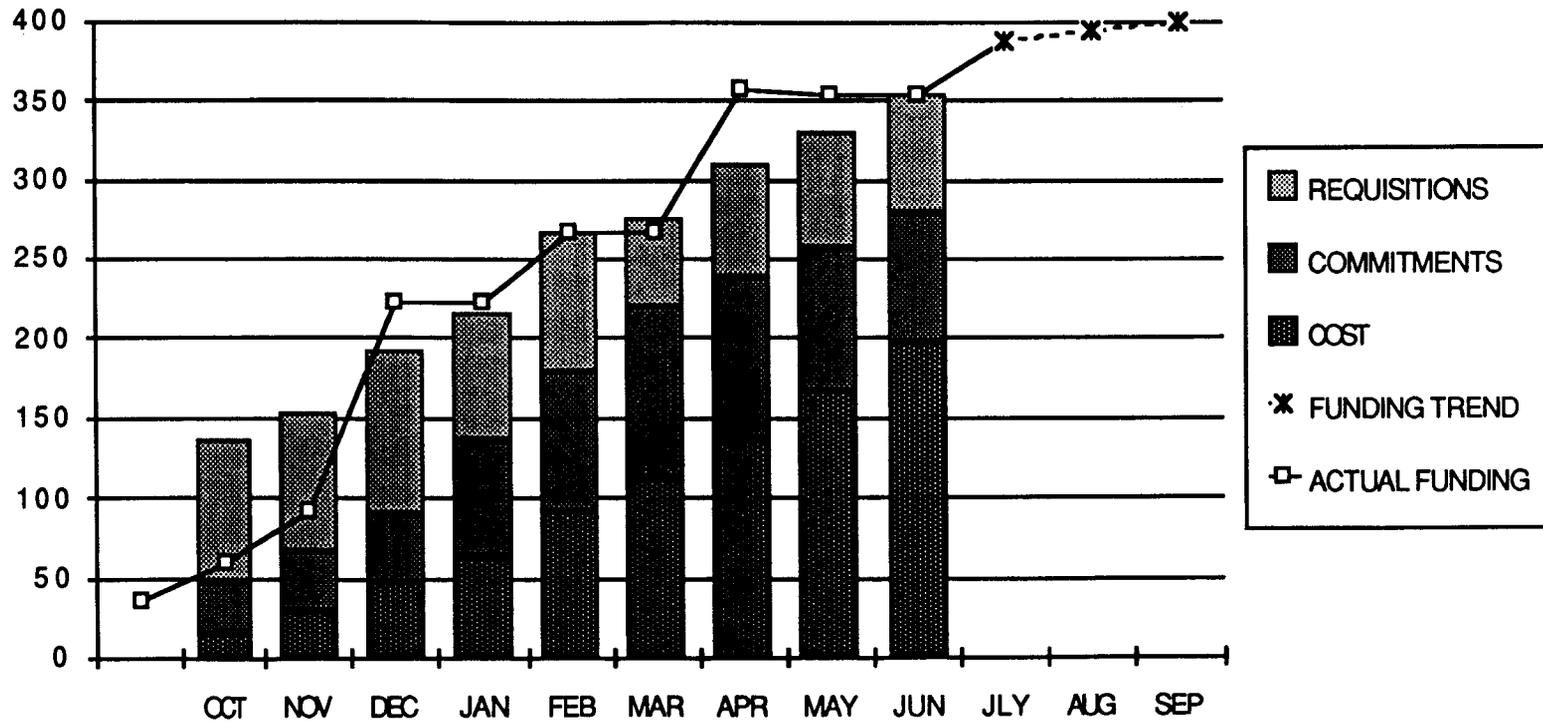
Corrective Action: MOD 19 DUE IN JULY WILL CORRECT THE ABOVE

Condition: GREEN

POC: G. HILL **DATE:** 17 JULY 91 **SIGNATURE** /S/G. Hill

LABORATORY
ALL FUNDS

PROJECTED FY91 FUNDING VS YTD CONTRACT SUMMARY (KS-TPC)



7/17/91

LABORATORY FINANCIAL OVERVIEW
Labor and Labor Related Costs

Goal TO ENSURE ADEQUATE BUDGET TO COVER ALL EXISTING AND PLANNED LABOR AND LABOR RELATED COSTS.

WBS Elements Description

Accomplishments BUDGET PLANNING IS ADEQUATE TO COVER EXISTING AND PLANNED LABOR AND RELATED EXPENSES.

Issues and Concerns COSTS CONTINUE TO LAG BEHIND PROJECTIONS.

Corrective Action: RE'EVALUATE PROJECTIONS IN LIGHT OF HIRING AND FINALIZED BUDGETS.

Condition: GREEN

POC: G. HILL

DATE: 17 JULY 91

SIGNATURE

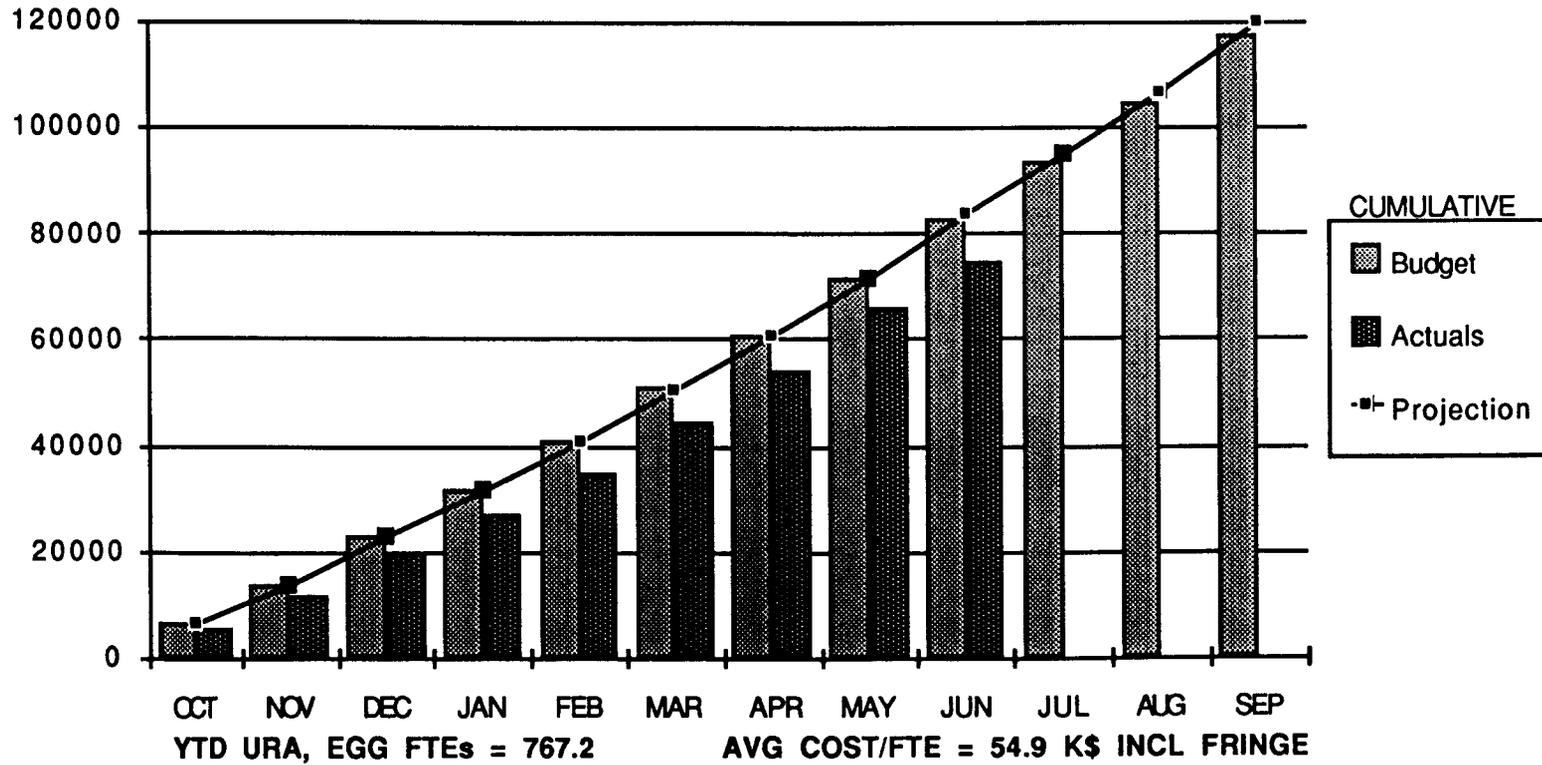
/S/G. Hill

LABORATORY
ALL FUNDS

JUNE FY91

EXPENSE CLASS:
39-48

LABOR AND LABOR RELATED COSTS
(\$'s In Thousands)



**LABORATORY FINANCIAL OVERVIEW
M&S and Subcontractors**

Goal TO ENSURE ADEQUATE BUDGET TO COVER PLANNED PROCUREMENTS.

WBS Elements Description

Accomplishments M&S AND SUBCONTRACT BUDGETS ARE ON TRACK WITH CURRENT COMMITMENTS.

Issues and Concerns COSTS LAG BEHIND COST PLAN.

Corrective Action: A COST PLANNING STRATEGY THAT OPTIMIZES M&S FUNDING. RE/EVALUATE PLANS IN LIGHT OF FINALIZED BUDGETS AND CURRENT STATUS OF COSTS AND COMMITMENTS.

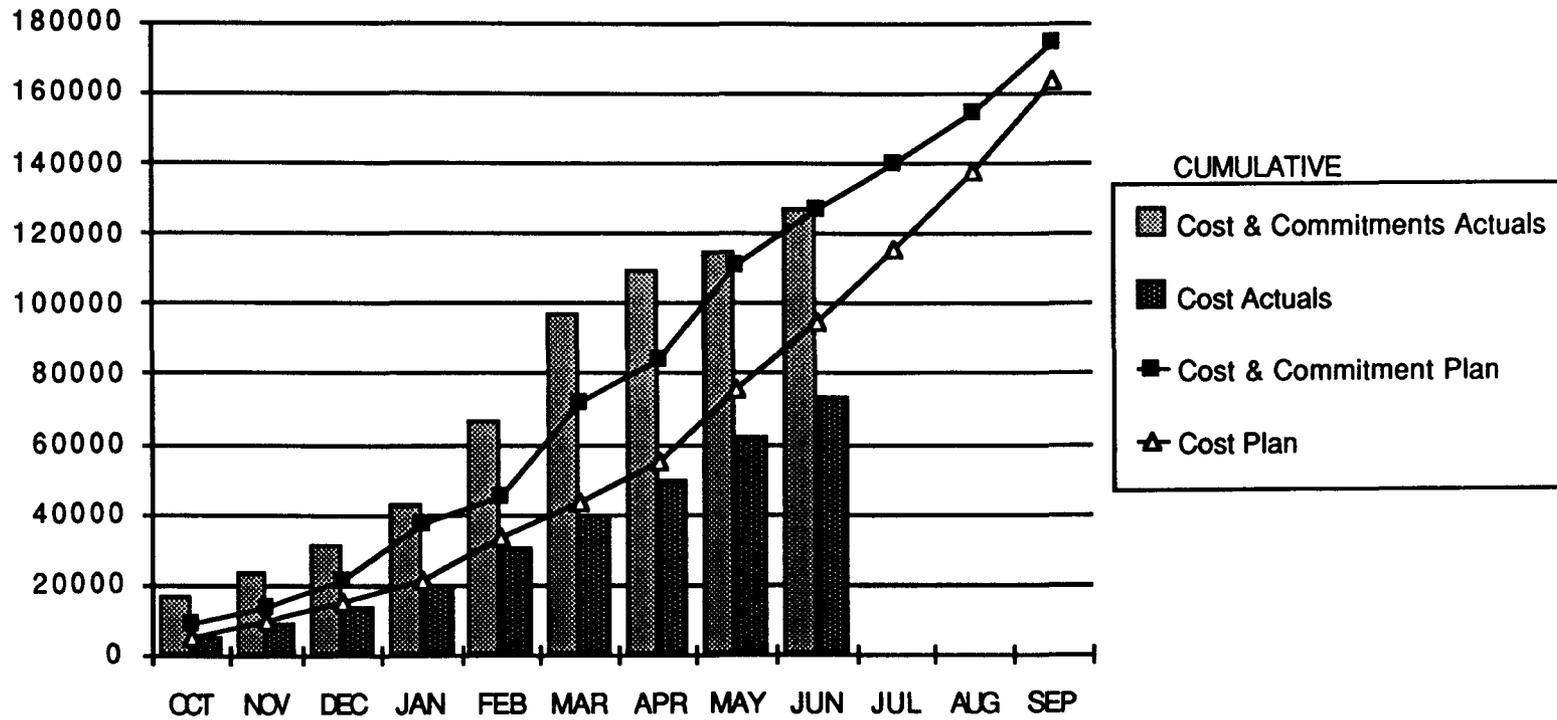
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POC: G. HILL **DATE:** 17 JULY 91 **SIGNATURE** /S/G. Hill

LABORATORY
ALL FUNDS

JUNE FY91
M&S AND SUBCONTRACTS
(\$'s In Thousands)

EXPENSE CLASS:
49,50,51



**LABORATORY FINANCIAL OVERVIEW
Other Labs and Universities**

Goal TO ENSURE ADEQUATE BUDGET TO COVER COMMITMENTS TO LABORATORIES AND UNIVERSITIES.

WBS Elements **Description**

Accomplishments COMMITMENTS ARE NEARLY UP TO TOTAL BUDGET. COSTS ARE ON TRACK WITH COST PLAN.

Issues and Concerns NONE

Corrective Action: NONE

Condition: GREEN

POC: G. HILL

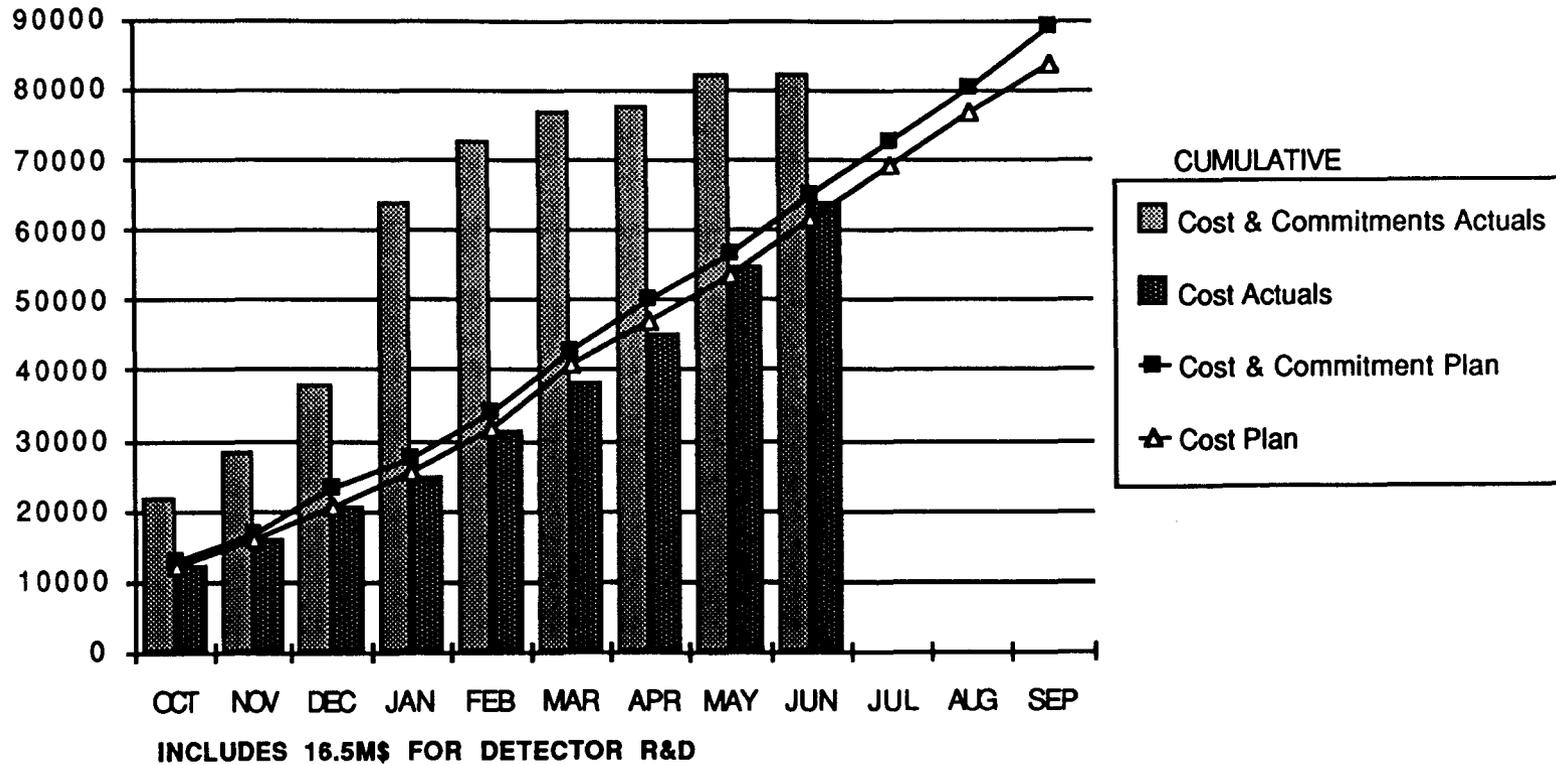
DATE: 17 JULY 91

SIGNATURE /S/G. Hill

LABORATORY
ALL FUNDS

JUNE FY91
OTHER LABS & UNIVERSITIES
(\$'s In Thousands)

EXPENSE CLASS:
52,53



LABORATORY FINANCIAL OVERVIEW
Total Cost and Commitments

Goal MONITOR ACTUAL COSTS AND COMMITMENTS AGAINST PLAN AND AVAILABLE FUNDING.

WBS Elements Description

Accomplishments COST AND COMMITMENTS ARE WITHIN BUDGET.

Issues and Concerns COSTS LAG BEHIND PLAN.

Corrective Action: A COST PLANNING STRATEGY THAT OPTIMIZES THE AVAILABLE FUNDING.

Condition: GREEN

POC: G. HILL

DATE: 17 JULY 91

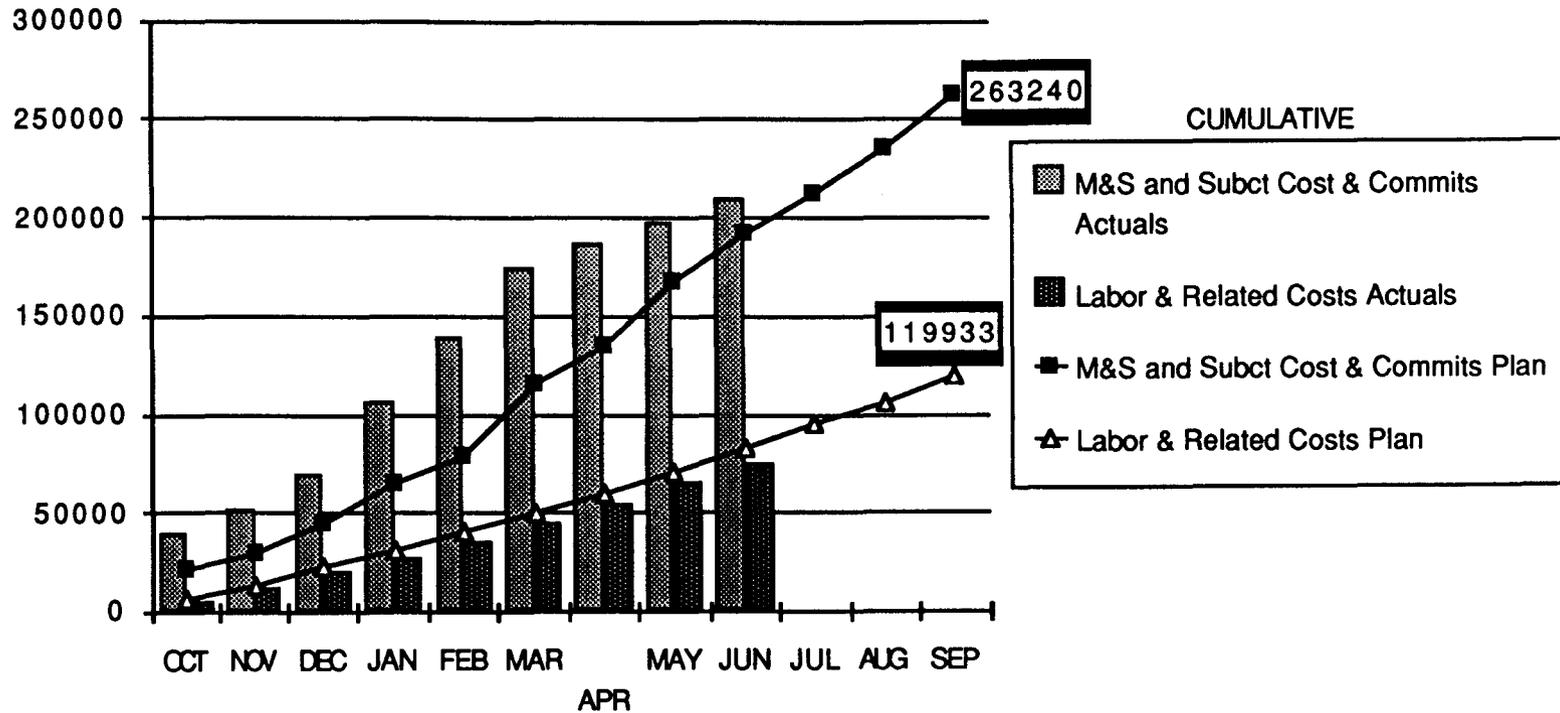
SIGNATURE

/S/G. Hill

LABORATORY
ALL FUNDS

**JUNE FY91
PROJECTED COSTS & COMMITMENTS
VS ACTUALS**

EXPENSE CLASS:
Labor & Related: 39-48
M&S Subc, L&U: 49-53



DOES NOT INCL: CTRL FAC (28.4), CONT (11.4), DOE W/HELD (6.9), MGMT RES 14.4

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DIVISION PROJECT STATUS REPORT				
DESIGN <input type="checkbox"/>	PRODUCTION <input type="checkbox"/>			
CONSTRUCTION <input type="checkbox"/>	RESEARCH & DEVELOPMENT <input type="checkbox"/>			PART I
1. IDENTIFIERS:				
1a. PROJECT TITLE/NUMBER SUPERCONDUCTING SUPER COLLIDER LABORATORY	1b. REPORTING PERIOD June 1991			
1c. MANAGING DIVISION ADOD	1f. PERFORMING ORGANIZATION(S) Linac HEB ASST LEB Collider MEB Beamlines			
1d. DIVISION/OFFICE CONTACT Don Edwards				
1e. DIVISION MANAGER Don Edwards				
2 DIVISION MANAGER'S PERSONAL ASSESSMENT:				
2a. Summary Status				
GROUP	TECHNICAL	COST	SCHEDULE	OVERALL
Linac	Green	Green	Green	Green
LEB	Green	Green	Red	Green
MEB	Green	Green	Red	Green
HEB	Green	Green	Red	Green
Collider	Green	Green	Green	Green
ASST	Green	Green	Green	Green
Beamlines	Green	Green	Green	Green
OVERALL DIVISION ASSESSMENT				
Green				
PREVIOUS DIVISION ASSESSMENT				
Green				

**ADOD
Test Beams**

Goal Design and build 200 GeV Test Beams and Calibration Hall.

WBS Elements **Description**
1.1.7 Test Beams

Accomplishments We have a workable 200 GeV/2 TeV layout for Beamline and Calibration Hall.
The Calibration Hall is compatible with the IR-1 building Complex.
The new schedule has been agreed to in principal by ASD, PRD, and CCD.

Issues and Concerns None

Corrective Action: None

Condition: Green

POC: John McGill

DATE: July 15, 1991

SIGNATURE /s/ John McGill

**ADOD
FY91 Deliverables**

Goal To supply the necessary deliverables to support the project milestones.

WBS Elements **Description**
4.2.1 Accelerator R&D

Accomplishments Good progress on specification preparation.

Issues and Concerns Preparation of most 3A and 3B specifications are behind schedule. The first issue of the specifications may be delayed will have some (TBD's).

Corrective Action: Proceed with approvals so that the major portions of the specifications are available for use. Complete the TBD's as soon as possible.

Condition: Green

POC: Don Edwards **DATE:** July 15, 1991 **SIGNATURE** /S/Don Edwards

**ADOD
FY 91-92 DELIVERABLES**

WBS	Deliverables	Baseline Schedule	Current Projection	Condition Appraisal
4.2.1	LINAC Final Design Review	August 91	August 91	Green
4.2.1	Set Coordinates, All Accelerators	April 91	April 91	Complete
4.2.1	Magnet Requirements Completed			
	LEB	June 91	August 91	Red
	MEB	June 91	August 91	Red
	HEB	June 91	July 91	Red
4.2.1	RF Requirements Completed			
	LEB	June 91	August 91	Red
	MEB	June 91	August 91	Red
	HEB	June 91	July 91	Red

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ACCELERATOR SYSTEM STRING TEST (ASST)

**ADOD
ASST**

Goal	Demonstrate coldier operation of a half-cell of industrially produced magnets.
WBS Elements	Description
4.2.1	2.1.6 (String enclosure/N15 service buildings)
Accomplishments	Projected start on iron-work for string enclosure one month ahead of schedule (end of June). Procurement started on cooling tower. Moved to Grey's residence at E1 on July 3. Controls trailer delivery July 5. WEC contract through DOE, work to begin Aug. 1 at BNL. PDR presented for LCW system on June 28, procurement started. First power supply factory tested and ready for delivery. Plan B refrigerator out for bids, due July 22. CDR on spools held on July 1-2, bid package being readied.
Issues and Concerns	Monitor interface with CCD on infrastructure items at E1 site. Software for controls system a concern. KPS/SEDALCO work around in Sept.-Oct. to be resolved. ER spool delivery scheduled for Aug. 1.
Corrective Action:	J. Nonte requested CCD to present details on ASST related infrastructure items at E1. ASST meeting scheduled for July 16 to discuss slow controls and other issues. PB/MK trying to work up an integrated schedule for KPS installation, but must be reviewed.
Condition:	Green
POC:	Thomas Dombeck
	DATE: July 15, 1991
	SIGNATURE /s/Thomas Dombeck

ASST

Goal Meet the overall laboratory goals to complete the ASST first string test by the end of summer, 1992. The current detailed schedule calls for installation and leak checking through June 9, 1992; start cooldown (after electrical safety checks) on August 4, 1992; and run the cold tests from August 4 through October 2, 1992.
Data Source: SSC baseline schedule and division tier 1 (shown), tier 2, and tier 3 schedule.

WBS Elements **Description**
4.2.1 Accelerator R&D
1.1.6 Collider

Accomplishments Completed the Controls System PDR. Completed the ER cryostat weldment and the vacuum barrier. Completed the re-cooler for ER spool. The ASST spool piece CDR, originally scheduled for June, was held the first week in July. The first article test of the magnet power supplies was completed at the vendor's plant.

Issues and Concerns We have to closely monitor the ASST building and the refrigeration subcontractor (Koch) to handle all interfaces and turnover requirements. There is potential problem with protection for a quadrupole magnet connected in series with the five dipole magnets during a quench. If the quadrupole will not be installed (or will require electrical modifications) we need to know soon.

CONDITION: GREEN

POC: Ted Kozman

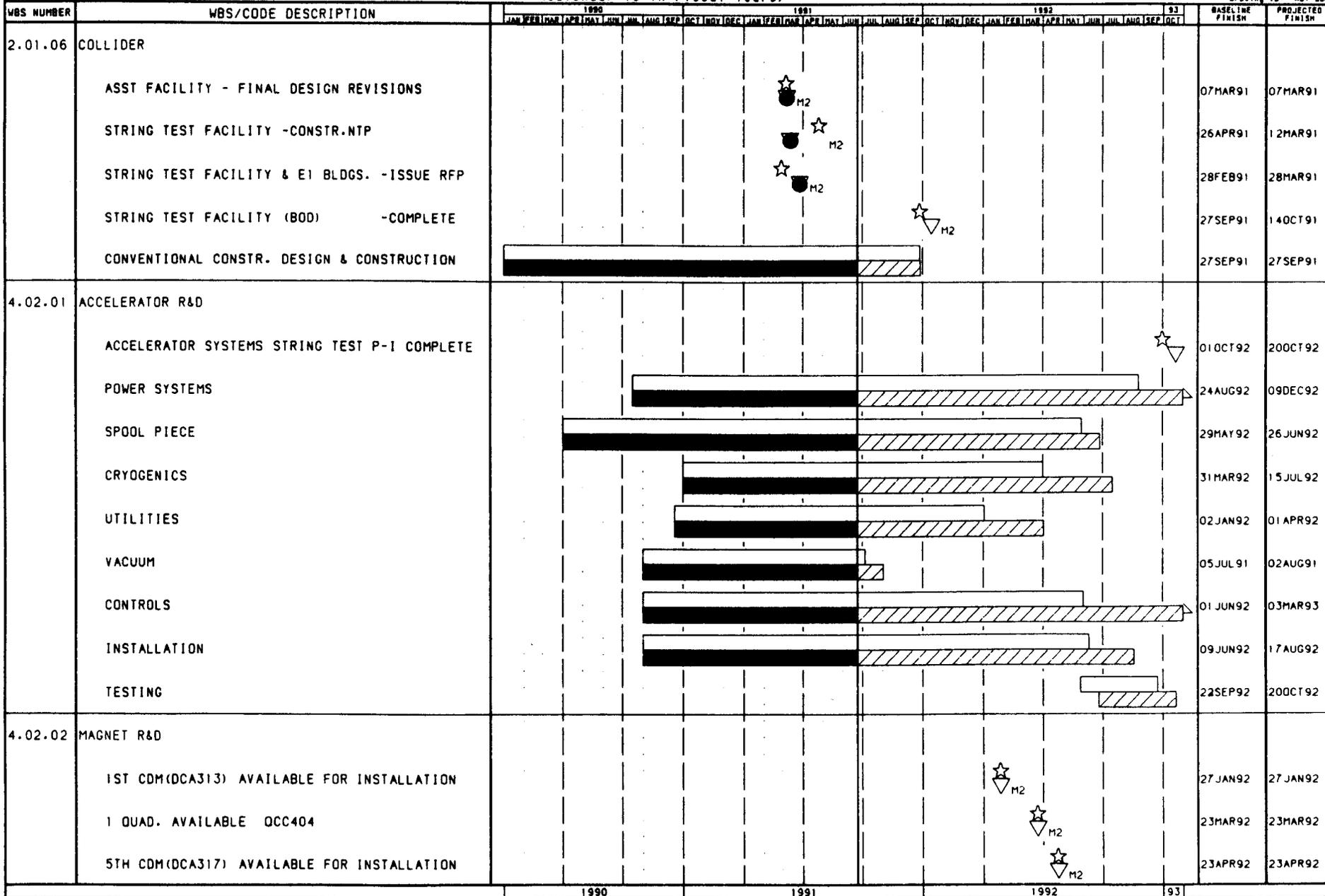
DATE: 08 July 91

SIGNATURE: S/T. Kozman

Superconducting Super Collider
 Network Status Date: 23JUN91
 Graphic Produced by PMO on 25JUL91

3 YEAR TERM COMPARATIVE SUMMARY BARCHART
 LMR Report: ASST w/Level 0-2 Milestones
 (Calendar is in Fiscal Years)

Baseline Master Schedule: Ver. 12, Rev. 7
 SSCL REVIEW SUMMARY BY WBS
 Drawing ID: ASST-SUM



**CONVENTIONAL CONSTRUCTION DIVISION
ASST**

Goal

WBS Elements

Description

2.1.6.25 String Enclosure, Cryo Alcove & Shop
2.1.6.2.2.1 N15 Service Bldg
2.1.6.2.2.2 Compressor Bldg

Accomplishments

- Foundations initiated.
- Steel on schedule, on order.
- Interface items with Koch defined.

Costs:

Baseline Cost Estimate: \$3.6M (ASST only) EAC: \$3.6M (ASST only)

Issues and Concerns

- BOD delayed thru bid protest to October 14.
- Process change order for underslab conduits between buildings (not included in general package).
- Permanent electrical power for testing start (Hill County line).

Corrective Action:

Interface Working Group resolved major critical path design issues, Dombeck POC for any further changes.

Condition:

Green

POC:

Craig N. Trimble

DATE: 15 July 1991

SIGNATURE

/S/Jon R. Ives

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**ADOD
Linac**

Goal Acquire a long-lived, reliable ion source and LEPT meeting specifications.

WBS Elements **Description**
1.1.2.1.2 Ion Source/Matching

Accomplishments HESQ assembled and installed in its vacuum can.
Emittance Measuring Unit constructed and installation is in progress.
Section Leader arrived (Kouroush Saadatmand).
Controls Department is working on computerized data acquisition and control of Ion Source and LEPT.
Laboratory procedure established for routine ion source operation.
Laboratory procedure established for recovery from failure of ion source.

Issues and Concerns RF volume source program to go to full speed this fall.

Corrective Action: Section's primary focus will be the RF volume source

Condition: Green

POC: L.W. Funk

DATE: July 15, 1991

SIGNATURE /s/ Warren Funk

**ADOD
Linac**

Goal Acquire a Radio Frequency Quadrupole which preserves transverse emittance and transmits and accelerates the required beam.

WBS Elements **Description**
1.1.2.1.3 Radio Frequency Quadrupole

Accomplishments Completed beam dynamics tolerance study.
Electroforming tooling frames delivered to LANL.
Thermally-controlled enclosure for milling machine completed.

Issues and Concerns Two week delay due to failure of control electronics for milling machine.

Corrective Action: LANL shops working overtime to make up some lost time.
Order new control electronics.

Condition: Green

POC: L.W. Funk

DATE: July 15, 1991

SIGNATURE /s/ Warren Funk

**ADOD
Linac**

Goal Acquire a state-of-the-art Drift Tube Linac from industry.

WBS Elements **Description**
1.1.2.1.4 Drift Tube Linac

Accomplishments DTL RFP went out on June 10.
 Vendors conference held at SSC.
 RFQ/DTL buncher cavity design started at SSC.

Issues and Concerns Order for samples of permanent magnets from China behind schedule.
 Power requirements for buncher cavities not determined.

Corrective Action: Elevate priority of the order for samples.
 Simulations continuing for buncher cavity designs.

Condition: Green

POC: L.W. Funk

DATE: July 15, 1991

SIGNATURE /s/ Warren Funk

**ADOD
Linac**

Goal Acquire a Coupled-Cavity Linac

WBS Elements **Description**
1.1.2.1.5 Coupled Cavity Linac

Accomplishments Redesigned CCL for decreased emittance growth (-25%).
IHEP visited.

Issues and Concerns Possible supply of CCL sections by IHEP, Beijing.
Uncertainty of final requirements of medical applications group.

Corrective Action: Maintain flexibility in plans for extraction systems.

Condition: Green
POC: L.W. Funk

DATE: July 15, 1991

SIGNATURE /s/ Warren Funk

**ADOD
Linac**

Goal Design and build pulsed quadrupole magnets for the CCL and transport line.

WBS Elements **Description**
1.1.2.1.8 Quadrupole Magnets

Accomplishments Bridge coupler height increased to accommodate quadrupoles.
Working group (ME,I & D, Linac) established to coordinate quadrupole effort.

Issues and Concerns Space requirements of field clamps on quadrupoles.
Residual field leakage into CCL.

Corrective Action: Design trade off's need to be simulated for the field clamps.

Condition: Green
POC: L.W. Funk

DATE: July 15, 1991

SIGNATURE /s/ Warren Funk

**ADOD
Linac**

Goal Specify, oversee acquisition, commission and operate the rf systems for the linac.

WBS Elements **Description**
1.1.2.1.12 RF System

Accomplishments Klystron bids came in.
Technical evaluations completed for Klystrons.

Issues and Concerns Uncertainty in buncher RF power requirements could delay procurements.

Corrective Action: Finalize RF power requirements for components.

Condition: Green

POC: L.W. Funk

DATE: July 15, 1991

SIGNATURE /s/ Warren Funk

**ADOD
Linac**

Goal Specify, oversee development and acquisition of, commission and operate Linac.
Instrumentation/Diagnostics and Controls.

WBS Elements **Description**
1.1.2.1.18,19 Instrumentation, Controls

Accomplishments High priority for computerization on a prototype platform of data acquisition and control of Ion Source/LEBT was implemented so that procedures for effective interaction with Instrumentation & Diagnostics and Controls Department can be developed.
First elements of computer platform for production control system received.

Issues and Concerns Early development of commissioning and operations plans.

Corrective Action: Make drafting of commissioning plan a top priority.

Condition: Green
POC: L.W. Funk

DATE: July 15, 1991

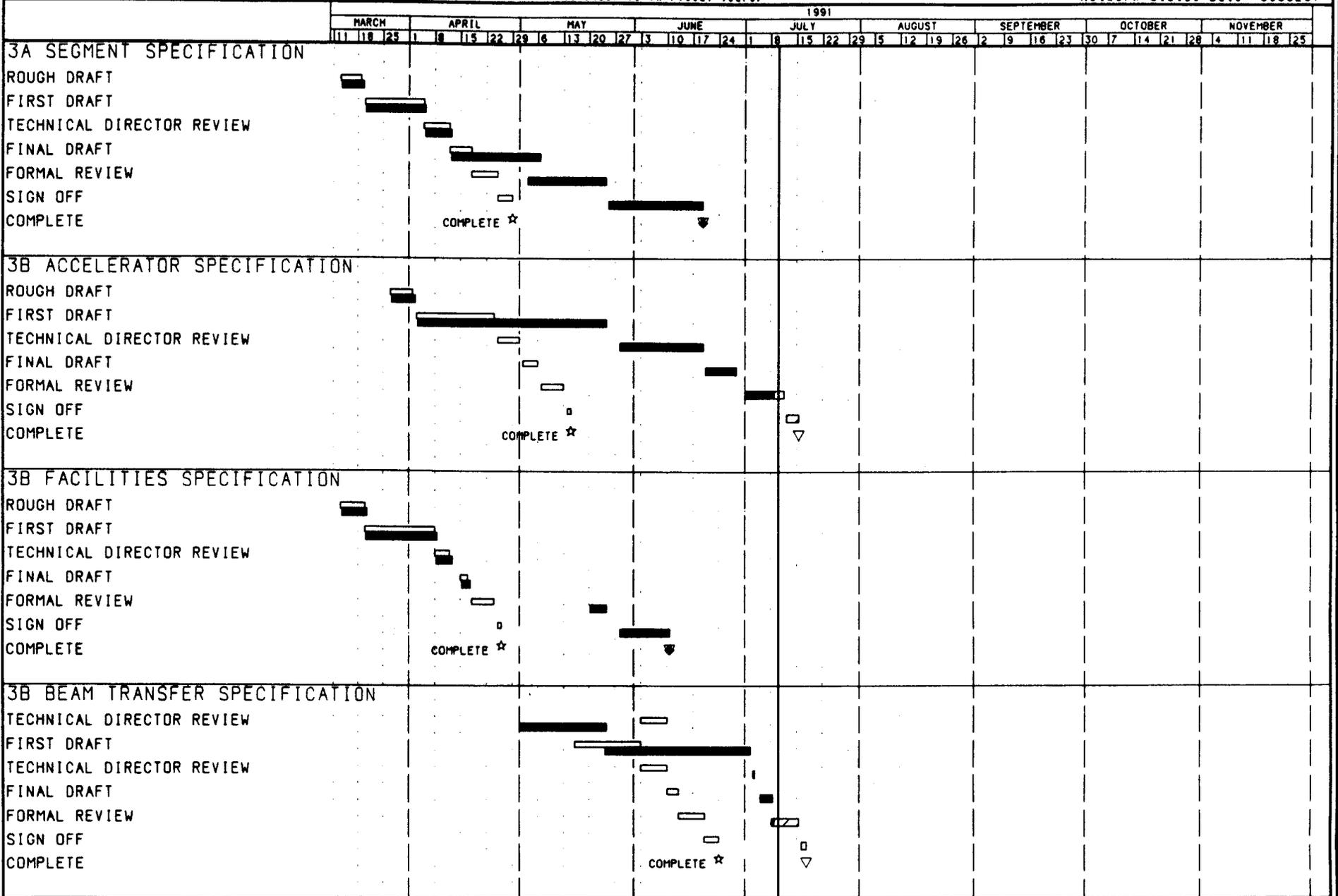
SIGNATURE /s/ Warren Funk

WBS NUMBER	WBS/CODE DESCRIPTION	89	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	BASELINE FINISH	PROJECTED FINISH
1.01.02	LINAC SYSTEM													
	SET COORDINATES: LINAC			★									28DEC90	29MAR91
	LINAC RFO/DTL/SCL (FDR)					▽							09DEC92	08DEC92
	LINAC START 600 MEV COMMISSIONING							▽					03OCT94	03OCT94
	TECHNICAL SYSTEMS		■										28JAN91	28JAN91
	ION SOURCE		■	▨									06APR92	06APR92
	RFO		■	▨									28APR93	03MAY93
	DTL		■	▨									17MAR94	17MAR94
	CCL			■	▨								05JUL94	05JUL94
	RF SYSTEMS		■	▨									24JUN94	24JUN94
	TESTING						▨						04APR95	04APR95
2.01.02	LINAC													
	LINAC TRANSPORT & TRANSFER LINE BOD							▽					01APR93	01APR93
	LINAC FACILITY COMPLETE							▽					25FEB93	05APR93
	CONVENTIONAL CONSTR. DESIGN & CONSTRUCTION			▨									25FEB93	05APR93
4.01	ACCELERATOR PRE-OPERATIONS													
	LINAC START COMMISSIONING (600 MEV)							▽					03OCT94	03OCT94
	LINAC OPERATIONAL - READY TO SUPPORT LEB							▽					01MAR95	04APR95
	PRE-OPERATIONS									▨			30SEP99	30SEP99

BASELINE ACTIVITY
 ACTUAL ACTIVITY
 PROJ. CRITICAL ACT.
 ○-ORIG. CRITICAL MS
 ▽-PROJECTED MILESTONE
 ORIG. CRITICAL ACT.
 PROJECTED ACTIVITY
 ★-BASELINE MILESTONE
 ●-ACTUAL MILESTONE
 ▽-PROJ'TED CRITICAL MS



COMPARATIVE BARCHART
 LINAC - 3A & 3B SPECIFICATION SCHEDULE
 (Calendar is in Fiscal Years)



BASELINE ACTIVITY
 ACTUAL ACTIVITY
 PROJ. CRITICAL ACT.
 ● ORIG. CRITICAL MS ▽ PROJ. MILESTONE
 ORIG. CRITICAL ACT.
 PROJECTED ACTIVITY
 ☆ BASELINE MILESTONE
 ◆ ACTUAL MILESTONE
 ▽ PROJ. CRITICAL MS

LINAC

Goal Meet the Laboratory and the SSC June Baseline estimate and schedule
Data Source: SSC Baseline schedule and detailed ASD tier 1 and 2 division schedules..

WBS Elements **Description**
1.1.2 Linac
4.2.1 Accelerator R&D

Accomplishments Everything is on tract to meet the start of commissioning date. However, because more detailed logic and procurement strategy has been developed, some activities have moved from their originally scheduled dates:

Issues and Concerns	Activity:	Baseline Date:	Current Date:
	CDR for RFQ	03/25/91	04/24/91 completed
	CDR for DTL	03/11/92	12/15/92
	CDR for CCL	11/12/91	11/11/91
	Linac underground BOD	04/01/93	04/01/93
	Start Commissioning	10/03/94	10/03/94
	Operational	04/04/95	04/04/95

Issues: Commissioning schedule to start on October, 1994 as originally scheduled. The reason CCL Final Design Review is prior to the DTL Final Design Review is the DTL Final Design will be completed by industry.

CONDITION: GREEN

POC: Ted Kozman DATE: 08 July 91 SIGNATURE: S/T. KOZMAN

**CONVENTIONAL CONSTRUCTION DIVISION
Linac**

Goal	Support installation of Linac technical system by timely completion of conventional facilities.
WBS Elements	Description
2.1.2	
Accomplishments	Linear Accelerator Conventional Construction (including beam transfer to LEB). Title I design Proceeding. Title I Submittal scheduled 7/22/91.
	Costs:
	Baseline Cost Estimate: \$ 3.1M EAC: \$ 4.7M (CCB approved scope changes)
Issues and Concerns	SCHEDULE: Projecting 6-month schedule slip in issuance of construction Notice to Proceed. Projecting 17 day slip in baseline BO. SCOPE: Uncertainty and possible revisions in requirements and scope as design approaches Title II phase.
Corrective Action:	SCHEDULE: None. No technical system impact identified.
Condition:	SCOPE: Definitize requirements prior to Title I review (7/22/91). Decisions on Scope.
POC:	Yellow Deryl L. Earsom DATE: 15 July 1991 SIGNATURE /S/Jon R. Ives

LOW ENERGY BOOSTER (LEB)

**ADOD
LEB**

Goal	LEB Specified
WBS Elements 4.2.1	Description 3A Specification 3B Specification
Accomplishments	LEB staff work completed for 3A specifications. LEB staff work beyond 3B specification documentation.
Issues and Concerns	Not at LEB staff level. 3B specification behind schedule.
Corrective Action:	Accelerator 3B specification will be completed August 1.

Condition: Red (Schedule)
POC: Richard York

DATE: July 15, 1991

SIGNATURE /s/ Richard York

**ADOD
LEB**

Goal	LEB meeting cost, schedule, and performance
WBS Elements	Description
4.2.1	LEB budget vs actuals
Accomplishments	None
Issues and Concerns	Final validation of cost data.
Corrective Action:	Bottoms up cost estimate by system. Development of resource loading profile compatible with cost estimate, schedule, <u>assigned</u> manpower. Resources - budget and personnel assigned to LEB under direction of task leader.
Condition:	Green
POC:	Richard York
	DATE: July 15, 1991
	SIGNATURE /s/ Richard York

**ADOD
LEB**

Goal	Commissioned LEB FY95
WBS Elements	Description
4.2.1	LEB
Accomplishments	Dipole detailed design evaluation initiated. Quadrupole detailed evaluation initiated. Corrector/trim magnets engineering initiated. Title I design specification complete.
Issues and Concerns	Task Leader Issue - Zero Progress. Dipole/Quadrupole Prototype LBL - May be yes quadrupole. SLAC - Possible in January 92. BNL - Exorbitant cost estimate. Russians need to investigate role/relationship. RF Prototype Effort Insufficient priority given. Suitable AC power required at central facility NO LATER THAN AUGUST 1, 1991.
Corrective Action:	Negotiate further with LBL/SLAC/Russian contingent. Push RF effort.
Condition:	Green
POC:	Richard York

DATE: July 15, 1991

SIGNATURE /s/ Richard York

**ADOD
LEB**

Goal	Commissioned LEB FY95
WBS Elements	Description
4.2.1	LEB
Accomplishments	Action Item: LEB kicker specification review
Issues and Concerns	PDRR for LEB kicker held. Kicker specification (rise time) relaxed pending evaluation of ramification with respect to radiation issues. - Note: Changes to requirements are expected.
Corrective Action:	None
Condition:	Green
POC:	Richard York
	DATE: July 15, 1991
	SIGNATURE /s/ Richard York

Superconducting Super Collider
 Network Status Date: 23JUN91
 Graphic Produced by PMO on 17JUL91

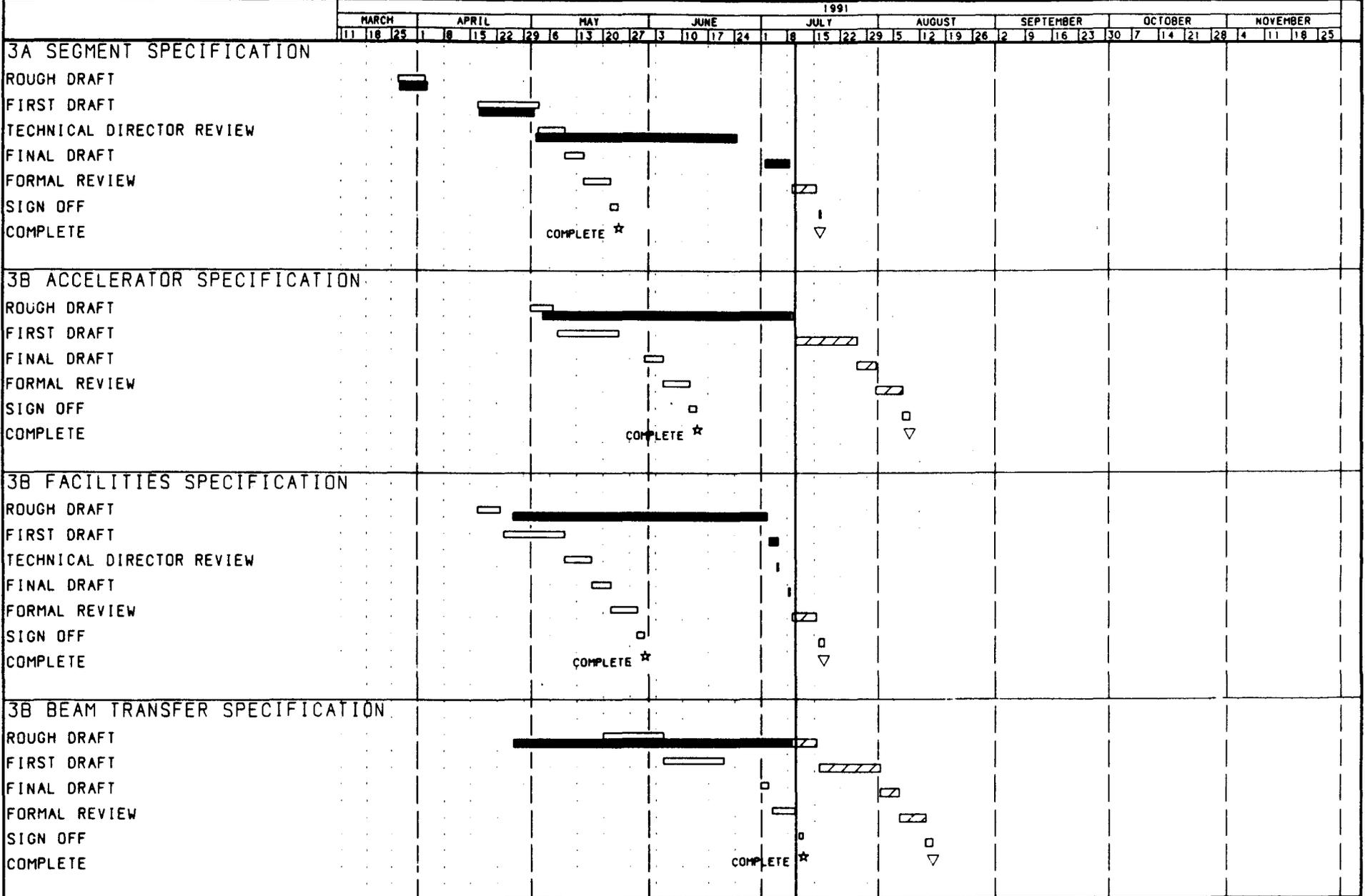
LONG TERM COMPARATIVE SUMMARY BARCHART
 LMR Report: LEB w/Level 0-2 Milestones
 (Calendar is in Fiscal Years)

Baseline Master Schedule Ver. 12, Rev. 7
 SSCL REVIEW SUMMARY BY WBS
 Drawing ID: LEB-SUM

WBS NUMBER	WBS/CODE DESCRIPTION	1991	1992	1993	1994	1995	1996	1997	1998	1999	BASLINE FINISH	PROJECTED FINISH
1.01.03	LEB SYSTEM											
	POWER SYSTEMS										13SEP95	21 JUN95
	DIPOLE MAGNETS										23JAN95	07OCT94
	QUADRUPOLE MAGNETS										23JAN95	07OCT94
	RF SYSTEMS										15AUG95	31MAR95
	UTILITIES										25NOV91	19FEB92
	VACUUM										26JUN91	20SEP91
	CONTROLS										26JUL91	22OCT91
	INSTALLATION										28APR92	20FEB92
	TESTING										12SEP95	04OCT95
2.01.03	LEB											
	LEB FACILITY COMPLETE										24DEC93	31DEC93
	CONVENTIONAL CONSTR. DESIGN & CONSTRUCTION										24DEC93	31DEC93
4.01	ACCELERATOR PRE-OPERATIONS											
	LEB START COMMISSIONING										02OCT95	05OCT95
	LEB COMPLETE COMMISSIONING										01MAY96	03APR96
	MEB START COMMISSIONING										01JUN96	03JUN96
	COMMISSIONING										29MAR96	03APR96
	PRE-OPERATIONS										30SEP99	30SEP99

BASELINE ACTIVITY
 ACTUAL ACTIVITY
 PROJ. CRITICAL ACT.
 ORIG. CRITICAL MS
 PROJECTED MILESTONE
 ORIG. CRITICAL ACT.
 PROJECTED ACTIVITY
 BASELINE MILESTONE
 ACTUAL MILESTONE
 PROJ'TED CRITICAL MS

COMPARATIVE BARCHART
 LEB - 3A & 3B SPECIFICATION SCHEDULE
 (Calendar is in Fiscal Years)



[Solid line] BASELINE ACTIVITY [Thick solid line] ACTUAL ACTIVITY [Hatched line] PROJ. CRITICAL ACT. [Circle] ORIG. CRITICAL MS [Inverted triangle] PROJ. MILESTONE
 [Thin solid line] ORIG. CRITICAL ACT. [Hatched line] PROJECTED ACTIVITY [Star] BASELINE MILESTONE [Arrow] ACTUAL MILESTONE [Inverted triangle] PROJ. CRITICAL MS

LOW ENERGY BOOSTER (LEB)

Goal	Meet the overall Laboratory Goals to start commissioning by early FY96 <u>Data Source:</u> SSC baseline schedule and detailed ASD tier 1, 2, and 3 division schedules.
WBS Elements	Description
1.1.3	LEB
4.2.1	Accelerator R&D
Accomplishments	The first draft of the LEB magnet Advance Acquisition Plan has been circulated. The PDR for the LEB dipole was scheduled for June, but will now be in July at the earliest, after the LEB PDRR. The same is true for the quadrupoles which had scheduled a PDR originally in June. The RF Systems, which are the critical path items for the LEB, remain close or on schedule.
Issues and Concerns	The current schedule shows the start of commissioning to be August 31, 1995. This will allow seven months before the start of commissioning for the MEB. As can be seen from this schedule we currently have the RF systems as the critical path. We need to complete and finalize the magnet requirements so that the Preliminary Design Reviews can be held.

CONDITION: YELLOW

POC: Ted Kozman

DATE: 08 July 91

SIGNATURE: S/T.KOZMAN

**CONVENTIONAL CONSTRUCTION DIVISION
LEB**

Goal	Support installation of LEB technical system by timely completion of conventional facilities.		
WBS Elements	Description		
2.13	Low Energy Booster Conventional Construction (including beam transfer to MEB).		
Accomplishments	Draft preliminary design requirements document completed.		
	Costs:		
	Baseline Cost Estimate: \$6.0M	EAC: \$6.0M	
Issues and Concerns	None.		
Corrective Action:	None.		
Condition:	Green		
POC:	Deryl L. Earsom	DATE: 15 July 1991	SIGNATURE /S/Jon R. Ives

MEDIUM ENERGY BOOSTER (MEB)

**ADOD
MEB**

Goal To provide an accelerator which will accelerate protons from 12 GeV/c to 200 GeV/c for injection into the HEB and to provide test beams, on a schedule to meet major milestones.

WBS Elements **Description**
4.1.4.1 3A Specifications
 3B Specifications

Accomplishments Progress has been made.

Issues and Concerns MEB continues to receive low priority among ASD providers of information.

Corrective Action: Make this issue known.

Condition: Red (Schedule)

POC: Rod Gerig

DATE: July 15, 1991

SIGNATURE /s/ Rod Gerig

**ADOD
MEB**

Goal To provide an accelerator which will accelerate protons from 12 GeV/c to 200 GeV/c for injection into the HEB and to provide test beams, on a schedule to meet major milestones.

WBS Elements Description
4.4.4.1 MEB

Accomplishments Magnet design and evaluation underway.
Ministraight space budget evaluation.
Integrated schedule submitted to PMO.

Issues and Concerns Ministraight space extremely tight.
Continued concern over main magnetic element design.

Corrective Action: Focused attention on space budget by ME.
Possible minor magnet relocation.

Condition: Green
POC: Rod Gerig

DATE: July 15, 1991

SIGNATURE /s/ Rod Gerig

**ADOD
MEB**

Goal To provide an accelerator which will accelerate protons from 12 GeV/c to 200 GeV/c for injection into the HEB and to provide test beams, on a schedule to meet major milestones.

WBS Elements **Description**
4.1.4.1 MEB Facilities Specifications

Accomplishments Working group met three times in June - information coming in.

Issues and Concerns MEB is low priority among ASD providers of information.
Baseline building space too small.

Corrective Action: Enlarge buildings.

Condition: Yellow (Schedule)

POC: Rod Gerig

DATE: July 15, 1991

SIGNATURE /s/ Rod Gerig

Superconducting Super Collider
 Network Status Date: 23JUN91
 Graphic Produced by PMO on 17JUL91

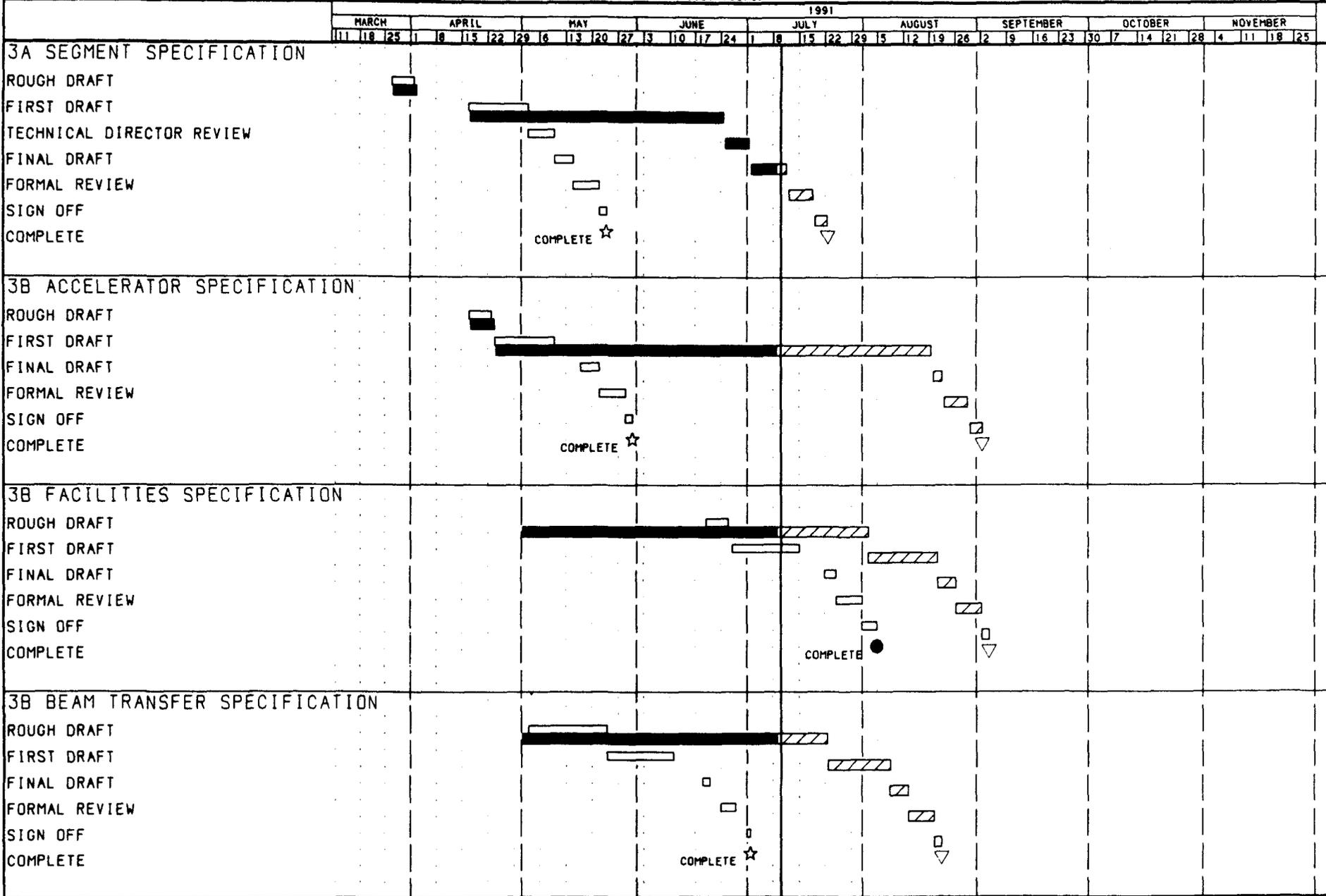
LONG TERM COMPARATIVE SUMMARY BARCHART
 LMR Report: MEB w/Level 0-2 Milestones
 (Calendar is in Fiscal Years)

Baseline Master Schedule Ver. 12, Rev. 7
 SSCL REVIEW SUMMARY BY WBS
 Drawing ID: MEB-SUM

WBS NUMBER	WBS/CODE DESCRIPTION	91	1992	1993	1994	1995	1996	1997	1998	1999	BAS. FINISH	PROJ. FINISH
1.01.04	MEB SYSTEM											
	SET COORDINATES: MEB	★									15APR91	29MAR91
	TESTING				□						06JAN94	06JAN94
2.01.04	MEDIUM ENERGY BOOSTER (MEB)											
	MEB: FACILITY COMPLETE				◇ _{M2}						11JUL94	11JUL94
	CONVENTIONAL CONSTR. DESIGN & CONSTRUCTION		▨								11JUL94	11JUL94
4.01	ACCELERATOR PRE-OPERATIONS											
	MEB START COMMISSIONING						◇ _{M1}				01JUN96	03JUN96
	MEB COMPLETE COMMISSIONING							▽ _{M2}			01JAN97	29NOV96
	MEB TEST BEAMS AVAILABLE							◇ _{M1}			01JAN97	01JAN97
	COMMISSIONING						▨				29OCT96	29NOV96
	PRE-OPERATIONS							▨			30SEP99	28SEP99

□ BASELINE ACTIVITY ▨ ACTUAL ACTIVITY ▨ PROJ. CRITICAL ACT. ◇-ORIG. CRITICAL MS ▽-PROJECTED MILESTONE
 ▨ ORIG. CRITICAL ACT. ▨ PROJECTED ACTIVITY ★-BASELINE MILESTONE ●-ACTUAL MILESTONE ▽-PROJ'ED CRITICAL MS

COMPARATIVE BARCHART
 MEB - 3A & 3B SPECIFICATION SCHEDULE
 (Calendar is in Fiscal Year)



BASELINE ACTIVITY
 ORIG. CRITICAL ACT.
 ACTUAL ACTIVITY
 PROJECTED ACTIVITY
 PROJ. CRITICAL ACT.

MEDIUM ENERGY BOOSTER (MEB)

Goal Meet the overall Laboratory goals to start commissioning by mid FY96.
Data Source: SSC Baseline Schedule and detailed ASD tier 1,2, and 3 division schedules.

WBS Elements **Description**
4.2.1 Accelerator R&D

Accomplishments Work on level 3A technical specifications has been ongoing. We anticipate the specification to be complete in draft form in early July. If the specifications are not completed in July, we will have a difficult time meeting the magnet PDR's scheduled for this fall.

Issues and Concerns The detailed scheduling has started, and as of this point in time the start of commissioning will be June, 1996 and commissioning complete in January, 1997

CONDITION: YELLOW

POC: Ted Kozman

DATE: 08 July 91

SIGNATURE: S/T. KOZMAN

**CONVENTIONAL CONSTRUCTION DIVISION
Medium Energy Booster (MEB)**

Goal	Support installation of MEB technical system by timely completion of conventional facilities.
WBS Elements	Description
2.1.4	Medium Energy Booster Conventional Construction (including beam transfers to HEB bored & tunnel for Test Beam).
Accomplishments	Continued preliminary design requirements with the working group.
	Costs:
	Baseline Cost Estimate: \$39.0M EAC: \$39.0M
Issues and Concerns	Projecting 6 month schedule slip in issuance of construction Notice to Proceed.
Corrective Action:	None. No technical system impacted as all BOD's are projected to be met.
Condition:	Yellow
POC:	Jack H. Clifton DATE: 15 July 1991 SIGNATURE /S/Jon R. Ives

HIGH ENERGY BOOSTER (HEB)

**ADOD
HEB**

Goal To design and manage the construction and commissioning of the HEB.

WBS Elements	Description
1.1.5	HEB System
1.2.2	HEB Magnet Production
2.1.5	HEB
4.2.1	Accelerator R&D

Accomplishments High-Q lattice adopted.
3A specifications out for formal review early July.
3B Magnet specifications final draft mid-July.
Working on 2.5 μ vs. 6 μ filament cost analysis.

Issues and Concerns Settle HEB elevation/HEB to Collider magnet type.

Corrective Action: None

Condition: Red (Schedule)
POC: David E. Johnson

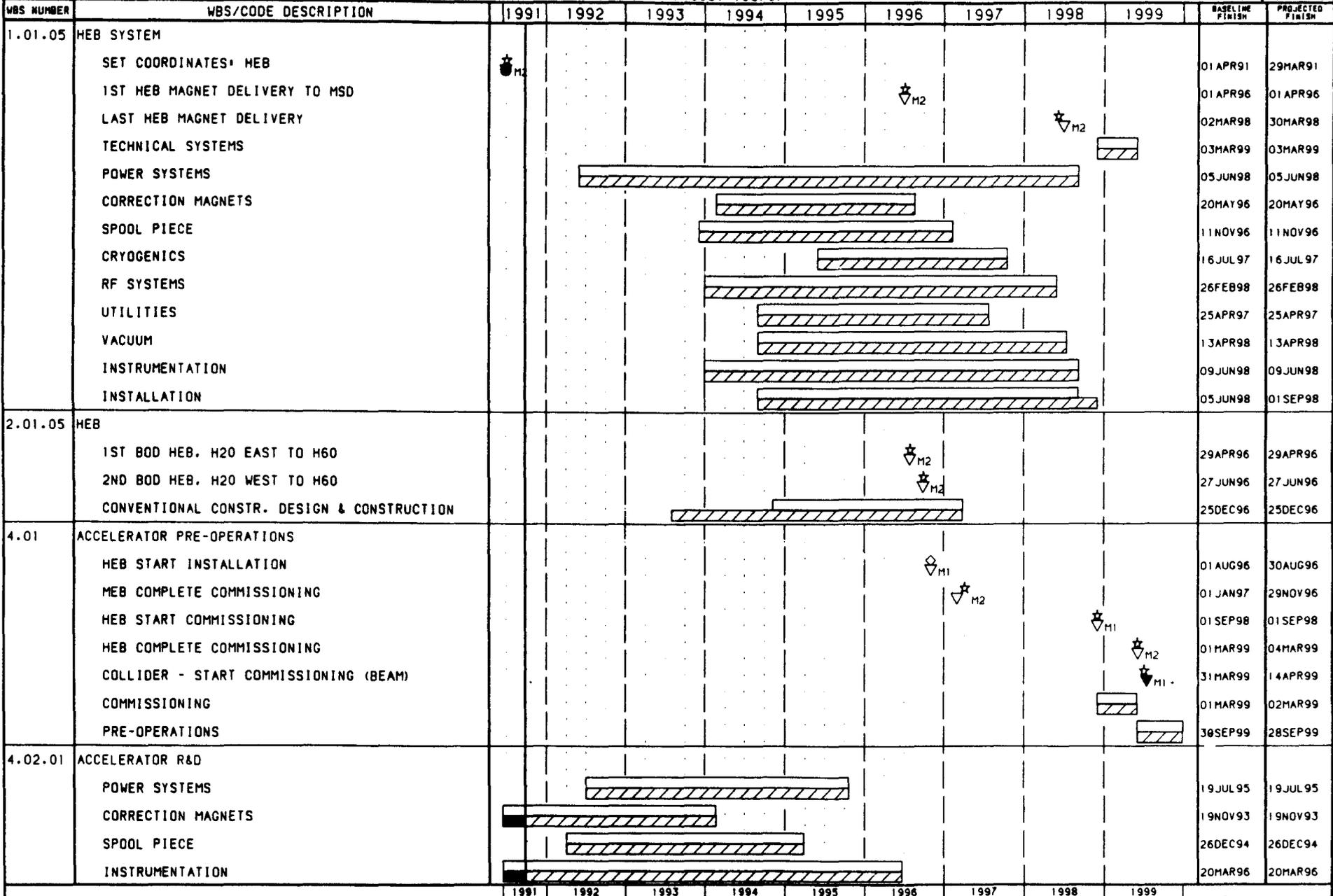
DATE: July 15, 1991

SIGNATURE /s/ David Johnson

Superconducting Super Collider
 Network Status Date: 23JUN91
 Graphic Produced by PHO on 18JUL91

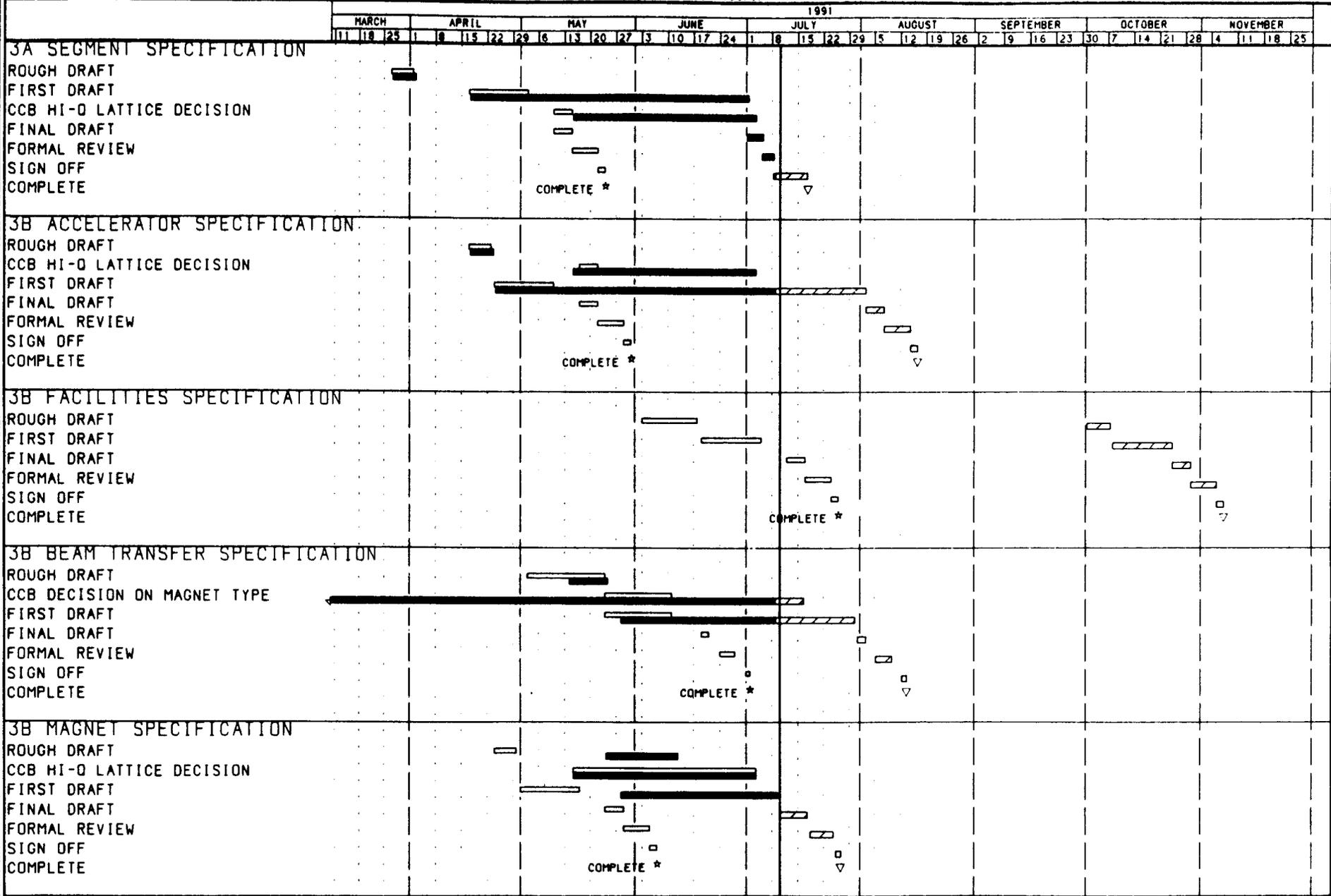
LONG TERM COMPARATIVE SUMMARY BARCHART
 LMR Report: HEB w/Level 0-2 Milestones
 (Calendar is in Fiscal Years)

Baseline Master Schedule Ver. 12, Rev. 7
 SSSL REVIEW SUMMARY BY WBS
 Drawing ID: HEB-SUM



▨ BASELINE ACTIVITY ▨ ACTUAL ACTIVITY ▨ PROJ. CRITICAL ACT. ◇ ORIG. CRITICAL MS ▽ PROJECTED MILESTONE
 ▨ ORIG. CRITICAL ACT. ▨ PROJECTED ACTIVITY ★ BASELINE MILESTONE ● ACTUAL MILESTONE ▽ PROJ. CRITICAL MS

COMPARATIVE BARCHART
 HEB - 3A & 3B SPECIFICATION SCHEDULE
 (Calendar is in Fiscal Years)



[Solid bar] BASELINE ACTIVITY [Hatched bar] ACTUAL ACTIVITY [Dashed bar] PROJ. CRITICAL ACT. [Square] ORIG. CRITICAL MS [Inverted Triangle] PROJ. CRITICAL MS
 [Dashed bar] ORIG. CRITICAL ACT. [Hatched bar] PROJECTED ACTIVITY [*] BASELINE MILESTONE [Square] ACTUAL MILESTONE [Inverted Triangle] PROJ. CRITICAL MS

HIGH ENERGY BOOSTER (HEB)

Goal Meet the overall Laboratory goals to start commissioning by before FY99.
Data Source: SSC Baseline Schedule and detailed ASD tier 1,2, and 3 division schedules.

WBS Elements **Description**
4.2.1 Accelerator R&D

Accomplishments With the coordinates set in March, work has started in preliminary design and the 3A and 3B specifications. These specifications are scheduled to be completed in July for the 3A and August for the 3B.

Issues and Concerns The detailed scheduling has started, and as of this point in time the start of commissioning will be September, 1998 and commissioning complete in March, 1999.

CONDITION: GREEN

POC: Ted Kozman

DATE: 08 July 1991

SIGNATURE: S/T. KOZMAN

COLLIDER

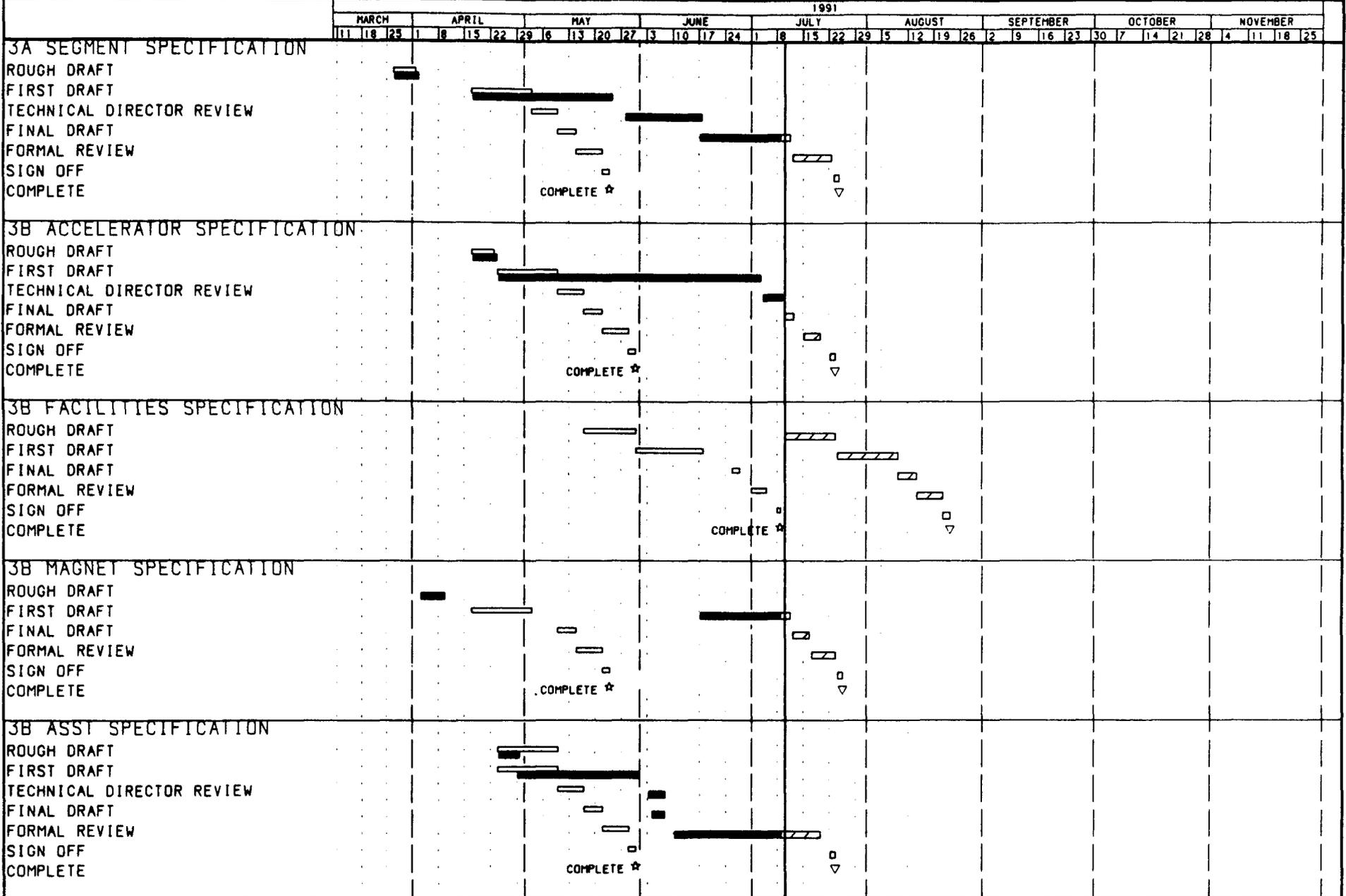
**ADOD
Collider**

Goal	Develop design and specification of 20 TeV Collider
WBS Elements	Description
4.2.1	3B specifications, integrated schedule.
Accomplishments	Completed first draft of collider specs 3B. Reduced spacing of niches (450 m) proposed. Number of dump resistors increased. Work on integrated collider schedule processing. Contract with UTA in preparation to do surface physics experiments. Workshops: RF system for the collider.
Issues and Concerns	Decision on niche spacing required. Present installation schedule for ASD does not allow to meet level 1 milestone (starting commissioning). No schedule for design and procurement of components (only for main magnets).
Corrective Action:	More help from ASD needed.
Condition:	Yellow (Schedule)
POC:	Rainer Meinke
	DATE: July 15, 1991
	SIGNATURE /s/ Rainer Meinke

Superconducting Super Collider
 WEEKLY PROGRESS REPORT
 Current Date: 18JUL91

COMPARATIVE BARCHART
COLLIDER 3A & 3B SPECIFICATION SCHEDULE
 (Calendar is in Fiscal Years)

ADD Specification Schedule
 Network Status Date: 09JUL91



[Solid line] BASELINE ACTIVITY [Thick solid line] ACTUAL ACTIVITY [Hatched line] PROJ. CRITICAL ACT. [Circle] ORIG. CRITICAL MS [Inverted triangle] PROJ. CRITICAL MS
 [Dashed line] ORIG. CRITICAL ACT. [Hatched line] PROJECTED ACTIVITY [Star] BASELINE MILESTONE [Diamond] ACTUAL MILESTONE [Triangle] PROJ. CRITICAL MS

**CONVENTIONAL CONSTRUCTION DIVISION
Collider Tunnel and Shafts**

Goal To provide ASD with the first 100m tunnel segment and its servicing shafts by January 1993. To provide ASD with the first tunnel half sector and its servicing shafts by March 1994. To provide ASD with additional tunnel half sectors and a second magnet delivery shaft by September 1994.

WBS Elements **Description**

2.1.6.2 N15 Shafts and N15 to N20 Tunnel Segment
N20 and N25 Shafts and N20 to N30 Tunnel Segment
N30 to N45 Shafts and N30 to N45 Tunnel Segment

Accomplishments N15 Magnet Shaft 100% submittal received. Will be bid in July.
N15 to N20 Basic Tunnel Title I submittal received.
Design Requirements for Shafts at N20 and N25 and Basic Tunnel from N20 to N30 developed and transmitted to the A-E/CM to initiate Title I design.
Design Requirements for Shafts at N30, N35, N40 and N45 and Basic Tunnel from N30 to N45 developed and transmitted to the A-E/CM to initiate Title I design.
Geotechnical Exploration "Deep" Program began June 15, 1991. Two drilling rigs out on site.

Costs:

	<i>Baseline Cost Estimate:</i>	<i>EAC:</i>
• N15 to N20	\$17.0M	\$17.0M
• N20 to N30	\$30.2M	\$30.2M
• N30 to N45	\$43.0M	\$43.0M

Issues and Concerns Larger tunnel diameter may require change in tunnel elevation to provide required 45-foot shielding at collider low cover areas.

Corrective Action: The A-E/CM has been tasked to perform a Collider Tunnel Elevation Study which will address tunnel elevation, construction costs associated with different elevations, and land areas affected at the low cover areas.

Condition: Green

POC: Tracy K. Lundin **DATE:** 15 July 1991 **SIGNATURE** /S/Jon R. Ives

**CONVENTIONAL CONSTRUCTION DIVISION
Exploratory Shaft (IR1 Location)**

Goal To provide large scale, in-situ, test input for the design of underground structures in Eagle Ford Shale rock strata and detector support systems.

To provide shaft access to the utility bypass and/or experimental facilities, at the IR1 location. Final function and finish-out to be determined.

WBS Elements

2.1.6.26

Accomplishments

Description

Exploratory Shaft (IR1)

Shaft Drilling subcontract awarded June 28th.

Geotechnical Instrumentation subcontract under final negotiation.

Issues and Concerns

Later construction completion date anticipated (2- to 3-week extension).

Corrective Action:

Adequate data acquisition time expected even with 3-week slip in construction completion.

Condition:

Green

POC:

Chris Laughton

DATE: 15 July 1991

SIGNATURE

/S/Jon R. Ives

**CONVENTIONAL CONSTRUCTION DIVISION
IR 4 Experimental Facilities; Underground Housings**

Goal	Conceptual Underground Design of the IR4 Experimental Facility Housings.		
WBS Elements	Description		
2.2.2.1.1	IR 4 Underground Hall and Shaft Structures		
Accomplishments	Rescoping of electrical and mechanical systems initiated		
	Underground Conceptual Design requirements redefined for SDC (except floor loading)		
	Construction schedule updated		
	Wall finish options selected for ongoing design work.		
Issues and Concerns	Apparent increases in scope from baseline		
	Lack of definitive floor loads for FEM analysis.		
Corrective Action:	CCD cost estimating of new scope programmed for July (for CCB action)		
	Floor loading requirements to be ready in early July.		
Condition:	Green		
POC:	Chris Laughton	DATE: 15 July 1991	SIGNATURE <u>/S/Ion R. Ives</u>

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ACCELERATOR SYSTEMS DIVISION

DIVISION PROJECT STATUS REPORT				
DESIGN	X	PRODUCTION	<input type="checkbox"/>	
CONSTRUCTION	X	RESEARCH & DEVELOPMENT	X	PART I
1. IDENTIFIERS:				
1a. PROJECT TITLE/NUMBER SUPERCONDUCTING SUPER COLLIDER LABORATORY	1b. REPORTING PERIOD June 1991			
1c. MANAGING DIVISION Accelerator Systems	Division Office Mechanical Engineering Electrical Engineering RF Engineering Controls Instrumentation and Diagnostics Cryogenics Systems			
1d. DIVISION/OFFICE CONTACT Accelerator Systems Division Ted Kozman				
1e. DIVISION MANAGER Ted Kozman				
2 DIVISION MANAGER'S PERSONAL ASSESSMENT:				
2a. Summary Status				
GROUP	TECHNICAL	COST	SCHEDULE	OVERALL
Division Office	Green	Green	Green	Green
Mechanical Engineering	Green	Green	Red	Yellow
Electrical Engineering	Green	Green	Green	Green
RF Engineering	Yellow	Green	Yellow	Yellow
Controls	Green	Green	Yellow	Green
Instrumentation & Diagnostics	Green	Green	Green	Green
Cryogenics Systems	Green	Yellow	Yellow	Yellow
<i>OVERALL DIVISION ASSESSMENT</i>	Green	Green	Yellow	Yellow
<i>PREVIOUS DIVISION ASSESSMENT</i>	Green	Green	Green	Green

Yellow Conditions:

1. Division office/staffing -- Hiring freeze will affect entire division staffing plans.
2. Mechanical Engineering/staffing -- Lost two people because we were not able to get an offer to them quickly enough. (Resistive magnet designer and engineer for the DTL).
3. Electrical Engineering/staffing -- Still need drafters and programmers.
4. RF Engineering/Technical -- Requirements for some machines are fluctuating.
5. RF Engineering/Schedule -- Lab at CF is needed by the end of July to meet the LEB RF design schedule. Also, buncher requirements changing for Linac RF systems could affect schedule.
6. Controls/Schedule -- Length of time to receive computer and software orders could delay the start of checkout of the ASST subsystems. Fileserver, TISAR, and communications software are all critical.
7. Cryogenics/Cost -- could be cost growth for MTL cryoplant because of schedule. Also difficulty with the tank pads for the ASST.
8. Cryogenics/Staffing -- Still have some difficulty locating cryogenic engineers.
9. Cryogenics/Schedule -- Koch MTL deliveries scheduled for September/October: PBMK schedule calls for partial BOD by January. Potential fix is to switch N15 and MTL which could limit ASST operations or incur a cost increase to both Koch and PBMK.

Red Conditions:

Controls/Staffing -- Without additional programmers during July and August, ASST systems checkout scheduled for January will be delayed.

Mechanical Engineering/schedule -- behind on the ER spool piece which was originally scheduled to be delivered in June. It will be delivered in August for installation in September.

Overall:

Technical -- Green -- same as May.
Cost -- Green -- same as May.
Staffing -- Yellow -- worse than May.
Schedule -- Yellow -- same as May.

Overall Division -- Yellow -- Worse than May.

ACCOMPLISHMENTS/CONCERNS --June 1991

Accomplishments:

BPM for collider -- electrical testing started.

ER (string test at Fermi) schedule meeting held.

Started FY92 Planning packages.

ASST -- Utilities PDR completed.

ASST -- Controls PDR completed.

First article full power test completed for ASST magnet power supplies.

First full power cold test of collider correction magnets completed at SSCL.

Completed hydrostatic testing of SSCL ER Spool piece.

Concerns:

Hiring freeze in early June could affect early ASST systems test.

Computer/software procurements require excessive time.

Koch -- PB/MK installation coordination needs management attention for both ASST and MTL.

QUARTERLY ACCOMPLISHMENTS -- April - June, 1991

April:

Award contract for magnet dollies.

CDR -- Linac RFQ

PDRR -- ASST Control System

May:

Division started the move to the Central Facility

Completed first correction magnet cold test at SSCL

LCW Design completed for Central Facility

Completed ASST vendor power supply Critical Design Review

June:

First full power cold test for collider correction magnets at the SSCL

First ASST magnet power supply test at vendor's plant

Completed hydrostatic test of ER spool piece built by SSCL

Completed ASST utilities PDR

Completed ASST controls PDR

FY91 Deliverables

WBS	Milestone	Baseline Schedule	Current Projection	Condition Appraisal
4.2.1	Start refrigerator fabrication for ASST	11/90	11/90*	Complete
4.2.1	Magnet supports - order prototype for ASST	12/90	12/90*	Complete
4.2.1.	4cm prototype spool available for ER string test	6/91	8/91	Red
4.2.1	Power supplies, quench protection procurement started	7/91	2/91*	Complete
1.1.2	LINAC RFQ procurement started	12/90	12/90*	Complete
1.1.2	Start procurement of klystrons and power systems	2/91	2/91*	Complete
1.1.2	LINAC final design review	8/91	8/91**	Green
1.1.6	Start procurement of E1 cryoplant with the ASST/MTL	11/90	11/90*	Complete
1.1.6	Start corrector magnet procurement for collider	9/91	7/91	Green

*Milestone complete

**Series of reviews: RFQ-4/91, CCL--11/91, DTL--12/92

FY91 DELIVERABLE MILESTONES

Start Refrigerator Fabrication -- Completed on time.

Magnet Supports -- Order Prototype -- Completed on time.

ER Spool Pieces --Scheduled late; August delivery.

Power Supplies, Quench Protection Procurement Started -- Completed early.

Linac RFQ Procurement Started -- Completed on time.

Start Procurement of Klystrons and Power Systems - Completed on time.

Linac final design review is a series of design reviews (for each section of the Linac) scheduled to start for the RFQ in April, 1991 (completed on time); the CCL in November, 1991; and the DTL scheduled for December, 1992. This apparent slip is for procurement time for the DTL and will not change or delay the overall Linac start of commissioning.

Start Procurement of E1 Cryoplant -- Completed on time.

Start of corrector magnet procurement for the collider -- this is ahead of schedule, the procurement packages have been submitted to DOE for approval. We anticipate award in July, two months ahead of schedule.

FY92 Deliverables

WBS	Milestone	Baseline Schedule	Current Projection	Condition Appraisal
4.2.1	Two Spools completed for ASST	3/92	12/91	Green
1.1.6	Cryogenic 4 K Plant -- Commissioning Complete	4/92	4/92	Green
4.2.1	Accelerator Systems available for Cooldown for ASST	4/92	4/92	Green
1.1.2	Start SCL Procurement for Linac	10/91	11/91	Yellow
1.1.2	Start DTL Fabrication for Linac	10/91	2/92	Red
1.1.2	Linac RFQ Completed	7/92	7/92	Green
1.1.2	Delivery of Klystrons and Power Systems	7/92	7/92	Yellow
1.1.3	LEB Magnet Engineering Complete	12/91	12/91	Yellow
1.1.3	Start Procurement Process for LEB Dipole/Quadrupole	6/92	6/92	Green
1.1.6	E2 Cryoplant -- Start Procurement	6/92	6/92	Green

FY92 DELIVERABLE MILESTONES

The ASST Spool Pieces are projected to be delivered earlier than originally scheduled.

Cryoplant and Accelerator Systems available for cooldown are currently scheduled to be completed in April 1992. We are continuing successfully and hope these will be completed early. The deliverable for Accelerator Systems available for cooldown for ASST will be completed as soon as all Accelerator Systems are ready for the cooldown of the string. These are currently planned to be completed by April 1992.

The start of the SCL procurement for the Linac is currently scheduled for November, 1991, which is one month later than the original schedule so this is a yellow condition. This will not delay the start of commissioning of the Linac.

Start DTL Fabrication for the Linac is currently planned for February, 1992; this will not delay the commissioning of the Linac. This slip, which results in a Red condition, is because the detailed schedule now reflects the procurement philosophy of performance specification and the December date is when the CDR is scheduled and the final design can begin.

Linac RFQ completed is on schedule and currently planned for July, 1992.

Delivery of Klystrons and Power Systems -- Budget status is Yellow because of the spares issue raised in the FY91 deliverable milestones.

Have some worry about completing the LEB Magnet Engineering as scheduled due to the fact that we started later than anticipated and have space problems. We have a slow start because of the needed requirements, coordinates, and lattice definition. For this reason this is a Yellow condition. We have no new currently planned date.

Start procurement process for the LEB magnets is green -- we have no new schedule.

E2 Cryoplant -- start procurement, June 1992 is the currently planned schedule.

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DIVISION PROJECT STATUS REPORT				
DESIGN <input checked="" type="checkbox"/>		PRODUCTION <input type="checkbox"/>		
CONSTRUCTION <input type="checkbox"/>		RESEARCH & DEVELOPMENT <input checked="" type="checkbox"/>	PART I	
1. IDENTIFIERS:				
1a. PROJECT TITLE/NUMBER SUPERCONDUCTING SUPER COLLIDER LABORATORY		1b. REPORTING PERIOD 27 May - 23 Jun 1991		
1c. MANAGING DIVISION Magnet Systems Division		1f. PERFORMING ORGANIZATION(S) Engineering Test Production Quality Assurance Business Management Fermi National Accelerator Laboratory Lawrence Berkeley Laboratory Brookhaven National Laboratory General Dynamics Space System Division Westinghouse Electric Corporation		
1d. DIVISION/OFFICE CONTACT Roosevelt Baker, Jr. ext. 2084				
1e. DIVISION MANAGER Tom Bush ext. 2023				
2 DIVISION MANAGER'S PERSONAL ASSESSMENT:				
2a. Summary Status				
GROUP	TECHNICAL	COST	SCHEDULE	OVERALL
WBS 1.2.1 Program Management	Green	Green	Green	Green
WBS 1.2.2 HEB Magnets	Green	Green	Green	Green
WBS 1.2.3 Collider Ring Magnets	Green	Green	Green	Green
WBS 1.2.4 Magnet Equipment & Tooling	Green	Green	Yellow	Yellow
WBS 4.2.2 Magnet R&D	Green	Green	Green	Green
<hr/>				
<i>OVERALL DIVISION ASSESSMENT</i>	Green	Green	Green	Green
<i>PREVIOUS DIVISION ASSESSMENT</i>	Green	Green	Green	Green

DIVISION PROJECT STATUS REPORT
PART I

REPORTING DIVISION: MAGNET SYSTEMS DIVISION

2b. DIVISION MANAGER'S NARRATIVE HIGHLIGHTS

QUARTERLY ACCOMPLISHMENTS

WBS 1.2.1 PROGRAM MANAGEMENT

Developing schedules to comply with the CDM program SSCL functional resource projections. Loaded budgets in Cobra at the work package level and identified the earned value.

WBS 1.2.2 HEB MAGNETS

Dipole Magnets. Conducted industry briefings. First 6 micron magnet is complete. Released formal RFP.

Quadrupole Magnets. Technical exchange meeting with CEN/SACLAY. Submitted Acquisition Plan. Finalized statement of work.

WBS 1.2.3 COLLIDER RING MAGNETS

- a. Collider Dipole Magnets. Executed letter contract with GD and WEC. Added industry assemble magnets to WEC at BNL. Completed the Technology Transfer Program.
- b. Quadrupole Magnets. Issued letter contract to Babcock & Wilcox for first 60 days. Developed a Plan for Technology Transfer and Magnet build program at LBL.

WBS 1.2.4 MAGNET FACILITIES EQUIPMENT AND TOOLING

MDL: Awarded contracts for the coil winding machine, and the auto linear welding system. Received the Quad collaring press and the cable wrapping machine.

MTL: Completed design and review of Dynapower 8000 amp power supply and a successful qualifications test. Received a 18D36 calibration dipole from SLAC.

WBS 4.2.2 MAGNET R&D

FNAL: First dipole being prepared for yoking. General Dynamics has 20 people on the FNAL site.

BNL: First dipole being assembled. Increased magnet builds from 2 to 7. Added industry assemble magnets by WEC.

LBL: First 40mm-5m quadrupole tested. Production configuration complete.

SSCL: Completed practice winding for DSA101. Completed Phase I of Transportation Studies.

**MAGNET SYSTEMS DIVISION
Major Project Milestones**

WBS	Milestone	Baseline Schedule	Current Projection	Condition Appraisal
1.2.3	CDM AUTHORIZATION TO INCUR COSTS	NOV-90	15 NOV 90 A*2	GREEN
1.2.3	FULL-RATE PRODUCTION CONTRACT AWARDED ON COLLIDER MAGNETS	APR-94*1	JAN-95	GREEN
1.2.3	START FIRST HALF SECTOR CDM DELIVERY FROM VENDOR PLANT	APR-94*1	JUL-94	GREEN

*1 CCB action in process to modify baseline schedule dates to reflect actual work schedule.

*2 A indicates actual date. Note that GD did not incur costs until May 91.

**MAGNET SYSTEMS DIVISION
FY91/92 Deliverables**

WBS	Milestone	Baseline Schedule	Current Projection	Condition Appraisal
4.2.2.2	Complete Testing of 1st Lab Prototype Quad Cold Mass	May 91	May 91*	Green
1.2.3.1	Start GD assembly of dipoles at FNAL	Jun 91	Jun 91*	Green
1.2.3.1	First 5cm Long Magnet Assembled	Sep 91	Sep 91	Green
1.2.4	Start Magnet Lab Tooling Procurement	Oct 90	Oct 90*	Green
4.2.2.3	Collider S/C Dipole Magnet Cable Vendor Qualification program started	Jan 91	Jan 91*	Green
1.2.3.1	CR Dipole Development started in Industry (delay in contract award)	Feb 91	Apr 91*	Green
1.2.3.3	CR Quad Development started in Industry (awaiting contract approval)	Apr 91	Jun. 91*	Green
4.2.2.2	Quad string test delivered to ASST	Mar 92	Mar 92	Green
1.2.3.1	All string test delivered to ASST	May 92	May 92	Green
1.2.4	Complete Installation of Magnet Lab Tooling	Sep 92	Sep 92	Green

*Milestones complete

**MAGNET SYSTEMS DIVISION
15 Meter CDM/13 Meter CDM**

Goal : PROVIDE RELIABLE COLLIDER DIPOLE MAGNETS ON SCHEDULE AND WITHIN BUDGET.

WBS Elements 1.2.3.1	Description 15 METER CDM	WBS Elements 1.2.3.2	Description 13 METER CDM
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- Accomplishments**
- COMPLETED THE TECHNOLOGY TRANSFER PROGRAM.
 - TASKING AND BUDGET FOR INTERNAL MSD SUPPORT OF CDM PROGRAM IS IN PROCESS.
 - GENERAL DYNAMICS INTEGRATION AT FNAL CONTINUES ON SCHEDULE.
 - MEETINGS BETWEEN SSCL, GD, AND WEC FUNCTIONAL PERSONNEL INTIAL ASPECTS OF THE CDM PROGRAM WERE HELD THROUGHOUT THE MONTH.
 - GENERAL DYNAMICS FIRST DELIVERABLE, THE SYSTEMS ENGINEERING MANAGEMENT PLAN WAS MADE ON TIME (JUNE 20, 1991).
 - PREPARED PLAN OF ACTION AND MILESTONES FOR CONTRACT MOD TO BUY FOLLOWER LONG LEAD MATERIAL, CRYO PLANT, TEST EQUIPMENT AND TOOLING. NOTIFICATION SENT TO DOE.
 - CONTINUING EFFORT FOR CONTRACT MODS NECESSARY TO PLACE INDUSTRY AT BNL.

- Issues and Concerns**
- THE TIME REQUIRED TO OBTAIN DOE CONCURRENCE ON THE NEGOTIATED GENERAL DYNAMICS AND WESTINGHOUSE CONTRACTS.
 - LETTER CONTRACT REQUIRES EXTENSION ON JULY 17, 1991. LACK OF CONTRACT IN PLACE WILL IMPACT ABILITY TO ISSUE MODIFICATIONS..

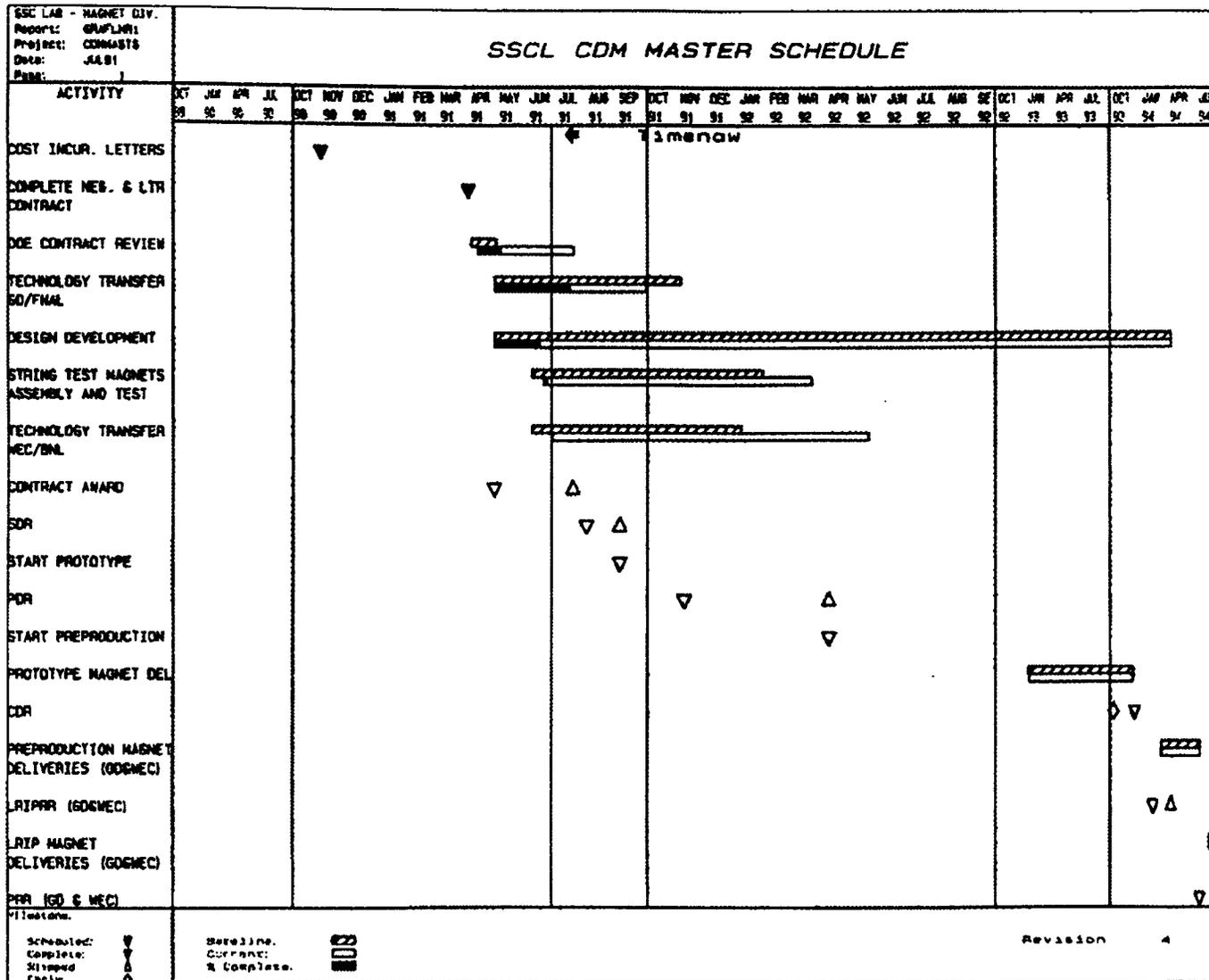
Corrective Action: • APPLY MANAGEMENT PRESSURE TO OBTAIN DOE CONCURRENCE ON ISSUE OF CONTRACTS.

Condition: Green

POC: Herb Trenham

DATE: June 23, 1991

SIGNATURE */S/*



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HEB MAGNETS

**MAGNET SYSTEMS DIVISION
HEB Dipole Magnets**

Goal PROVIDE RELIABLE HEB DIPOLE MAGNETS ON SCHEDULE AND WITHIN BUDGET.

WBS Elements **Description**
1.2.2.1 HEB DIPOLE MAGNETS

Accomplishments

- DIPOLE DEVELOPMENT RFP WAS SENT TO INDUSTRIAL CBD RESPONDENTS.
- SELECTED THE SSB TEAM FOR RFP PROPOSAL EVALUATION.
- COMPLETED COST EVALUATIONS OF POSSIBLE DESIGN OPTIONS FOR THE HEB.

Issues and Concerns

- LACK OF FINALIZED LEVEL 3A AND B SPEC IS CRITICAL.
- NEED TO FORMULATE FOREIGN IN-KIND DONATION POLICIES.

Corrective Action:

- PROVIDE LEVEL 3A AND B SPEC.
- ARRIVE AT AN AGREED FOREIGN IN-KIND DONATION POLICY FOR MAGNETS.

Condition: Green

POC: Dave Fortunato

DATE: June 23, 1991

SIGNATURE /S/

**MAGNET SYSTEMS DIVISION
HEB Quadrupole Magnets**

Goal PROVIDE RELIABLE HEB QUADRUPOLE MAGNETS ON SCHEDULE AND WITHIN BUDGET.

WBS Elements **Description**
1.2.2.2 HEB QUADRUPOLE MAGNETS

Accomplishments

- SOLE SOURCE JUSTIFICATION QUESTIONS HAVE BEEN ANSWERED AND SENT TO DOE.
- PROGRAM SCHEDULE IS BEING REVISED BASED ON NEW INPUT FROM CEN/SACLAY.
- PURCHASE REQUISITION FOR THE COLDMASS DEVELOPMENT WITH CEN/SACLAY HAS BEEN APPROVED.
- ESTABLISHED QUIDLINES AND BUDGETS FOR PERSONNEL RELOCATION TO PARIS FRANCE.

Issues and Concerns

- LACK OF LEVEL 3A AND B SPEC IS CRITICAL.
- SOLE SOURCE JUSTIFICATION APPROVAL.
- FORMAL RELOCATION POLICY APPROVAL.
- COMPLETION OF CONTRACT WITH CEN/SACLAY.

Corrective Action:

- PROVIDE LEVEL 3A AND B SPEC..
- DOE APPROVAL ON SOLE SOURCE ACQUISITION.
- ESTABLISH AN APPROVED RELOCATION PACKAGE FOR SSCL PERSONNEL MOVING TO CEN/SACLAY.

Condition: Green
POC: Dave Fortunato **DATE:** June 23, 1991 **SIGNATURE** /

**MAGNET SYSTEMS DIVISION
2.5 Micron Conductor**

Goal CONTINUE THE DEVELOPMENT OF 2.5 μ m CONDUCTOR IN SUPPORT OF THE HEB MAGNET PROGRAM.

WBS Elements 4.2.2.3	Description CONTINUE PROCESS DEVELOPMENT FOR 2.5 μ m CONDUCTOR	WBS Elements 1.2.2	Description SUPPLY PROTOTYPE CONDUCTOR FOR HEB MAGNET PROGRAMS REQUIRING 2.5 μ m CONDUCTOR
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Accomplishments

- THREE SUBCONTRACTORS SELECTED TO NEGOTIATE 2.5 μ m DEVELOPMENT CONTRACTS. HITACHI, SUPERCON, AND IGC/ASI.
- CONTRACT PREPARATION IN PROCESS.
- RECEIVED 2.5 μ m CABLES FOR KEK MODEL MAGNETS FROM HITACHI.

Issues and Concerns

- CONTRACT PREPARATION WILL BE DIFFICULT IN PARALLEL WITH 6 μ m WORKLOAD.
- LONG DELAYS IN CONTRACT APPROVAL PROCESS IS IMPEDING THE SCHEDULE.

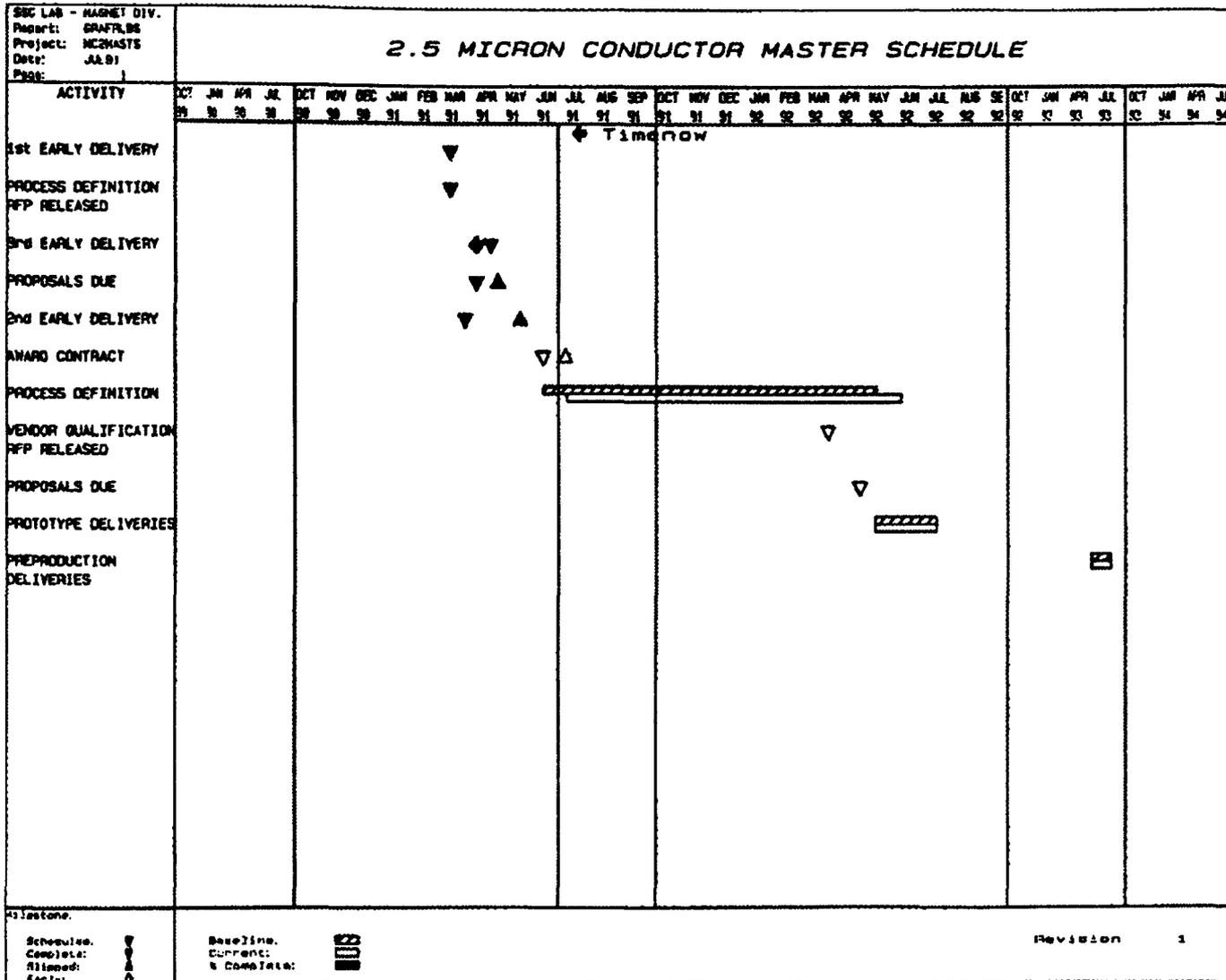
Corrective Action:

- RELIEVED SCA OF ALL RESPONSIBILITY EXCEPT FOR WIRE AND CABLE PROCUREMENTS.
- PREPARE CONTRACTS FOR SIGNATURE OF SUBCONTRACTORS AT CONCLUSION OF NEGOTIATIONS, A LA CDM.

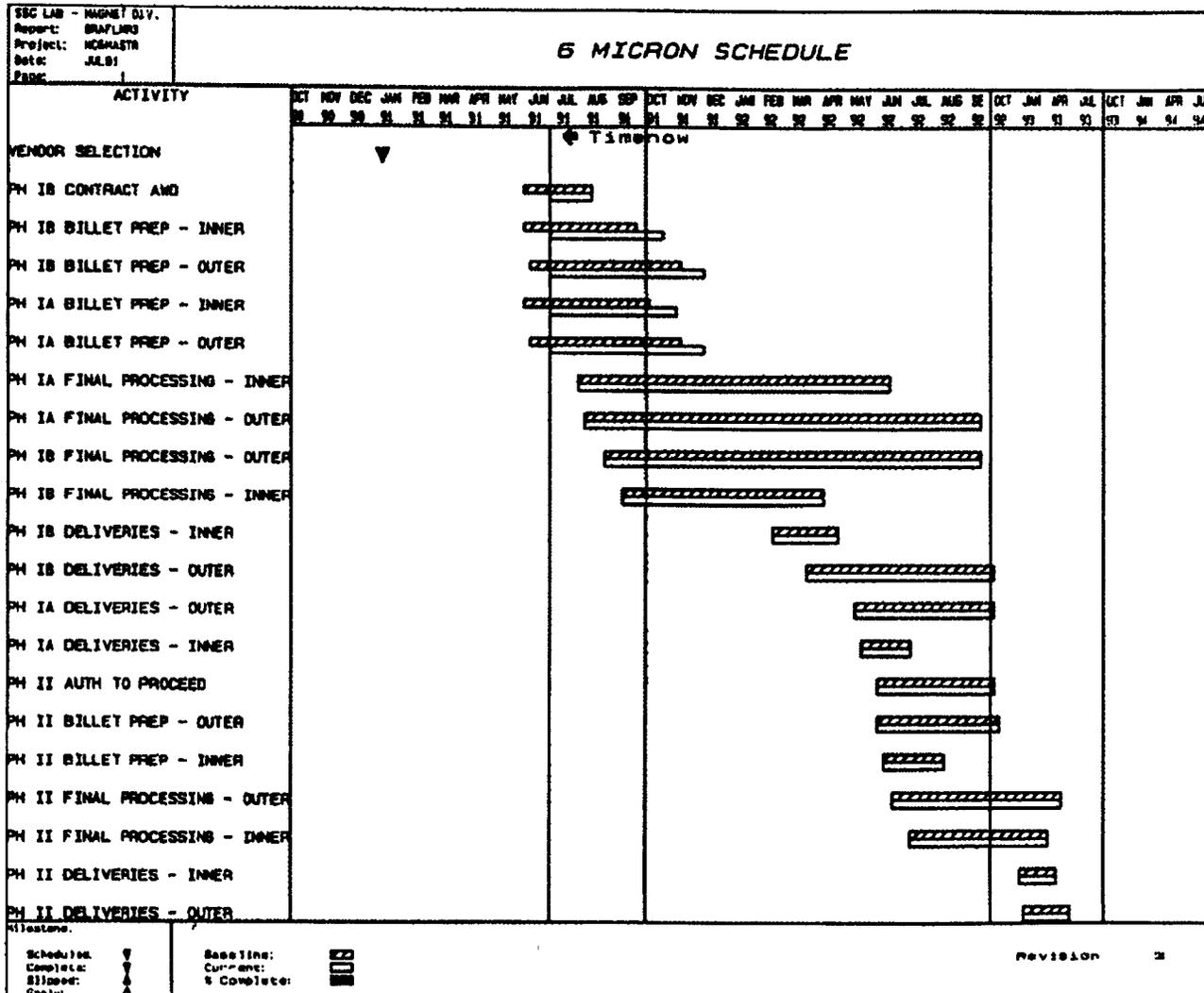
Condition: Green
POC: Don Capone

DATE: June 23, 1991

SIGNATURE /S/



Milestone:	Schedule: <input type="checkbox"/>	Baseline: <input type="checkbox"/>	Revision: 1
Complete: <input type="checkbox"/>	Current: <input type="checkbox"/>	% Complete: <input type="checkbox"/>	
Aligned: <input type="checkbox"/>			
Active: <input type="checkbox"/>			



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MAGNET FACILITIES

**MAGNET SYSTEMS DIVISION
MTL Equipment and Tooling**

Goal	DESIGN AND TEST THE MEASUREMENT AND CONTROL INSTRUMENTATION WHICH WILL BE USED TO EVALUATE SUPERCONDUCTING MAGNET PERFORMANCE IN THE MAGNET TEST LABORATORY.
WBS Elements	Description
1.2.4.2	MTL EQUIPMENT AND TOOLING
Accomplishments	<ul style="list-style-type: none">• REV. 2 ISOLATION AMPLIFIER BOARD RECEIVED.• ROTATING COIL RETURNED TO BNL FOR NEW WARM FINGER INSTALLATION.• BEAM ABORT PERMANENT MAGNET RECEIVED FROM SLAC.• NMR AND HALL PROBES RECEIVED FOR VERTICAL FIELD ANGLE SENSOR.• DYNAPOWER 8,000 AMP SUPPLY QUALIFICATION TEST SUCCESSFUL.
Issues and Concerns	<ul style="list-style-type: none">• INSUFFICIENT OF LHe REFRIGERATOR IN MTL CONFLICTS WITH MTL CONSTRUCTION SCHEDULE.• FUNDING FOR REFRIGERATION BUILDING NOT YET IDENTIFIED
Corrective Action:	<ul style="list-style-type: none">• NEGOTIATION ONGOING WITH KOCH FOR JOINT OCCUPANCY OF MTL DURING CONSTRUCTION.• PROCESS REQUEST FOR ADDITIONAL FUNDING.
Condition:	Green
POC:	Mark Coles
	DATE: June 23, 1991
	SIGNATURE <i>/S/</i>



**CONVENTIONAL CONSTRUCTION DIVISION
Magnet Test Lab (MTL)**

Goal	Support MSD with a BOD of 4/1/92 and a PBOD of 1/1/92.
WBS Elements	Description
2.4.2.1	Magnet Test Lab (MTL)
Accomplishments	Title II design, 60% documents completed for review, 90% Title II submitted 7/18/91 for review
	Initiated accelerated schedule by letter, steel package breakout in documents initiated.
	Title II - 100% steel package to procurement
Issues and Concerns	<p>Costs: Baseline Cost Estimate: \$ 4.6M (MTL only) EAC: \$ 4.5M (MTL only)</p> <p>Schedule - Construction - Construction: PBOD 4/1/92, BOD 7/10/92</p>
Corrective Action:	Funding for technical systems elements, Refrigeration Area, Compressor Building CCP approved action for additional technical and conventional funds, awaits PMO estimatings approval prior to issuing to Project Manager
Condition:	RED (Schedule)
POC:	Craig N. Trimble DATE: 15 July 1991 SIGNATURE <u>/S/Jon R. Ives</u>

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**CONVENTIONAL CONSTRUCTION DIVISION
Magnet Development Lab (MDL)**

Goal	Support MSD with BOD of 7/1/91 and a PBOD of 4/1/91.
WBS Elements	Description
2.4.2.2	Magnet Development Lab (MDL)
Accomplishments	Exterior skin and interior finish proceeding. Interior CMU walls and studs for second floor drywall under construction Beneficial occupancy: High Bay August 15, 1991; Offices September 15, 1991.
	Costs:
	Baseline Cost Estimate: \$9.0M EAC: \$9.8M
Issues and Concerns	Permanent electrical power (Hill County) Fire pumps on-line schedule. Final negotiations on large modification 13.
Corrective Action:	DOE approval required for 25KV line from Hill County and they are tracking.
Condition:	RED (10% Cost overrun)
POC:	Craig N. Trimble DATE: 15 July 1991 SIGNATURE <u>/S/ Jon R. Ives</u>

CONVENTIONAL CONSTRUCTION DIVISION

DIVISION PROJECT STATUS REPORT				
DESIGN <input checked="" type="checkbox"/>	PRODUCTION <input type="checkbox"/>			
CONSTRUCTION <input checked="" type="checkbox"/>	RESEARCH & DEVELOPMENT <input type="checkbox"/>			PART I
1. IDENTIFIERS:				
1a. PROJECT TITLE/NUMBER SUPERCONDUCTING SUPER COLLIDER LABORATORY	1b. REPORTING PERIOD June 1991			
1c. MANAGING DIVISION Conventional Construction	1f. PERFORMING ORGANIZATION(S) CCD Division Office Program Management Department Requirements Planning Department Engineering & Design Department Construction Department			
1d. DIVISION/OFFICE CONTACT Robert K. Tener				
1e. DIVISION MANAGER Jon R. Ives				
2 DIVISION MANAGER'S PERSONAL ASSESSMENT:				
2a. Summary Status				
GROUP	TECHNICAL	COST	SCHEDULE	OVERALL
2.1.2 thru				
2.1.5 Injector	Green	Green	Yellow	Green
2.1.6 Collider	Green	Green	Yellow	Green
2.2 Experimental Halls	Green	Green	Green	Green
2.3 Infrastructure	Green	Green	Green	Green
2.4 Campus	Green	Green	Yellow	Green
OVERALL DIVISION ASSESSMENT				
	Green	Green	Yellow	Green
PREVIOUS DIVISION ASSESSMENT				
	Green	Green	Yellow	Green

**CONVENTIONAL CONSTRUCTION DIVISION
Conventional Facilities**

Goal

WBS Elements

2.0

Accomplishments

Description

Conventional Facilities

- 2.1 ASST construction on schedule and structural steel has been ordered. Koch underslab items design completed and contractor is preparing cost proposal. Exploratory shaft bid date extended to June 91. N15 magnet drop-shaft 100% design received, will be bid on July 8, 1991. Basic Tunnel N15 to N20 Title I design submitted and is under review. Geotechnical exploration "Deep" program began June 15, 1991.
- 2.2 IR4 Underground Hall and Shaft - completed Pre-Title I studies on seepage and wall lining options. Have provisional agreement on wall finish options for ongoing design.
- 2.3 Completed 60% Title II for Phase II of N15 Sewage Treatment Plant. Completed Permit Application for Cooling Tower Blowdown Pond. Completed Title I for N15 Infrastructure. Completed Draft ECP for ASST, MTL, N15 Shafts and N15 to N20 Tunnel. Started Title II for Arrowhead Road. Authorized HCEC to furnish electric service to N15. Located site for West Campus Sewage Treatment Plant. Started traffic studies on access routes to verify lane requirements. Completed ECP for the Exploratory Shaft. Completed report on Construction Access to N&S Sites.
- 2.4 Magnet Development Lab (MDL) construction continued. Continued Title II designs for the Magnet Test Lab (MTL) and its Compressor Building, based on completed Value Engineering effort.
- 2.5 PB/MK project management admin. activities continued to progress well. SSCL initiated review of PB/MK Project Procedures manuals.

Issues and Concerns

- 1. Development of integrated cost and schedule systems.
- 2. Final resolution of FY92 CCD budget.

Corrective Action:

- 1. PMO activities underway to develop integrated cost and schedule systems.
- 2. Continued liaison with PMO on FY92 CCD budget.

Condition:

Green

POC:

R.K. Tener

DATE: 12 June 1991

SIGNATURE

/S/Jon R. Ives

**CONVENTIONAL CONSTRUCTION DIVISION
Test Beams**

Goal	Support installation of Test Beam technical systems by timely completion of conventional facilities.		
WBS Elements	Description		
2.1.7	Test Beams Conventional Construction		
Accomplishments	Continued working group general planning.		
	Supported schedule revision to include test beam tunnel in MEB design and construction package.		
	Costs:		
	Baseline Cost Estimate: \$19.2M	EAC: \$19.2M	
Issues and Concerns	None.		
Corrective Action:	None.		
Condition:	Green		
POC:	Jack H. Clifton/Deryl Earsom	DATE: 15 July 1991	SIGNATURE <u>/S/Jon R. Ives</u>

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**CONVENTIONAL CONSTRUCTION DIVISION
Major Project Milestones**

WBS No.	Milestone	Milestone Level	Baseline Schedule	Current Projection	Condition Appraisal
2.0	Start Civil Construction	1	March 91	March 91 (A)	Green
2.4.2.2	Magnet Development Lab BOD	2	April 91	September 91	Red
2.4.2.1	Magnet Test Lab BOD	2	March 92	June 92	Red
2.1.2	Linac Construction Start	2	August 91	February 92	Red
2.1.6.25	ASST Construction Start	2	April 91	May 91 (A)	Green
2.1.6.25	ASST BOD	2	September 91	October 91	Green
2.1.6.2	N15 Magnet Shaft Construction Start	2	March 91	September 91	Red
2.1.6.2	N15 - N20 Construction Basic Tunnel Start	2	July 91	January 92	Red
2.1.6.2	N20 - N30 Construction Basic Tunnel Start		April 92 (Revised Baseline)	April 92	Green
2.1.6.2	N30 - N45 Construction Basic Tunnel Start		April 92 (Revised Baseline)	April 92	Green
2.1.3	LEB Construction Start	2	April 92	June 92	Red
2.1.4	MEB Construction Start	2	July 92	January 93	Red
2.3.2	Infrastructure, Campus Construction Start*	2	August 92	October 91	Green
2.3.2	Infrastructure, Injector Construction Start*	2	October 92	December 91	Yellow
2.2.2	Experimental Halls Construction Start	1	June 93	April 93	Green

**CONVENTIONAL CONSTRUCTION DIVISION
FY91 Deliverables**

WBS No.	Milestone	Baseline Schedule	Current Projection	Condition Appraisal
2.4.2	MDL Completed (BOD - High Bay)	April 91	August 91	Red
2.1.6	ASST Construction Start	April 91	May 91 (A)	Green
2.1.6	ASST BOD	September 91	October 91	Green
2.3.3	Infrastructure and Utilities Construction Start	April 91	March 91 (A)	Green
2.4.2	MTL Construction Start	June 91	August 91	Yellow
2.1.2	Linac Facility Construction Start	August 91	February 92	Red

**CONVENTIONAL CONSTRUCTION DIVISION
FY91 Deliverables**

MDL Completed (BOD - High Bay) - Delays in steel fabrication and delivery, underslab water conditions which required mitigation prior to foundation placement, weather days and user changes to office configurations forced by personnel moving to the Central Facility have caused this slip in the scheduled BOD.

MTL Construction Start - Start is delayed but early steel package strategy will make-up time to hit the current projected 15 June BOD.

Linac construction start is projected 6 month later than baseline schedule because of a slip in initiation of A-E design and increased duration. Refined construction schedule projects net slip of less than one month in BOD.

Exploratory Shaft - Ground broken 7/8/91. Under construction.

N15 Mag Tunnel and Utility and Personnel Shafts - Design and award.

**CONVENTIONAL CONSTRUCTION DIVISION
FY92 Deliverables**

WBS No.	Milestone	Baseline Schedule	Current Projection	Condition Appraisal
2.1.6	Collider-First Sector Construction Start	October 91	January 92	Red*
2.3.3	N15 Roads Completed	October 91	February 92	Red
2.4.2	MTL Completed (BOD)	March 92	June 92	Red
2.1.3	LEB Facility Construction Start	April 92	June 92	Red
2.1.4	MEB Facility Construction Start	July 92	January 93	Red

** Collider construction sequencing has been rescheduled. Approval and acceptance by PMO will eliminate Red condition.*

**CONVENTIONAL CONSTRUCTION DIVISION
FY92 Deliverables**

N15 roads to be completed by segments from August 91 to February 92 as required by facility.

MTL Completion (BOD) - CCB action is in process to revise schedule. Appears June 1992 BOD can meet milestone of 1 September 1992 magnet cool down.

Although LEB construction start is projected 2 month later than baseline schedule because of an increase in required A-E design time, refined construction schedule projects early early turnover of completed facilities.

Although MEB construction start is projected 6 months later than the baseline schedule, the BOD's are projected to complete earlier.

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INFRASTRUCTURE

**CONVENTIONAL CONSTRUCTION DIVISION
Collider Infrastructure Other than N15 (E1)**

Goal	Provide necessary infrastructure to support BOD of each completed facility		
WBS Elements	Description		
2.3.2	Infrastructure - Primary		
2.3.3	Infrastructure - Secondary		
Accomplishments	Completed Report on Construction Access to the N&S Sites. Contains recommendations on access routes during construction.		
	Started traffic studies on Access Routes to confirm recommended routes.		
	Costs:		
	Baseline Cost Estimate: \$20.1M	EAC: \$20.1M	
Issues and Concerns	None.		
Corrective Action:	None.		
Condition:	Green		
POC:	Richard Wiebe	DATE: 15 July 1991	SIGNATURE <u>/S/Jon R. Ives</u>

**CONVENTIONAL CONSTRUCTION DIVISION
West Campus (Injector) Infrastructure**

Goal	Provide necessary infrastructure to support BOD of each completed facility.
WBS Elements	Description
2.3.2	Infrastructure - Primary
2.3.3	Infrastructure - Secondary
Accomplishments	Two Working Groups are continuing to meet to determine Technical Requirements for design of Infrastructure.
	Started traffic studies on access routes to confirm lane requirements.
	Recommend site for Sewage Treatment Plant to TNRLC.
	Completed the Environmental Compliance Plan for the Exploratory Shaft.
	Issued directive to meet accelerated office complex schedule.
	Costs:
	Baseline Cost Estimate: \$76.7M EAC: \$76.7M
Issues and Concerns	Initial analysis of road costs indicates that proposed Master Plan system exceeds baseline road costs.
Corrective Action:	Investigating alternate road system to bring road costs within baseline.
Condition:	Green
POC:	Richard Wiebe
	DATE: 15 July 1991
	SIGNATURE <u>/S/Jon R. Ives</u>

**CONVENTIONAL CONSTRUCTION DIVISION
West Campus Complex (WCC)**

Goal Support PMO with BOD (shell) 1/93, phased fit-up (move-in through 5/93).

WBS Elements **Description**

2.4.1.1 Office Building 1

2.4.1.2 Office Building 2

2.4.1.3 Office Building 3

2.4.1.4 Central Services

2.4.1.5 Auditorium

2.4.1.7 Emergency Services (West)

2.2.1.3.1 Admin/Lab (IR 1/2) - Office only (35,100 sq ft)

Accomplishments Design Requirements transmitted and kickoff for familiarization of requirements 6/24/91.
Title I design only approved by NTP.

Costs:

Baseline Cost Estimate: \$31,463M (Offices & Central Services)
\$ 1,589M (Auditorium) (No escalation)
\$ 390K (Emergency Services) (No escalation)

Issues and Concerns

Corrective Action: CCP (schedule)

Condition: GREEN

POC: Craig N. Trimble

DATE: 15 July 1991

SIGNATURE

/S/Don R. Ives

**CONVENTIONAL CONSTRUCTION DIVISION
Site Development (Master Plan)**

Goal Develop, by May 29, 1991, a fully coordinated Site Development Plan to guide project planning and design

WBS Elements **Description**
2.5 Site Development Plan (Master Plan)

Accomplishments Received comments on June 17.

Costs:

Baseline Cost Estimate: \$0.9M EAC: \$0.9M

Issues and Concerns Incorporating review comments delayed final production.

Corrective Action: Final Site Development Plan to print late July.

Condition: Yellow

POC: Robert W. Sims **DATE:** 15 July 1991 **SIGNATURE** /S/Jon R. Ives

DIRECTORATE DIVISION

DIVISION PROJECT STATUS REPORT				
DESIGN <input type="checkbox"/>			PRODUCTION <input type="checkbox"/>	
CONSTRUCTION <input type="checkbox"/>			RESEARCH & DEVELOPMENT <input type="checkbox"/>	PART I
1. IDENTIFIERS:				
1a. PROJECT TITLE/NUMBER SUPERCONDUCTING SUPER COLLIDER LABORATORY	1b. REPORTING PERIOD June 1, 1991 through June 30, 1991			
1c. MANAGING DIVISION Directorate	1f. PERFORMING ORGANIZATION(S) Director's Office External Affairs Legal Counsel User's Office Environment, Safety & Health Planning International Coordination Education			
1d. DIVISION/OFFICE CONTACT Neil Baggett				
1e. DIVISION MANAGER Raphael Kasper				
2 DIVISION MANAGER'S PERSONAL ASSESSMENT:				
2a. Summary Status				
GROUP	TECHNICAL	COST	SCHEDULE	OVERALL
Director's Office	G	G	G	G
External Affairs	G	G	G	G
Legal Counsel	G	G	G	G
User's Office	G	G	G	G
Environment, Safety & Health	G	G	G	G
Planning	G	G	G	G
International Education	G	G	G	G
Education	G	G	G	G
OVERALL DIVISION ASSESSMENT	G	G	G	G
PREVIOUS DIVISION ASSESSMENT	G	G	G	G

Goal To oversee and direct Laboratory activities

WBS Elements	Description	WBS Elements	Description
4.5.1	Director's Office	4.5.6	ES&H
4.5.2	External Affairs	4.5.7	Planning
4.5.3	Legal Counsel	4.5.8	International Coordination
4.5.5	Users Office	4.5.9	Education Office

Accomplishments Held meeting of the SSC Board of Overseers; Second Detector workshop was held; Expressions of Interest were presented in a public session; the Mitigation Action Plan was signed; the Draft Site Development Plan was reviewed; presentations of the Master Plan were made; Infrastructure meetings continued with TNRLC; co-hosted a national science education conference; 39 Student Interns began work.

Issues and Concerns None

Corrective Action: None

DIVISION PROJECT STATUS REPORT PART I
2b. DIVISION MANAGER'S NARRATIVE HIGHLIGHTS

REPORTING DIVISION:
ACCOMPLISHMENTS

DIRECTORATE

4.5.1 Director's Office

A meeting of the SSC Board of Overseers was held. Three members retired (Trilling, Nauenberg and Wheeler) and three new members came on board (Forsen, Reeder and Wiik).

A workshop was held at the Laboratory on June 11-13 on the subject of the second major detector. A new collaboration emerged, including scientists from L*, EMPACT/TEXAS and other institutions, and prepared an "Expression of Interest to Construct a Major SSC Detector" by the end of June.

Five Expressions of Interest, which had been received during the year since the first EOIs of May, 1990, were presented in a public session at the Laboratory on June 14. These included one EOI aimed at a full acceptance detector, two addressing high p_T physics, one on atomic physics at the Linac, and one on physics with polarized protons.

4.5.6 Environment, Safety & Health

Jeff Bull and Larry Coulson presented a paper at the DOE Workshop on Personnel Dosimetry.

The Mitigation Action Plan was signed by Roy Schwitters. One of its followup documents, the Socioeconomic Monitoring and Mitigation Plan, was also signed.

Debra Fontenot attended the NFPA Fire Alarm Seminar and Richie Marple attended the Texas Environmental Regulations Conference.

4.5.7 Planning

The Draft Site Development Plan prepared by PB/MK/CRSS was reviewed by staff from the SSCL, DOE and TNRLC. In response, approximately 40 pages of typed comments have been transmitted to CRSS. Concerns stated by Steve Howerton, City Manager of Ennis and Congressman Barton prompted a review by the planning group of the scope of the East Complex as described in the Plan. CRSS will work throughout July to address issues raised during the review process. A second draft is expected in July.

Presentations on the Master plan were made to TNRLC, Ellis County Planning Commission, and to friends of the laboratory. A panel discussion on the economic impact of the SSC was held in Fort Worth. Infrastructure Meetings continued with TNRLC.

The Planning Group participated in the development of the Detector Project Management Plan. A draft is expected in July.

4.5.8 International Coordination

Dr. Eduardo Duek joined SSCL with responsibilities in the area of International Coordination. Formerly at Brookhaven National Laboratory, Dr. Duek will provide support for existing negotiations and ongoing agreements, as well as expand the present foreign support of the SSC, for both construction and experiments.

A survey of the present status of Laboratory negotiations with foreign contributors was presented to the Board of Overseers, during their meeting at the SSCL.

DIVISION PROJECT STATUS REPORT PART I
2b. DIVISION MANAGER'S NARRATIVE HIGHLIGHTS

REPORTING DIVISION: DIRECTORATE
ACCOMPLISHMENTS

4.5.8 International Coordination, continued...

The SSC was included in the agenda during the meeting of the President's Science Advisor, Dr. Allan Bromley, and the Brazilian Science Minister Dr. Jose Goldemberg, member of a Brazilian Presidential delegation that visited Washington D.C. Similar efforts are being made to include the SSC in discussion at the President's meetings in July, with the President of (South) Korea and the Prime Minister of Japan.

Initiatives are underway to explore the interest for participation - and technical capabilities for contribution - of countries not previously considered.

4.5.9 Education

Four middle school educators joined the lab in mid-June to begin working on development of a middle school component to the Adopt-A-Magnet Program, and a software development team is now developing interactive software to accompany the middle school modules. In addition, a Spanish translation of the elementary modules began this month.

At the request of the Texas Education Agency, the SSC co-hosted a national science education conference June 27-28 for key leaders in science education nationwide. The University of Texas at Arlington hosted the conference the first day, on June 27th. The SSC hosted the final day of the conference. At the conference, an announcement was made that for the first time, a multi-state collaboration establishing criteria for science curricula and science textbooks will take place.

Thirty-nine student interns joined the SSCL this month. Orientation day activities included personnel processing, a tour of the laboratory, an "Overview of the SSC" presentation, and lunch with their mentors. Students are now attending weekly technical seminars and special seminars that have been established by some of the hiring divisions.

SSC education staff met with representatives from "The Children's Workshop" and Threshold Productions, to discuss possible videotape and interactive software development collaborations. The latter organization has indicated that Phillips of the Netherlands, will be announcing a new laser disk product line this winter and has expressed a strong interest in focusing upon the Adopt-A-Magnet program, as an educational/public relations mechanism for this new line. The collaboration could result in Phillips funding the development of multiple videotapes, laser disks, and possibly even a sophisticated interactive software program.

SSC education staff met with Dr. Beverly Mitchell, Director, Dallas Urban League. Meeting topics included increasing minority educator and student participation in SSC educational programs.

SSC education staff participated in the "New Directions in Education" conference held at the Texas A&M University this month.

SSC education staff travelled to Fermilab and Argonne National Laboratories and the DOE sponsored Science and Mathematics Academy in Chicago. At each site, extended discussions were held with education staff concerning programs and management.

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QUALITY ASSURANCE

Goal Coordinate the overall SSCL Quality Assurance Program to ensure that quality goals and objectives are met. Provide a plan so that the application of QA requirements may be tailored to the needs of the various activities carried out in each Division.

WBS Elements **Description**

3.1 Project Management Office - Quality Assurance

Objectives Laboratory Wide QA:

- Coordinate and approve the SSC Laboratory Quality Assurance Program Plan
- Quality Assurance Overview/Introduction Training
- Schedule and initiate Quality Audits

Divisional QA:

- Quality Implementation Plan (QIP) for each Division
- Supplier/Subcontractor Audits or Surveillances
- Supplier/Subcontractor Source Inspections

Accomplishments

Laboratory Wide QA:

- SSCL QA Program Plan completed and Approved by SSCPO
- Quality Assurance Training Plan draft completed and in review
- Provided introductory QA training to 150 new employees.
- Presented four all-employee introductory QA training sessions.
- Initiated internal quality audits - Completed audit of Organization & QA Program .
- Hired one permanent and two contract employees.
- Submitted FY 92-99 budget estimate for QA office.

Divisional QA:

- Six of seven Divisions have approved QIPs. One Division has QIP in final review.
- Thirty seven Supplier/Subcontractor audits completed by MSD and ASD.
- Twenty seven Source inspections/surveillances completed by MSD and ASD.

ENVIRONMENT, SAFETY & HEALTH (ES&H)

**DIRECTORATE DIVISION
Environment, Safety & Health**

WBS Elements
4.5.6

Description
Environment, Safety & Health

Accomplishments

- The Director approved the Mitigation Action Plan called for by the Record of Decision for the Supplemental Environmental Impact Statement. This plan identifies those responsible for the mitigations and the additional plans necessary for carrying out the mitigations. The annual Site Environmental Report will summarize the related environmental activities performed during the past year and planned for the coming year. The Mitigation Action Plan was signed by Roy Schwitters. One of its followup documents, the Socioeconomic Monitoring and Mitigation Plan, was also signed.
- A meeting was held with emergency preparedness officials in Ellis County to discuss emergency response at the new Central Facility and on the final site. Representatives of the Fire and Police Departments in Waxahachie, Ennis, and Midlothian attended, as well as the Ellis County Sheriff. The county has response organizations which work together very well to provide mutual assistance.
- A chemical inventory of the SSCL was completed.
- On May 14, 1991, the shipping and receiving department opened a leaking case containing 13 chemicals. The chemicals were repacked into DOT drums and with the help of a contract firm--EmTech--taken care of without additional incident.
- Hazardous waste awareness training was given to all employees.
- Lead sheet shielding was installed to absorb x-rays at the RF and Ion Source Laboratories.
- Training was provided via Tele-Conference network to SSCL employees permanently assigned to Fermilab.

EDUCATION

**DIRECTORATE DIVISION
Education**

Goal Stimulate interest and promote understanding of science and technology.

WBS Elements
4.5.9 **Description**
Education

Accomplishments

Adopt-a-Magnet

- The Elementary Adopt-a-Magnet Program was expanded to include Pre-Kindergarten and revisions were begun for grades K-5 based on evaluative feedback from the first pilot.
- Spanish translation of the Elementary Adopt-a-Magnet Program began.
- Funding was received to expand the Adopt-a-Magnet Program to the middle level grades (6-9). As a result, four teachers have been hired for the summer to serve on the writing team. The team has begun development of the Middle Level Adopt-a-Magnet Program.
- Interactive software development was begun to accompany the Middle Level Adopt-a-Magnet Program.
- Adopt-a-Magnet workshops were conducted for teachers. Included was a workshop at the Region 10 Educational Service Center.

Meetings/Workshops

- Several meetings were held to explore the possibilities of cooperative ventures to utilize video media (Children's Television Workshop, Threshold Communications, Voyage of the Mimi).
- The director of the Dallas Urban League met with staff concerning increasing minority educator and student participation in SSC educational programs.
- An SSC technology workshop was conducted for a west Texas community college and technical institute faculty.
- Staff presented an SSC Technology Live Teleconference from Houston.
- Staff participated in the Texas Science Summit at NASA Houston.
- A workshop about the SSC was conducted in Mesquite for the general public.
- SSC staff met with metroplex science supervisors and issued an invitation to host their September meeting.
- SSC staff met with the TNRLC Education Advisory Committee and have worked with the committee in development of recommendations for SSC education.
- SSC staff met with the director and founder of the O'Donnell Foundation. Education staff visited with teachers in schools in DeSoto and Milford, Texas.
- A presentation about SSC education was made at New Directions in Education Conference.
- The SSC co-hosted the Texas Education Agency's National Science Conference announcing cooperation between Texas and California in science curriculum and textbook criteria specification for a new science program. Fifteen states were in attendance.

Other Accomplishments

- Funding was received to send minority SSC speakers to eight HBCUs.
- Five students were identified to participate in a two-week environmental study sponsored by Earthwatch.
- A trial program sponsoring eight minority high school students for summer employment as technicians in the Magnet Division and possible part-time school year employment was begun.
- Thirty-nine student interns were selected from nearly 400 applications. All thirty-nine began the ten-week internship as scheduled.
- A SSC-sponsored team from Lubbock H.S. competed in and won the first National Science Bowl in Washington, D.C.
- An SSC staff member was elected Executive Secretary for the Science Teachers Association of Texas (STAT) and attended the STAT board meeting in College Station, Texas.
- An SSC staff member was appointed General Chair for the National Science Teachers Association western regional convention for 1992. The SSC will play a major role in this conference. Arrangements and Program coordinators were appointed.

Issues and Concerns

Adopt-a-Magnet

- Interest in the Adopt-a-Magnet Program has increased significantly, yet evaluation has only been done internally and with a limited, local population. There is a need for inclusion of more diverse demographics and geographics in pilot testing.

Corrective Action

Adopt-a-Magnet

- In June, a proposal was developed to accelerate and expand the Adopt-a-Magnet Program into fifteen states through training of state level master teachers accompanied with external evaluation to determine the effects of the program on students and teachers and whether the program is flexible enough to cross geographic and demographic boundaries.

PHYSICS RESEARCH DIVISION

DIVISION PROJECT STATUS REPORT

DESIGN
 CONSTRUCTION

PRODUCTION
 RESEARCH & DEVELOPMENT

PART I

1. IDENTIFIERS:

1a. PROJECT TITLE/NUMBER DE-AC02-89ER40486
 SUPERCONDUCTING SUPER COLLIDER LABORATORY

1b. REPORTING PERIOD
 June 1991

1c. MANAGING DIVISION

 Physics Research Division

1f. PERFORMING ORGANIZATION(S)

SSC Library Services
 Experimental Facilities Support
 Experimental Systems-Detector R&D
 Experimental Systems-Detectors
 Experimental Systems-Detector Computing
 SDC Collaboration--LBL
 L* Collaboration--MIT

1d. DIVISION/OFFICE CONTACT

 Newton Norman ext. 6035

1e. DIVISION MANAGER

 Fred Gilman ext. 6113

2 DIVISION MANAGER'S PERSONAL ASSESSMENT:

2a. Summary Status

GROUP	TECHNICAL	COST	SCHEDULE	OVERALL
SSC Library	Green	Green	Green	Green
Experimental Facilities Support	Green	Green	Yellow	Green
Experimental Systems-Detector R&D	Green	Yellow	Green	Green
Experimental Systems-Detectors	Green	Green	Green	Green
Experimental Systems-Detector Computing	Green	Green	Green	Green
SDC Collaboration--LBL	Green	Green	Green	Green
Second Detector	Red	Red	Red	Red
<i>OVERALL DIVISION ASSESSMENT</i>	Green	Green	Green	Green
<i>PREVIOUS DIVISION ASSESSMENT</i>	Green	Green	Green	Green

**PHYSICS RESEARCH DIVISION
Library and Information Services**

- Goal**
- Develop distributed information access and delivery system to avoid costly duplication of resources in remote locations
 - Develop efficient and cost-effective methods for complying with DOE contract requirements concerning serials expenditures.

WBS Elements
4.6.1

Description
Library and Information Services

Accomplishments

During the month of June the Library provided service to Lab employees; began to test the networking of library applications with the Logcraft vendor; provided training on the IHS standards and specifications collection in the CD-Rom format; ordered and processed 137 new titles and prepared approximately 625 periodical volumes to be sent to Empire bindery.

Implementation of an inventory project began this month. An inventory team made up of 2.5 workers began inventoring the Library's holdings, to date 1,400 of 4,000 records have been completed.

Two new hires began employment during this reporting period, Connie Coleman as the High Energy Physics Documents Specialist and Susan Edwards as the Technical Data Cataloger.

Four SSCL librarians attended the Special Libraries Association conference in San Antonio and two SSCL librarians attended the American Librarian Association conference in Atlanta. Recruiting for three library positions was conducted at both conferences.

The Library staff welcomed Paula Garrett, manager of Fermilab Library as she visited the Library and met with various Library staff.

Issues and Concerns None.
Corrective Action: None.
Condition: Green
POC: P. Kreitz

DATE: June 11, 1991 **SIGNATURE** /S/P. Kreitz

**PHYSICS RESEARCH DIVISION
Detector R&D**

Goal	To carry out detector R&D necessary to establish technologies for the initial SSC detectors.		
WBS Elements	Description		
5.1	Detector R&D		
Accomplishments	All detector R&D proposals that are to receive funding in FY1991 had final budgets by the end of May, with one exception (No. 200). All completed budgets were forwarded to the DOE by the end of May, so that funds could begin moving to the universities and national laboratories involved in the SSC Detector Subsystems R&D program. Consequently, the June financial plan for the SSCL had the last withdrawal of funds in FY1991 for distribution through the DOE Division of High Energy Physics. Full Memoranda of Understanding were completed with twelve more subsystem collaborations, and then signed by the contact person(s) of the respective collaboration and the Director of the SSCL. These were sent to Washington for concurrence by the DOE Office of the SSC and the DOE High Energy Physics Division, bringing the total of signed MOU's to 28 at the end of June. The last three Memoranda of Understanding were almost complete and should be available for final signatures at the beginning of July. Discussions continued with the proponents of SSC Detector Subsystems R&D Proposal No. 200 to arrive at a final budget.		
Issues and Concerns	None.		
Corrective Action:	None.		
Condition:	Green		
POC:	W. Chinowsky	DATE: June 11, 1991	SIGNATURE <u>/S/W. Chinowsky</u>

**PHYSICS RESEARCH DIVISION
Major Project Milestones**

WBS	Milestone	Baseline Schedule	Current Projection	Condition Appraisal
4.6.3	Test beam configuration and coordination defined	Feb 91	Apr, 91 ^A	Yellow (No impact on baseline expected)
4.6.3	Developed physics lab for detectors for test beam monitoring	Feb 91	Feb 15, 91 ^A	Green
4.6.3	Test beam optics defined.	Apr 91	Apr 91 ^A	Green
4.6.3	Resource requirements for LOI detectors defined.	Dec 90	Dec 15, 90 ^A	Green
4.6.3	Begin detector and support facilities design for proposal stage.	Feb 91	Feb 91 for SDC July 91 for Second Detector (earliest) ^A	Green Red (Could cause delays in proposal)
4.6.3	Develop detector assembly and installation schedules	Sep 91	Sep 91	Green
5.2	Letters of Intent submitted from the collaborations	Nov 90	Nov. 30, 1990 ^A	Green
5.2	PAC recommendations for large, general purpose detectors	Dec 90	Dec. 15, 1990 ^A	Green
5.2	Choose two large, general purpose detectors to be supported to full proposals	Jan 91	SDC Jan. 4, 1991 Second Detector December (earliest)	Green Red (Could cause delays in defining overall experimental program)
5.2	Begin conceptual design reports for large detectors	Feb 91	SDC Feb 1,91 Second Detector December (earliest)	Green Red (Same as above)
5.2	Prepare preliminary construction schedules and drawings for detector subsystems	Sep 91	Sep 91	Green
5.3	Acquire and install 500 MIPS of distributed, UNIX-based computing hardware for detector simulation	Mar 91	Mar 15, 91 ^A	Green
5.3	Begin detector physics simulation work at SSCL	Mar 91	Mar 15, 91 ^A	Green

^A Complete

**PHYSICS RESEARCH DIVISION
FY91/92 Deliverables/Milestones**

WBS	Milestone	Baseline Schedule	Current Projection	Condition Appraisal
4.6.3	Test beam configuration and coordination defined	Feb 91	Apr 91 ^A	Yellow (No impact on baseline expected)
	Developed physics lab for detectors for test beam monitoring	Feb 91	Feb 15, 91 ^A	Green
	Test beam optics defined.	Apr 91	Apr 91 ^A	Green
	Resource requirements for LOI detectors defined.	Dec 90	Dec 15, 90 ^A	Green
	Begin detector and support facilities design for proposal stage.	Feb 91	Feb 91 for SDC July 91 for Second Detector (earliest) ^A	Green Red (Could cause delays in proposal)
	Develop detector assembly and installation schedules	Sep 91	Sep 91	Green
	Start prototype detectors for test beams	Oct 91	Oct 91	Green
	Identify magnet alternatives for test beams	Oct 91	Oct 91	Green
	Establish compliance with ES&H design criteria	Oct 91	Oct 91	Green
	Have full operation of detector Technical Information Center	Oct 91	Oct 91	Green
	Test beam facility requirements set	Jan 92	Jan 92	Green
	Complete detector and facility design for proposal stage	Apr 92	Apr 92	Green

^A Complete

**PHYSICS RESEARCH DIVISION
FY91/92 Deliverables/Milestones**

WBS	Milestone	Baseline Schedule	Current Projection	Condition Appraisal
5.1	Develop wire alignment and tensioning devices for muon chambers	Apr 91	May 91 ^A Prototype chambers constructed and gas mixtures tested	Yellow
	Develop prototype VLSI test subcircuits for front end electronic subsystems	Jun 91	May 91 • New design of time to voltage converter chip • Strawtube tracker chip for level 1 trigger	Green
	Continue small test prototype calorimeter modules for beam and radiation damage tests	Sep 91	Sep 91 April 91 ^A • BNL Liquid Argon module in BNL beam. • Scintillator-plate module made for Fermilab test. May 91 • Liquid Argon module assembled at SSCL, beam test at BNL in June. ^A	Green

^A Complete

**PHYSICS RESEARCH DIVISION
FY91/92 Deliverables/Milestones**

Continue testing prototype straw tube, fiber and silicon tracking test devices	Sep 91	Sep 91 March 91 Successful test of photon yield with 4 meter scintillating fiber	Green
Start Large SSC calorimeter modules	Apr-Sep 92	Apr-Sep 92	Green
Start prototype SSC detector tracking devices	Jan-Sep 92	Jan-Sep 92	Green
Initiate procurement of tooling for prototype SSC detector construction	Sep 92	Sep 92	Green
Develop VLSI circuits for front end electronics with radiation hard design	Mar-Sep 92	Mar-Sep 92	Green

**PHYSICS RESEARCH DIVISION
FY91/92 Deliverables/Milestones**

WBS	Milestone	Baseline Schedule	Current Projection	Condition Appraisal
5.2	Letters of Intent submitted from the collaborations	Nov 90	Nov. 30, 1990 ^A	Green
	PAC recommendations for large, general purpose detectors	Dec 90	Dec. 15, 1990 ^A	Green
	Choose two large, general purpose detectors to be supported to full proposals	Jan 91	SDC Jan. 4, 1991 ^A Second Detector December (earliest)	Green Red (Could cause delays in defining overall experimental program)
	Begin conceptual design reports for large detectors	Feb 91	Feb 1, 91 for SDC Second Detector December (earliest)	Green Red (Same as above)
	Prepare preliminary construction schedules and drawings for detector subsystems	Sep 91	Sep 91	Green
	Complete conceptual design reports for large detectors which include: A. Establishment of detector hall rqmts. B. Establishment of facility rqmts.	Nov 91	Apr 92	Red (SDC proceeding; 2nd detector could cause delays in defining overall experimental program)
	Complete PAC reviews for large detectors and associated facilities	Feb 92	Jun 92	Red (Same as above)
	Start procurement of magnet and steel for large detectors	Mar 92	Jun 92	Red (Same as above)
	Complete the detailed technical evaluation and review of large detector proposals	Sep 92	Sep 92	Green

^A Complete

**PHYSICS RESEARCH DIVISION
FY91/92 Deliverables/Milestones**

WBS	Milestone	Baseline Schedule	Current Projection	Condition Appraisal
5.3	Acquire and install 500 MIPS of distributed, UNIX-based computing hardware for detector simulation	Mar 91	Mar 15, 91 ^A	Green - More than 1000 MIPS on schedule and within budget
	Begin detector physics simulation work at SSCL	Mar 91	Mar 15, 91 ^A	Green
	Acquire and install up to 4000 MIPS of distributed, UNIX-based computing hardware for detector simulation	Sep 92	Sep 92	Green
	Establish full physics simulation effort at SSCL	Sep 92	Sep 92	Green

^A Complete

EXPERIMENTAL FACILITIES SUPPORT

**PHYSICS RESEARCH DIVISION
Experimental Facilities Support**

Goal Develop firm specifications of detector support facilities for SSC detectors

WBS Elements Description
4.6.3 Experimental Facilities Support

Accomplishments A workshop for detector #2 was held at the SSCL on June 11-13. Various ideas for the second detector were presented, including presentations by a strong group based on a modification of the L* Letter of Intent. The design will try to meet cost objectives by descaling L*, including the elimination of the bucking coil from the superconducting solenoid magnet. The effects of stray fields will have to be considered. A great deal was learned from these initial meetings regarding facility requirements for this detector.

The group worked on evaluating the impact of the Expressions of Interest. Since these form a potential base for detectors on the East campus, they can give us some insight into a better definition of East Campus facility requirements.

Parameter definition for the two major detectors have now been delivered to CCD. This include major parameters for the detector halls, and a first rough pass at surface facility requirements. These parameters will be used for the conceptual design required prior to start of Title I.

A new test beam configuration was established that minimizes cost and maintains a high level of flexibility. The change was made necessary to match into changing positions of the MEB and HEB, and the need to establish schedule requirements for Project Management. The current, and we hope final, configuration for the test beams can more easily accommodate changes in injector locations.

DTASS is being prepared for start of document tracking for the SDC collaboration. This function will move from LBL to the SSC Lab by October.

A detailed specification has been written for utility requirements for the SDC detector. This was transmitted to CCD for input to cost studies for the detector hall and surface facilities.

Condition:

Green

POC:

R. Stefanski

DATE: June 11, 1991

SIGNATURE

/S/R. Stefanski

EXPERIMENTAL DETECTORS

**PHYSICS RESEARCH DIVISION
Experimental Detectors**

Goal Decide on initial experimental program and support the management, engineering, and design of SSC detectors.

WBS Elements
5.2 **Description**
Experimental Detectors

Accomplishments The Solenoidal Detector Collaboration continues to review technical progress in developing and specifying detector subsystems and on the engineering, systems integration, and coordination work that will lead to a proposal on April 1, 1992. Discussions between the Laboratory and the Collaboration on funds for this work for the remainder of FY1991 were finalized and a memorandum purchase order for a major part of this last pulse of funds for this fiscal year was sent out from the SSCL. Discussions also continued on setting up an interim SDC project management organization at the SSCL, with the orderly transfer of associated efforts presently based at LBL envisaged during the remainder of this fiscal year and FY1992. The Solenoidal Detector Collaboration held a meeting at the SCCL on June 20 - 22, 1991 with opening talks by Roy Schwitters, Director of the SSCL, and George Trilling, Spokesman of SDC. Intensive discussions within the Collaboration took place on reducing the potential cost of the detector. A draft of the SDC-specific R&D plan for FY1992 is nearly complete, and it will be submitted to the Laboratory at the beginning of July (before the July 8 - 12, 1991 meeting of the PAC).

Following the decision of the SSCL not to support L* to proceed to a proposal in May, there was much discussion in the high energy physics community on the Laboratory's invitation to all interested parties to consider forming a new international collaboration to design a second major detector. Meetings organized by possible proponents were held on the both the East and West Coasts, and about 170 people came to the Workshop on June 11 - 13, 1991 called by the SSC Laboratory. Following that meeting, a new collaboration formed and met for the first time on June 18th in Dallas. The cospokespersons are Barry Barish (Caltech) and Bill Willis (Columbia). The collaboration organized itself for the immediate task of writing an Expression of Interest to be submitted to the Laboratory by July 1st, so that it could be considered at the July meeting of the PAC.

On June 14th, there were public presentations of the Expressions of Interest received since last summer (an extension of EOI-001, called SPIN, plus EOI-016, EOI-017, EOI-018, and EOI-019). These were attended by a subset of the PAC membership, and will be taken up by the full committee in July.

Issues and Concerns None.

Corrective Action: None.

Condition: Green

POC: F. Gilman

DATE: June 11, 1991 **SIGNATURE** /S/E. Gilman

**PHYSICS RESEARCH DIVISION
Experimental Detectors**

Goal
WBS Elements
5.2
Accomplishments

Decide on initial experimental program and support the management, engineering, and design of SSC detectors.
Description

Experimental Detectors

(ORNL) Efforts were directed at updating the cost estimate for the Scintillating FiberOuter Tracker. The Magnet and Central Tracker Resource Requirements Report and the Interface Control Document were revised to reflect current designs. (PSL) - MUON The muon chamber system cost estimates were reviewed and updated. A draft of the Muon barrel toroid conceptual design was completed.

(PSL) - TRIGGER The overall structure of the trigger system has been developed. Simulation efforts are continuing to evaluate front-end electronics options.

(FNAL) Conceptual design efforts have continued on the superconducting solenoid. Construction methods for the inner and outer vacuum shells have been explored as well as options for the cold mass supports. Design and cost optimization work progressed on the scintillation tiles, the all-iron hadron plate lead EM calorimeter, and the calorimeter support system.

(ANL) The barrel and endcap calorimeter geometries were revised to reflect current cost/performance specs. Design options and finite element modeling of the barrel EM module is continuing. Plans are underway for evaluation in the FNAL test beam.

(WSTC) This month efforts focused on developing cost and schedule information for the barrel calorimeter, the end-cap calorimeter and the straw tube tracker.

UNIVERSITY OF MICHIGAN Work centered on triggering with super layers of straw tubes making use of application specific Integrated circuits. The effort includes chip fabrication and software simulation of the circuits as well as assembly of a cosmic ray test stand for system tests.

(LANL) Cost and Schedule activities associated with the silicon tracking system (R&D, design, construction, assembly and test) have been developed into an integrated program plan. The specific design issues under study are forward region structural interfaces, alignments, and power cabling concepts.

(KE) Efforts focused on developing an overall SDC construction schedule. Monthly assembly sequence drawings were started. Preliminary design and cost estimates of a calorimeter lowering frame were prepared.

LBL A preliminary layout of mechanical utilities was created. New configurations of cables and electronic crates were developed. Both electrical and mechanical integration groups assisted in the overall cost estimating and provided the final roll-up and associated analysis.

Martin Marietta is working with the LAC group to provide Cryostat and Module cost estimates. The Silicon Tracking effort produced revised costs and schedules. The Computing Systems work is exploring new database technologies. Prototype systems will be built to explore the new ideas.

Issues and Concerns
Corrective Action:
Condition:
POC:

None.

None.

Green

F. Gilman

DATE: June 11, 1991

SIGNATURE

/S/F. Gilman

EXPERIMENTAL COMPUTING

**PHYSICS RESEARCH DIVISION
Experimental Computing**

Goal Develop computing resources to support SSC experimental physics requirements for detector simulation and data analysis

WBS Elements Description
5.3 Experimental Computing

Accomplishments The Systems Development section has completed the implementation of the subsystems for the Physics Detector Simulation Facility. The subsystems include system management, network queueing, distributed processing, operator and user interfaces, workstation allocation as well as the data management system and the tape robot control software. These subsystems have been upgraded to Version 1.1., a new release which fixes some bugs and adds some new functionality.

Work is underway on the architecture for the next phase of the PDSF. Preliminary designs have been considered and sized. An evaluation of technology from the major vendors is being done. The system specification has been updated to the new architecture.

The PDSF will be reconfigured to more closely reflect the new architecture. System software design has started for the reconfiguration of the PDSF. The changes in the hardware configuration will require some new functions to be put into the system software. Identified changes include redundant database design, formal operator message display and response system, split robotic control functions and independent data management system across each "leg" of the PDSF. These changes are being designed using the STP case tool and will be presented later in the month.

Issues and Concerns None.

Corrective Action: None.

Condition: Green

POC: P. Leibold

DATE: June 11, 1991 **SIGNATURE** /S/P. Leibold

LABORATORY TECHNICAL SERVICES DIVISION

DIVISION PROJECT STATUS REPORT				
DESIGN	<input type="checkbox"/>	PRODUCTION	<input type="checkbox"/>	
CONSTRUCTION	<input type="checkbox"/>	RESEARCH & DEVELOPMENT	<input type="checkbox"/>	PART I
1. IDENTIFIERS: 4.4				
1a. PROJECT TITLE/NUMBER SUPERCONDUCTING SUPER COLLIDER LABORATORY	1b. REPORTING PERIOD June 1991			
1c. MANAGING DIVISION Laboratory Technical Services	1f.. PERFORMING ORGANIZATION(S) TX- Technical Publications TH- Technical Support Management TJ- Facilities Engineering Services TK- Materiel & Logistics Services TL- Fabrication Shops TM- General Computing TN- Project Design Support TP- Communications TQ- Computer Operations TR- Engineering Standards/Support TS- Metrology & Calibration Labs TT- Protective Services TU- Staff Services TW- Technology Transfer			
1d. DIVISION/OFFICE CONTACT Jerry Davis				
1e. DIVISION MANAGER E. Jack Story				
2 DIVISION MANAGER'S PERSONAL ASSESSMENT:				
2a. Summary Status				
GROUP	TECHNICAL	COST	SCHEDULE	OVERALL
OVERALL DIVISION ASSESSMENT	Green	Green	Green	Green
PREVIOUS DIVISION ASSESSMENT	Green	Green	Green	Green

**DIVISION PROJECT STATUS REPORT
PART I
2b. DIVISION MANAGER'S NARRATIVE HIGHLIGHTS**

**REPORTING DIVISION:
Laboratory Technical Services
QUARTERLY ACCOMPLISHMENTS**

WBS 4.4

- SSCL received beneficial occupancy of the first 150 offices and computing facilities for the Central Facility in Waxahachie.
- Facilities requirements for the final 150,000 sq. ft. of office space at the Central Facility were completed and submitted to TNRLC.
- MIS administrative application systems were transferred to the Administration FAMIS Group.
- A laboratory-wide document control system study was initiated.
- Requirements for Accelerator Systems Laboratories and Shops were completed for the Central Facility.
- E-1 Site office space in an acquired residence for ASST support was developed, and 6 office trailers scheduled and sited for ASST.

PROJECT MANAGEMENT DIVISION

DIVISION PROJECT STATUS REPORT				
DESIGN	<input type="checkbox"/>	PRODUCTION	<input type="checkbox"/>	PART I
CONSTRUCTION	<input type="checkbox"/>	RESEARCH & DEVELOPMENT	<input type="checkbox"/>	
1. IDENTIFIERS:				
1a. PROJECT TITLE/NUMBER SUPERCONDUCTING SUPER COLLIDER LABORATORY	1b. REPORTING PERIOD June 1991			
1c. MANAGING DIVISION Project Management Office (PMO)	1f. PERFORMING ORGANIZATION(S) 3.1.1 Project Management Office 3.1.2 Cost Estimating 3.1.3 Project Cost/Schedule Reporting 3.1.4 Engineering Standards 3.1.5 Environmental Affairs 3.2 Systems Engineering			
1d. DIVISION/OFFICE CONTACT Project Management Office/Karen Clements				
1e. DIVISION MANAGER Paul Reardon				
2 DIVISION MANAGER'S PERSONAL ASSESSMENT:				
2a. Summary Status				
GROUP	TECHNICAL	COST	SCHEDULE	OVERALL
3.1.1 Project Management Office	Green	Red	Green	Green
3.1.2 & 3.1.3 Cost & Scheduling Dept	Green	Red	Red	Yellow
3.1.4 Engineering Standards	Green	Green	Green	Green
3.1.5 Environmental Affairs	Green	Red	Green	Green
3.2 Systems Engineering	Yellow	Green	Green	Green
<i>OVERALL DIVISION ASSESSMENT</i>	Green	Green	Green	Green
<i>PREVIOUS DIVISION ASSESSMENT</i>	Green	Green	Green	Green

PROJECT MANAGEMENT DIVISION

Yellow Conditions

Cost & Schedule - Divisional schedule development will not support mid-July 1991 Integrated Project Schedule completion. Finalization of WBS is approximately 10 weeks behind schedule.

Systems Engineering - Staffing shortfalls in Systems Safety is resulting in delays in input to designs. Additional staff has been approved and is being recruited.

**PROJECT MANAGEMENT DIVISION
Systems Engineering**

Goals	Establish Project Engineering Document Control System						
WBS Elements	Description						
3.2	Systems Engineering						
Accomplishments	<p>The drawing Quality Working Group was formed and has begun meetings.</p> <p>The Engineering Standards Group began a task to assist the CCD/CAD/Document Group in developing practices for divisional document control. This is part of the flowdown and implementation process.</p> <p>The Fire Protection Code IRC has been held. The Code is being updated to reflect the results of the IRC. Final signoff should be accomplished in early August.</p> <p>The following Document Change Control Practices have been received, resolved, updated and signed off and are now being implemented:</p> <table border="0" style="margin-left: 40px;"> <tr> <td>Engineering Release Package</td> <td>P40-000029</td> </tr> <tr> <td>Parts List Preparation</td> <td>P40-000030</td> </tr> <tr> <td>Drawing Review and Authentication</td> <td>P40-000032</td> </tr> </table> <p>A Pressure Vessel/Pressure Piping Policy Statement has been drafted for the General Manager. The Associated standard is being rewritten to reflect the content of the Policy Statement.</p> <p>Metric Orientation classes were presented to the SSCL the week of June 3, 1991.</p>	Engineering Release Package	P40-000029	Parts List Preparation	P40-000030	Drawing Review and Authentication	P40-000032
Engineering Release Package	P40-000029						
Parts List Preparation	P40-000030						
Drawing Review and Authentication	P40-000032						
Issues and Concerns	Difficulty in coming to closure on ASCE/EE/ME guidelines.						
Corrective Action:	Closure is being forced on the ASCE/EE/ME guidelines by scheduling a final IRC.						
Condition:	Green.						
POC:	John Nonte						
	DATE: June 16, 1991 SIGNATURE /S/John Nonte						

**PROJECT MANAGEMENT DIVISION
Systems Engineering**

Goals	To provide Systems Engineering support to Project Management.		
WBS Elements	Description		
3.2	Systems Engineering		
Accomplishments	The Configuration Management Plan was signed by the SSCL Management and sent to DOE. The Preliminary Hazard Analysis was signed and sent to DOE. Linac 3A specification has been signed. This is the first high level specification to be approved by the SSCL. Linac Facilities 3B specification is complete and signed.		
Issues and Concerns	None.		
Corrective Action:	None.		
Condition:	Green.		
POC:	John Nonte	DATE: June 16, 1991	SIGNATURE /S/John Nonte

**PROJECT MANAGEMENT
CCB Action Items**

CCB Date	Description	Impact		CCB Action	Comments	DOE Action
		Dollars	Sched			
(APR) 4/3/91	CCSR E12-000018 Injector Parameter Mod (HEB) Circumference Change	(\$292,000) Decrease		Approved	To DOE	Approved
	ECR E20-000037 Injector Parameter Mod (MEB)			Approved		
	CCSR E12-000017 - MEB Cost Change	\$826,000		Approved	To DOE	Approved
	ECR E20-000043 Low Energy Booster (LEB) Circumference Change			Approved		
	CCSR E12-000022 LEB Cost change	\$213,000		Approved	To DOE	Approved
4/29/91	CCSR M83-000017 Add Follower Industrial Demo to CDM			Approved	To DOE	*
	CCSR M83-000018 Add Follower Industrial Demo to CDM			Approved	To DOE	*
	CCSR M83-000019 Add Follower Insustrial Demo to CDM			Approved	ToDOE	*
(MAY) 5/10/91	ECR E20-000053 Central Facility			Approved		NA
	CCSR E12-000030 Central Facility Cost Change	(\$10,000K) Decrease		Approved	To DOE	Approved
5/22/91	CCSR E12-000035 Start SSC Civil Construction Milestone Definition Change			Approved	To DOE	Approved

* No action by DOE pending determination of Contingency dollars in out-years.

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ADMINISTRATION DIVISION

DIVISION PROJECT STATUS REPORT				
DESIGN <input type="checkbox"/>				PRODUCTION <input type="checkbox"/>
CONSTRUCTION <input type="checkbox"/>				RESEARCH & DEVELOPMENT <input type="checkbox"/> PART I
1. IDENTIFIERS:				
1a. PROJECT TITLE/NUMBER SUPERCONDUCTING SUPER COLLIDER LABORATORY	1b. REPORTING PERIOD June 1991			
1c. MANAGING DIVISION Administration	1f. PERFORMING ORGANIZATION(S) Personnel Procurement Finance Minority Affairs MIS Records Management			
1d. DIVISION/OFFICE CONTACT Carol Matteson				
1e. DIVISION MANAGER Robert L. Van Ness				
2 DIVISION MANAGER'S PERSONAL ASSESSMENT:				
2a. Summary Status				
GROUP	TECHNICAL	COST	SCHEDULE	OVERALL
<i>OVERALL DIVISION ASSESSMENT</i>	Green	Green	Green	Green
<i>PREVIOUS DIVISION ASSESSMENT</i>	Green	Green	Green	Green

**ADMINISTRATION DIVISION
Lab Administration & Support**

Goal To operate within budget while providing required service to Laboratory.

WBS Elements Description

4.3 Lab Administration & Support

Accomplishments Operating within budget.

Issues and Concerns None

Condition: Green

POC: R. L. Van Ness

Date: 15 July 91

SIGNATURE /s/ R. L. Van Ness

**ADMINISTRATION DIVISION
Finance Department**

Goal Develop, implement and maintain the Laboratory's Financial Reporting System in accordance with GAAP (Generally Accepted Accounting Principles) and DOE Orders.

WBS Elements **Description**

4.3.2 Finance

Accomplishments Worked with Project Management and DOE on finalizing the DOE Cost Performance Report Format.

Updated cost and funding projections through the end of FY91 and assisted Project Management in the final distribution of Laboratory budgets.

Completed analysis and adjusted the URA and EG&G labor fringe rates.

Continued effort on the design and implementation of the DOE Financial Information System (FIS).

Finalized interface procedures between the Finance Chart of Accounts system and the C/SCS reporting.

Assisted Ernst & Young auditors in their FY91 audit planning.

Began work with the Inspector General auditors.

Published the Finance Policies and Procedures Manual.

Completed transition to the new bank.

Completed transition to checks paid letter of credit.

Worked with top management to finalized revisions to the Signature Authority Policy.

Issues and Concerns None

Corrective Action: N/A

Condition: Green

POC: Wanda Mizutowicz

Date: 15 July 91

SIGNATURE /S/ Wanda J. Mizutowicz

**ADMINISTRATION DIVISION
Procurement Department**

Goal	Improve Procurement Quality and Timeliness.		
WBS Elements 4.3.3	Description Procurement		
Accomplishments	Increased requisition thru-put (awards) and reduced backlog (in-process). Selected credit card arrangements as option to existing small value order system. Added strong TQM and Planning capability to Procurement.		
Issues and Concerns	Implementation of credit card system will require out-of-the-box thinking by other cognizant administrative organizations.		
Corrective Action:	N/A		
Condition:	Green		
POC:	R. R. Russell	Date: 15 July 91	SIGNATURE <u>/S/ R. R. Russell</u>

**ADMINISTRATION DIVISION
Personnel Department**

Goal To fully support the Personnel Operations of the Laboratory.

WBS Elements Description
4.3.5 Personnel

Accomplishments We coordinated 218 interviews with hiring managers this month. One hundred fifty-five new employees joined the Laboratory for a total employee population of 1,349 as of 6/30/91.

The mapping-over of employees into the new SSCL Classification System took place this month. Extensive information sessions were held with supervisors and managers to acquaint them with the new system.

Performance Appraisal training was conducted for supervisors at both the Beckleymeade and Central Facility Site in preparation for Laboratory-wide performance appraisals.

The Recruiting and Staffing Section staff are working closely with the SSCL Education Programs on re-structuring the SSCL Co-op Program.

We are continuing our recruiting and Minority Outreach efforts with our attendance at the Black State Employees Association of Texas, Society of Women Engineers and IEEE Job Fair.

Issues and Concerns No major issues to discuss at this time.

Corrective Action: N/A

Condition: Green

POC: Douglas Kreitz

Date: 15 July 91

SIGNATURE /S/Douglas Kreitz

**ADMINISTRATION DIVISION
Minority Affairs Department**

Goal To ensure SSC Laboratory compliance with D.O.E., D.O.L. regulations, policies and procedures addressing equal opportunities in employment and procurement.

WBS Elements Description
4.3.7 Minority Affairs

Accomplishments The Director of Minority Affairs participated in the Office of Small and Disadvantaged Business Utilization (OSADBU) National Conference in Washington. The Director of Minority Affairs was guest speaker at the annual Leadership El Paso Alumni Retreat in El Paso. The Director of Minority Affairs participated in a "How to do business with the Super Collider" Seminar, here at the Lab, for the Dallas and Fort Worth Hispanic Chambers of Commerce. The Director of Minority Affairs was guest speaker at the Joint Conference "Access Meeting" in Riverside, CA. The Director of Minority Affairs participated in Vendor Seminars in Denver and Salt Lake City. The Manager of EEO/AA met with the Manager of Staffing and the College Recruiter to finalize the Fall Co-op schedule for recruiting. The Manager of EEO/AA, upon the arrival of Clevester Jones, GEM student, assisted him in familiarization with the Lab. He is assigned to the Accelerator Division. The Manager of EEO/AA received a letter from the Office of Federal Contract Compliance Programs (OFCCP) in reference to a finding of non-discrimination concerning the compliance review follow-up conducted by Ms. Shirley Thomas. The Manager of EEO/AA participated in the Society of Women Engineers (SWE) Conference which was held in San Diego, CA. Each year, the student chapters and professional chapters of SWE meet for a national conference. This conference is an exceptional opportunity for student and professional engineers to hear speakers, attend career and trade shows, participate in local area corporate tours, and network with potential employer representatives. Not all members are females and not all members are engineering majors. SWE is comprised of men and women who are dedicated to the advancement of women in engineering. As a national Laboratory, this too, is our primary reason for attendance at the conference. To ensure the SSC is contributing to the advancement of women in engineering and to offer career opportunities to those who are qualified. The SSC booth drew wide interest all week long at the job fair and exhibit center. In addition, Sandra Robinson, a mechanical engineer with the Magnets Division, gave an informative presentation of the SSC project to SWE. This is a well organized national event and is one of the few women in engineering oriented events held each year. The SSCL should continue to be involved in this very worthwhile organization.

Issues and Concerns N/A
Corrective Action: N/A
Condition: Green
POC: James Gonzales

Date: 15 July 91

SIGNATURE /S/James Gonzales

**ADMINISTRATION DIVISION
MIS Department**

Goal To establish an effective MIS Department within the Administration Division supporting the primary Administration functions of Personnel, Finance, Procurement, Minority Affairs and Records Management.

WBS Elements **Description**
4.3.9 MIS

Accomplishments Took administration responsibility for all Administration MIS systems effective 5/6/91.
Initial hires approved, continuing staffing process.

Compiled initial list of service requests from user organizations and are updating, prioritizing and working items from this list daily.

Issues and Concerns Backlog of requests for systems support and new systems development.

Corrective Action: Complete staffing of Department and address high priority action items.

Condition: Green

POC: Ray Harrison **Date:** 15 July 91 **SIGNATURE** /S/Ray Harrison

**ADMINISTRATION DIVISION
Records Management Department**

Goal To implement a Records Management Program that will comply with DOE, NARA and NQA-1 requirements for retaining records.

WBS Elements **Description**
4.3.10 Records Management

Accomplishments Completed final draft of the Records Management Policy which is ready to take to the Associate Directors for their review.

Continued design and programming of networked version of Central Tracking System using Powerhouse on the VAX.

Distributed the uniform subject codes to records coordinators for review and comments. This portion of the Central Tracking System must be completed and approved before the total package is ready for testing.

Issues and Concerns

None.

Corrective Action:

None.

Condition:

Green

POC:

Sarah Swindall

Date: 15 July 91

SIGNATURE /S/Sarah Swindall

