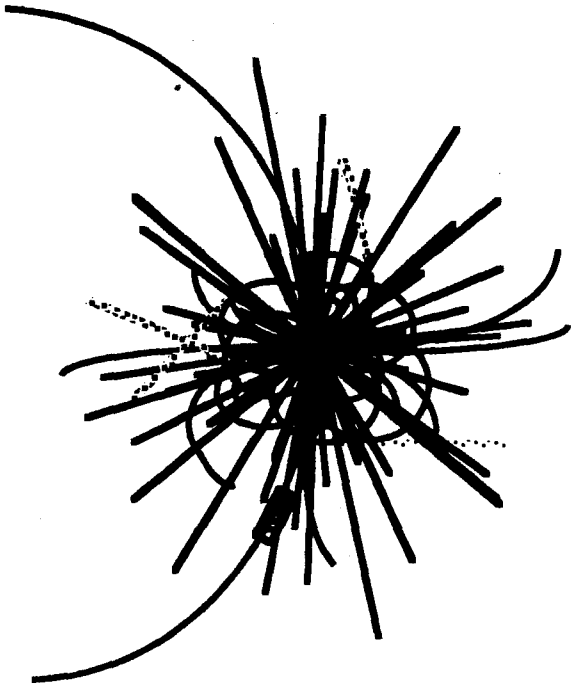
SSCL-328

Superconducting Super Collider Laboratory



SSC Project
Monthly Progress Report

December 1990

INTRODUCTION

and

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INTRODUCTION

The December 1990 Monthly Progress Report contains divisional status reports which include: Division Identifiers, Summary Status, Narrative Highlights, Significant Problems, Variance Analysis, Milestone Log, and Technical Parameters as they are being implemented.

The Cost Performance Report for December 1990 will include actuals only, due to the fact that in Fiscal Year 1991 there is no official cost/schedule baseline approved from DOE as of the date of this report.

Technical Performance Parameters have been generated by some of the Divisions and are being reviewed by the Technical Directors prior to inclusion in the Monthly Progress Report.

We are in the process of implementing electronic distribution of the Monthly Progress Reports. For all authorized SSCL personnel, distribution will be via a lock folder on the PMO server. All DOE recipients will receive a copy via QuickMail. The various other Laboratories and Universities that are currently receiving hard copy, will be sent a "MacIntosh" version via the VAX. All authorized personnel will be receiving instructions regarding retrieval of the report. No printed hard copies will be mailed after this report. Retrieving, printing, and security of the Monthly Progress Report will become the responsibility of the approved recipients.

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- Conventional Construction Divison
- Physics Research Division
- Laboratory Technical Services Division
- Directorate Division
- Administration Division

PROJECT MANAGEMENT

PROGRESS REPORTS

PROJECT MANAGER'S PROGRESS REPORT
PART I

1. IDENTIFIERS:

1a. PROJECT TITLE/NUMBER
Superconducting Super Collider Laboratory DE-AC02-89ER40486

1b. REPORTING PERIOD
December 1, 1990 - December 31, 1990

1c. MANAGING DOE FIELD LOCATION

SSC Project Office
2550 Beckleymeade Ave., MS1020
Dallas, Texas 75237

1d. PROJECT SPONSOR/PROGRAM OFFICE CONTACT

Joseph R. Cipriano

1e. PROJECT MANAGER

Paul Reardon

1f. PERFORMING ORGANIZATION(S)

Universities Research Association, Inc.
1111 19th St. N.W., Suite 400
Washington, D.C. 20036

2a. SUMMARY STATUS

Green	Yellow	Red
G	Y	R

	LAST PERIOD	THIS PERIOD
COST	G	G
SCHEDULE	G	G
TECHNICAL	G	G
OVERALL DIVISION	G	G

PROJECT MANAGER'S PROGRESS REPORT PART I	PROJECT TITLE: Superconducting Super Collider Laboratory

2b. PROJECT MANAGER'S NARRATIVE HIGHLIGHTS AND KEY ISSUES (See item 5 for details on problems and variances)

WBS

3.1.1 Project Management Office (PMO)

- The first Laboratory Management Review (LMR) was successfully held in December, 1990, by the PMO at the SSCL. The LMR will be held monthly to highlight significant technical, cost, and schedule issues.
- The draft MIS Strategic Plan is complete. Completion of the final plan is anticipated in January, 1991.
- The leader (General Dynamics) and follower (Westinghouse) contractors for the Collider Dipole Magnet subcontract were selected. Negotiation and contract process to be afforded top priority throughout the SSCL and by the DOE.

3.1.3 Project Cost, Scheduling and Reporting (PCSR)

- TNRLC is reviewing the nature of Accounting and Performance Measurement Reports to be requested on a regular basis from the SSCL.

3.1.4 Engineering Standards

- The Central Document Control Center is functional.

3.1.5 Environmental Affairs

- The draft Mitigation Action Plan (MAP) has been issued for review. Briefings will be held for prospective reviewers at DOE-HQ, SSCL, and PB/MK.
- The SEIS ROD is still on schedule to be signed by Secretary Watkins on January 28, 1991.

3.2 Project Systems Engineering

- Completed reviews of the draft Project Management Plan (PMP) with DOE/OPO Staff. Anticipate completion of final PMP in January, 1991.

DIVISION PROJECT STATUS REPORT PART I	REPORTING DIVISION:		
5. SIGNIFICANT PROBLEMS/VARIANCE ANALYSIS			
5a. PROBLEMS, IMPACT ON PROJECT, CORRECTIVE ACTION			RESPONSIBLE GROUP
PROBLEM IDENTIFICATION	IMPACT	CORRECTIVE ACTION	
FY92 Budget: Federal Funding Guidance	Project cost, schedule, and technical planning	Continue planning based on latest DOE guidance.	SSCL/PMO
Revised Baseline Schedule Approval	Ensure schedule performance measurement against the same baseline briefed to OMB versus October 1990 baseline. (New milestones added by DOE/OPO.)	SSCL PMO prepares change control request for DOE approval and signoff.	SSCL/PMO
Texas funding not available	Limits requisitions, awards, and continuing operations.	DOE must make arrangements for full legal authorization of FY91 funds inclusive of Texas contributions ASAP.	DOE/OPO SSCL/PMO & Directorate
5b. ITEMS REQUIRING PMO/DIRECTORATE/DOE ACTION			
Complete Project Management Plan	Common understanding of management approach, project objectives, and cost, schedule, and technical approval authorities.	Discussion issues to be resolved first week in January 1991. Plan complete by end of January 1991.	DOE/OPO SSCL/PMO
Complete Configuration Management Plan	Implementation of change control and document management process.	Dependent upon approval of approval authority described in PMP. To be completed within thee weeks after PMP approval/discussion issues resolved.	SSCL/PMO
SEIS ROD approval and signature; MAP approval and signature.	Holds up all construction starts except MDL. Possible schedule impact for ASST, LINAC and first collider installations.	Continue top SSCL/DOE management attention. Anticipate ROD on January 28, 1991, and the MAP signed off on February 14, 1991.	DOE/OPO DOE/OSSC SSCL/PMO

Superconducting Super Collider

REVIEW SUMMARY BY WBS

Current Date: 23JAN91

COMPARATIVE BARCHART

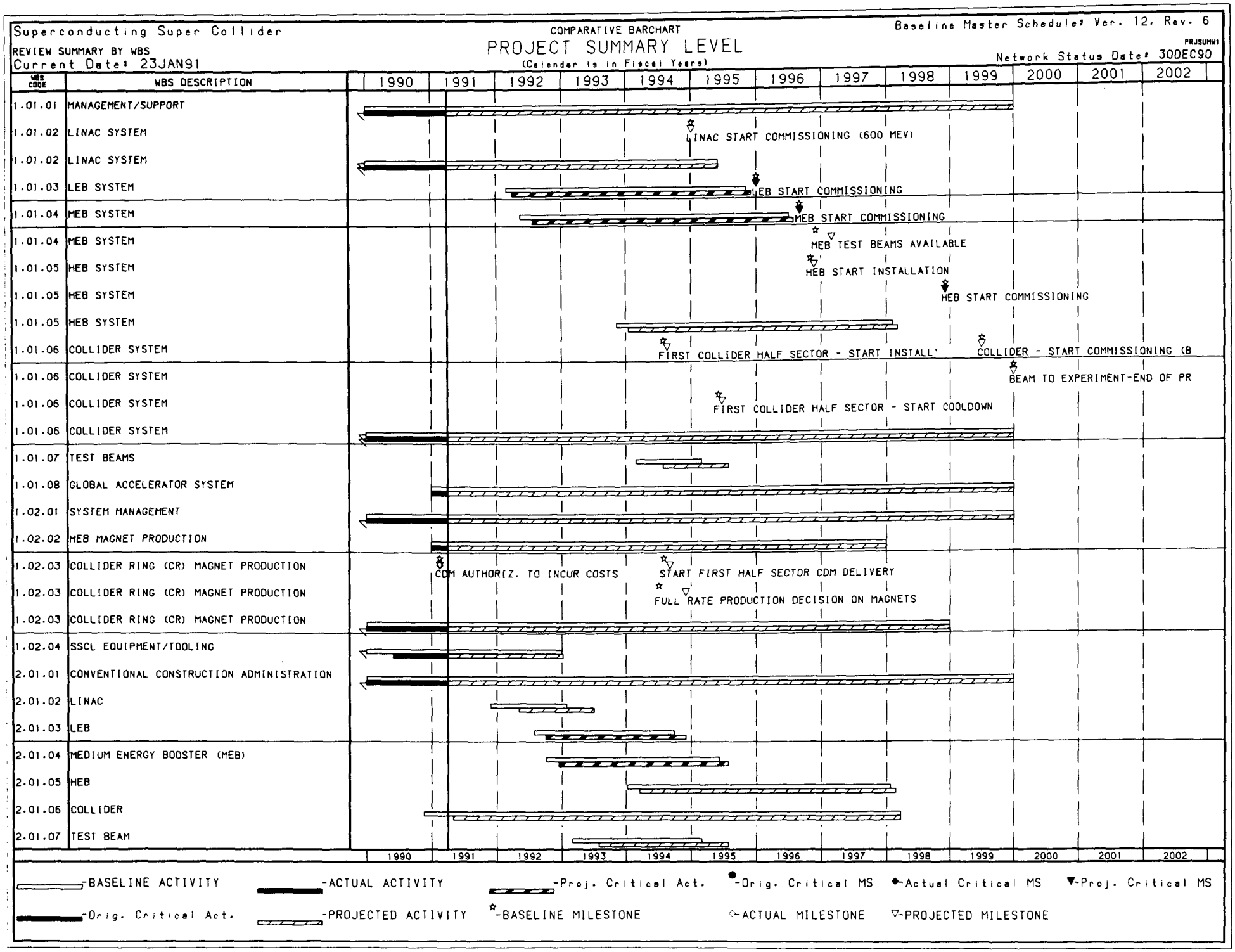
PROJECT SUMMARY LEVEL

(Calendar is in Fiscal Years)

Baseline Master Schedule: Ver. 12, Rev. 6

PRJSUMM1

Network Status Date: 30DEC90



Superconducting Super Collider

COMPARATIVE BARCHART

Baseline Master Schedule: Ver. 12, Rev. 6

REVIEW SUMMARY BY WBS

PROJECT SUMMARY LEVEL

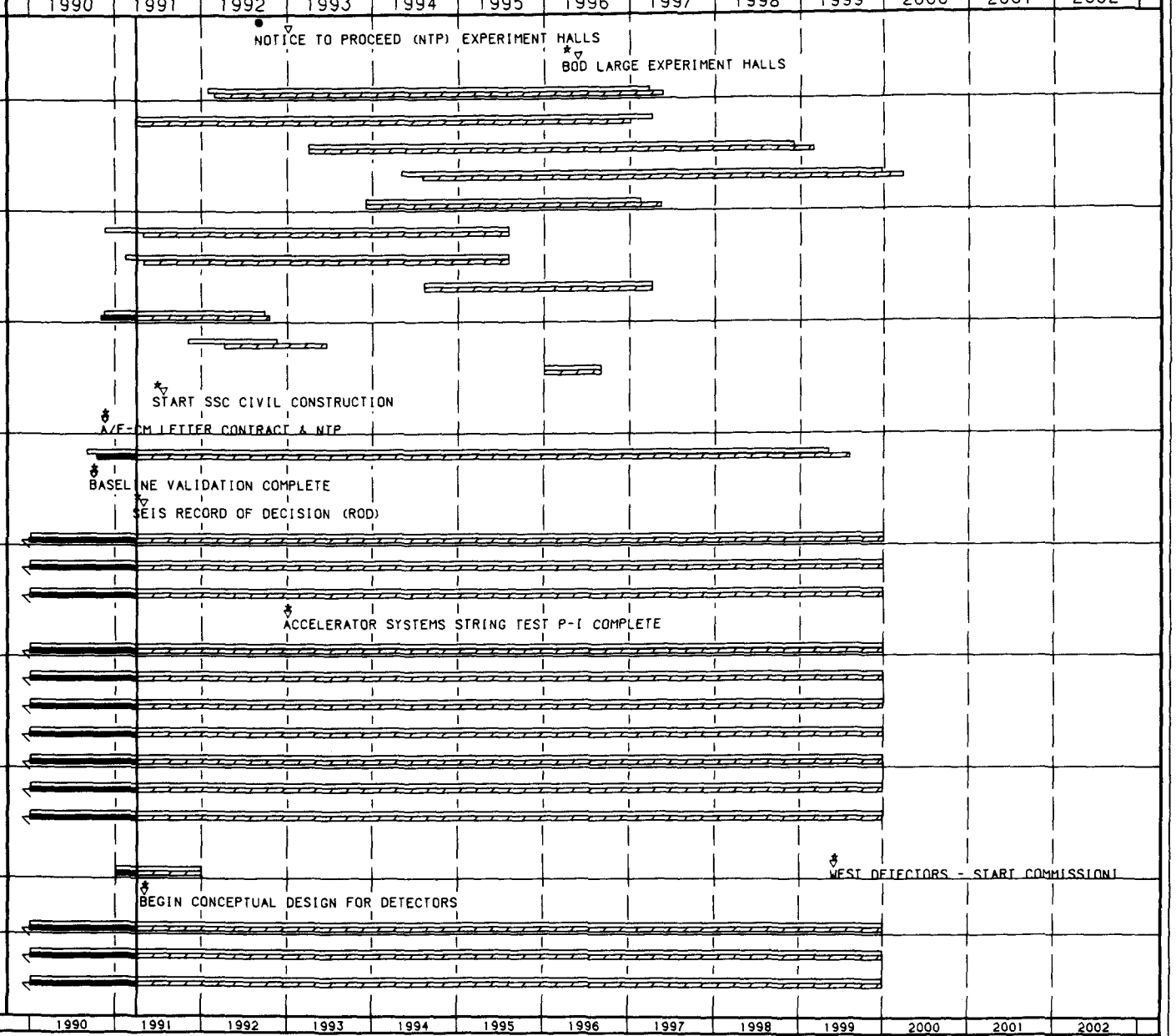
(Calendar is in Fiscal Years)

PRJSUMW2

Current Date: 23JAN91

Network Status Date: 30DEC90

WBS CODE	WBS DESCRIPTION
2.02	EXPERIMENTAL FACILITIES
2.02	EXPERIMENTAL FACILITIES
2.02.01	WN REGION
2.02.02	WS REGION
2.02.03	EN REGION
2.02.04	ES REGION
2.02.05	SUPPORT FUNCTIONS
2.03.02	PRIMARY SYSTEMS - ON-SITE
2.03.03	SECONDARY SYSTEMS - ON-SITE
2.04.01	CENTRAL LAB/OFFICE AREA
2.04.02	MAGNET LABORATORY
2.04.03	ACCELERATOR FACILITIES
2.04.04	ENVIRONMENTAL HEALTH FACILITIES
2.05.01	ARCHITECTURAL ENGINEERING
2.05.01	ARCHITECTURAL ENGINEERING
2.05.01	ARCHITECTURAL ENGINEERING
3.01.01	PROJECT MANAGEMENT OFFICE
3.01.01	PROJECT MANAGEMENT OFFICE
3.01.01	PROJECT MANAGEMENT OFFICE
3.02.01	SYSTEMS ENGINEERING
4.01	ACCELERATOR PRE-OPERATIONS
4.02.01	ACCELERATOR R&D
4.02.01	ACCELERATOR R&D
4.02.02	MAGNET R&D
4.03	LAB ADMINISTRATIVE SERVICES
4.04	LAB TECHNICAL SUPPORT
4.05	LAB DIRECTORATE
4.06	LAB EXPERIMENTAL SUPPORT
4.07	PRIME CONTRACTOR'S FEES
4.08	FY88 & FY89 COSTS
5	EXPERIMENTAL SYSTEMS
5.00	EXPERIMENTAL SYSTEMS
5.01	EXPERIMENTAL SYSTEM R&D
5.02	DETECTORS
5.03	EXPERIMENTAL SYSTEM COMPUTERS
5.04	FY88 & FY89 COSTS



BASELINE ACTIVITY — ACTUAL ACTIVITY — Proj. Critical Act. — Orig. Critical MS — Actual Critical MS — Proj. Critical MS

Orig. Critical Act. — PROJECTED ACTIVITY — BASELINE MILESTONE — ACTUAL MILESTONE — PROJECTED MILESTONE

SSC Laboratory Project Management

Baseline Schedule (Dec 90)
Major Project Milestones

WBS	Description	10-Year Rev 6	
3.0	Baseline Validation Complete	JUL-90	Completion of documents and briefings on Baseline Cost Estimate & Schedule and Supplemental Concept Design Report.
2.5.1	A-E/CM Letter Contract & NTP	AUG-90	DOE Approval and release of a letter contract, pending a full contract, for PB/MK to begin formal design & contruction work.
1.2	CDM Authorization to Incur Costs	NOV-90	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)	JAN-91	Secretary signature and formal filing of the Environmental Record of Decision. This allows non-reversible project construction to begin.
5.0	Begin Conceptual Design for Detectors	FEB-91	Start the detector concept design and Title I conventional facilities design effort.
2.1.1	Start SSC Civil Construction	MAR-91	The first construction notice to proceed after the SEIS ROD. The first facility is currently the ASST.
5.0	Notice to Proceed (NTP) Experiment Halls	JUN-92	The first notice of proceed for construction of the experiment (interaction region) halls; this is currently planned to be IR-4.
1.1.8.8.23	Accelerator String Test Complete	OCT-92	Cooldown and 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	Full-rate Production Decision on Magnets	APR-94	This is the decision by the SSCL, with DOE approval, for formal notice to the magnet (CDM & CQM) contractors to go to full scale production from a low rate production.
1.2	Start First Half Sector CDM Delivery	APR-94	Delivery of the first contractor production magnet (CDM) at the installation shafts after testing and acceptance in the MAAS and MTL.
1.1.6	First Collider Half Sector - Start Installation	APR-94	Start installation of major technical components after completion of tunnel out (e.g. power, lights & ventilation) technical components include piping, electrial components cryogenics, spools, magnets, etc.

1.1.2	LINAC Start Commissioning (600 MeV)	OCT-94	Start commission with beam is 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	MAR-95	Cooldown of the first complete half sector (E1-F1) and the concurrent power safety check of a full half sector.
1.1.3	LEB Start Commissioning	OCT-95	Beginning of the LEB beam commissioning installation and suitable checkout of engineering subsystems and safety signoff. Requires the LINAC to be able to provide test beam.
5.0	Beneficial Occupancy of Large Experiment Halls	JAN-96	Beneficial occupancy of the first experiment (interaction region) halls, currently IR-4. This BOD includes lighting, power & ventilation, etc. and is 9 months after the first BOD where just the unfinished chamber is turned over. 1 BOD means turnover of bare facility without power, cable tray, ventilation, etc. installed.
1.1.4	MEB Start Commissioning	JUN-96	Beginning of the MEB commissioning after installation and suitable checkout engineering subsystems and safety signoff. Requires the LEB to be able to provide test beam.
1.1.5	HEB Start Installation	AUG-96	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	SEP-96	Completion of the MEB and test beam commissioning activity so that beam for detector component testing is available some fraction of the time.
1.1.5	HEB Start Commissioning	SEP-98	Beginning of the HEB commissioning after installation and suitable checkout engineering subsystems and safety sign off. Requires the MEB to able to provide test beam.
5.0	West Detectors - Start Commissioning	MAR-99	Beginning of the first Detector (currently IR-4) commissioning activity after assembly of some engineers subsystems and safety subsystem review.
1.1.6	Collider - Start Commissioning (beam)	MAR-99	Beginning of the full Collider beam commissioning after sector testing is successfully completed. Requires the HEB to be able to provide test beams.
1.1.6	Beam to Exp. (End of Project/Begin Op)	SEP-99	Completion of the Collider and West detectors commissioning activities. The SSC is now ready to perform experiments in two experiment (interaction regions) halls.

COST PERFORMANCE REPORTS

CONTRACTOR: SSC LABORATORY LOCATION: DALLAS, TX	COST PERFORMANCE REPORT - WORK BREAKDOWN STRUCTURE			SIGNATURE,TITLE & DATE 30-DEC-90	FORM APPROVED OMB NUMBER 22R0280
RDT&E [X] PRODUCTION [ ]	CONTRACT TYPE/NO: DE-AC02-89ER40486	PROGRAM NAME/NUMBER:	REPORT PERIOD From: 26-NOV-90 To: 31-DEC-90		

QUANTITY	NEG COST	EST COST AUTH UNPR	TARGET PROFIT/FEE	EST PRICE	TGT PRICE	SHARE RATIO	CONTR CEILING	EST CEILING
0	$0	$0	$0 / 0.00%	$0	$0	0	$0	$0

ITEM	CURRENT PERIOD					CUMULATIVE TO DATE					AT COMPLETION		
	BUDGETED COST		ACTUAL COST	VARIANCE		BUDGETED COST		ACTUAL COST	VARIANCE				
	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	BUDGET	LATEST REVISED EST	VAR
PROJECT TOTALS	0.0	0.0	18093.4	0.0	-18093.4	0.0	0.0	48014.9	0.0	-48014.9	0.0	0.0	0.0
LABOR	0.0	0.0	4531.2	0.0	-4531.2	0.0	0.0	12087.1	0.0	-12087.1	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	13562.2	0.0	-13562.2	0.0	0.0	35927.9	0.0	-35927.9	0.0	0.0	0.0
1 TECHNICAL SYSTEM	0.0	0.0	2713.0	0.0	-2713.0	0.0	0.0	6759.3	0.0	-6759.3	0.0	0.0	0.0
2 CONVENTIONAL CONST.	0.0	0.0	3461.2	0.0	-3461.2	0.0	0.0	9434.3	0.0	-9434.3	0.0	0.0	0.0
3 PROJECT MANAGEMENT & SUPPORT FUNCTION	0.0	0.0	333.4	0.0	-333.4	0.0	0.0	963.1	0.0	-963.1	0.0	0.0	0.0
4 R&D & PRE-OPERATIONS	0.0	0.0	10309.6	0.0	-10309.6	0.0	0.0	27540.6	0.0	-27540.6	0.0	0.0	0.0
5 EXPERIMENTAL SYSTEMS	0.0	0.0	1304.0	0.0	-1304.0	0.0	0.0	3001.8	0.0	-3001.8	0.0	0.0	0.0
6 LAB OPERATIONS SUPPORT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7 ESCALATION & CONTINGENCY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
99	0.0	0.0	-1.1	0.0	1.1	0.0	0.0	336.9	0.0	-336.9	0.0	0.0	0.0
8	0.0	0.0	-26.7	0.0	26.7	0.0	0.0	-21.1	0.0	21.1	0.0	0.0	0.0
COST OF MONEY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GEN AND ADMIN (NON ADD)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UNDISTRIBUTED BUDGET	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	0.0	0.0	XXXXXX
SUBTOTAL	0.0	0.0	18093.4	0.0	-18093.4	0.0	0.0	48014.9	0.0	-48014.9	0.0	0.0	0.0
MANAGEMENT RESERVE	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	0.0	0.0	0.0
TOTAL	0.0	0.0	18093.4	0.0	-18093.4	0.0	0.0	48014.9	0.0	-48014.9	0.0	0.0	0.0

ITEM	CURRENT PERIOD					CUMULATIVE TO DATE					AT COMPLETION		
	BUDGETED COST		ACTUAL COST	VARIANCE		BUDGETED COST		ACTUAL COST	VARIANCE				
	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	BUDGET	LATEST REVISED EST	VAR
1													
TECHNICAL SYSTEM	0.0	0.0	2713.0	0.0	-2713.0	0.0	0.0	6759.3	0.0	-6759.3	0.0	0.0	0.0
LABOR	0.0	0.0	636.9	0.0	-636.9	0.0	0.0	1956.1	0.0	-1956.1	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	2076.2	0.0	-2076.2	0.0	0.0	4803.2	0.0	-4803.2	0.0	0.0	0.0
1.1													
ACCELERATOR SYSTEMS	0.0	0.0	855.2	0.0	-855.2	0.0	0.0	1775.4	0.0	-1775.4	0.0	0.0	0.0
LABOR	0.0	0.0	110.6	0.0	-110.6	0.0	0.0	290.9	0.0	-290.9	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	744.6	0.0	-744.6	0.0	0.0	1484.5	0.0	-1484.5	0.0	0.0	0.0
1.1.1													
MANAGEMENT/SUPPORT	0.0	0.0	727.8	0.0	-727.8	0.0	0.0	1526.8	0.0	-1526.8	0.0	0.0	0.0
LABOR	0.0	0.0	90.7	0.0	-90.7	0.0	0.0	255.2	0.0	-255.2	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	637.2	0.0	-637.2	0.0	0.0	1271.6	0.0	-1271.6	0.0	0.0	0.0
1.1.2													
LINAC SYSTEM	0.0	0.0	100.8	0.0	-100.8	0.0	0.0	204.8	0.0	-204.8	0.0	0.0	0.0
LABOR	0.0	0.0	0.7	0.0	-0.7	0.0	0.0	4.7	0.0	-4.7	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	100.1	0.0	-100.1	0.0	0.0	200.1	0.0	-200.1	0.0	0.0	0.0
1.1.6													
COLLIDER SYSTEM	0.0	0.0	0.9	0.0	-0.9	0.0	0.0	2.4	0.0	-2.4	0.0	0.0	0.0
LABOR	0.0	0.0	0.9	0.0	-0.9	0.0	0.0	2.4	0.0	-2.4	0.0	0.0	0.0
1.1.8													
GLOBAL ACCELERATOR SYSTEM	0.0	0.0	25.7	0.0	-25.7	0.0	0.0	41.3	0.0	-41.3	0.0	0.0	0.0
LABOR	0.0	0.0	18.4	0.0	-18.4	0.0	0.0	28.7	0.0	-28.7	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	7.3	0.0	-7.3	0.0	0.0	12.7	0.0	-12.7	0.0	0.0	0.0
1.2													
MAGNET SYSTEMS	0.0	0.0	1857.8	0.0	-1857.8	0.0	0.0	4983.9	0.0	-4983.9	0.0	0.0	0.0
LABOR	0.0	0.0	526.2	0.0	-526.2	0.0	0.0	1665.2	0.0	-1665.2	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	1331.6	0.0	-1331.6	0.0	0.0	3318.7	0.0	-3318.7	0.0	0.0	0.0
1.2.1													
SYSTEM MANAGEMENT	0.0	0.0	1005.6	0.0	-1005.6	0.0	0.0	2180.1	0.0	-2180.1	0.0	0.0	0.0
LABOR	0.0	0.0	362.8	0.0	-362.8	0.0	0.0	1023.9	0.0	-1023.9	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	642.9	0.0	-642.9	0.0	0.0	1156.2	0.0	-1156.2	0.0	0.0	0.0

ITEM	CURRENT PERIOD					CUMULATIVE TO DATE					AT COMPLETION		
	BUDGETED COST		ACTUAL COST	VARIANCE		BUDGETED COST		ACTUAL COST	VARIANCE				
	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	BUDGET	LATEST REVISED EST	VAR
1.2.2 HIGH ENERGY BOOSTER (HEB) MAGNET PRODUCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	-3.6	0.0	0.0	0.0
LABOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	-4.1	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	0.0	0.5	0.0	0.0	0.0
1.2.3 COLLIDER RING (CR) MAGNET PRODUCTION	0.0	0.0	462.8	0.0	-462.8	0.0	0.0	1103.1	0.0	-1103.1	0.0	0.0	0.0
LABOR	0.0	0.0	121.9	0.0	-121.9	0.0	0.0	520.5	0.0	-520.5	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	340.9	0.0	-340.9	0.0	0.0	582.5	0.0	-582.5	0.0	0.0	0.0
1.2.4 SSCL EQUIPMENT/TOOLING	0.0	0.0	389.3	0.0	-389.3	0.0	0.0	1697.2	0.0	-1697.2	0.0	0.0	0.0
LABOR	0.0	0.0	41.5	0.0	-41.5	0.0	0.0	116.7	0.0	-116.7	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	347.8	0.0	-347.8	0.0	0.0	1580.5	0.0	-1580.5	0.0	0.0	0.0
2 CONVENTIONAL CONSTRUCTION	0.0	0.0	3461.2	0.0	-3461.2	0.0	0.0	9434.3	0.0	-9434.3	0.0	0.0	0.0
LABOR	0.0	0.0	89.0	0.0	-89.0	0.0	0.0	223.2	0.0	-223.2	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	3372.2	0.0	-3372.2	0.0	0.0	9211.2	0.0	-9211.2	0.0	0.0	0.0
2.1 CONVENTIONAL CONST ACCELERATOR	0.0	0.0	768.6	0.0	-768.6	0.0	0.0	985.5	0.0	-985.5	0.0	0.0	0.0
LABOR	0.0	0.0	91.8	0.0	-91.8	0.0	0.0	133.9	0.0	-133.9	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	676.8	0.0	-676.8	0.0	0.0	851.6	0.0	-851.6	0.0	0.0	0.0
2.1.1 CONVENTIONAL CONST ADMINISTRATION	0.0	0.0	768.6	0.0	-768.6	0.0	0.0	985.5	0.0	-985.5	0.0	0.0	0.0
LABOR	0.0	0.0	91.8	0.0	-91.8	0.0	0.0	133.9	0.0	-133.9	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	676.8	0.0	-676.8	0.0	0.0	851.6	0.0	-851.6	0.0	0.0	0.0
2.3 SITE & INFRASTRUCTURE	0.0	0.0	184.6	0.0	-184.6	0.0	0.0	184.7	0.0	-184.7	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	184.6	0.0	-184.6	0.0	0.0	184.7	0.0	-184.7	0.0	0.0	0.0

ITEM	CURRENT PERIOD					CUMULATIVE TO DATE					AT COMPLETION		
	BUDGETED COST		ACTUAL COST	VARIANCE		BUDGETED COST		ACTUAL COST	VARIANCE				
	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	BUDGET	LATEST REVISED EST	VAR
2.3.1 PRIMARY SYSTEMS - OFF-SITE	0.0	0.0	184.6	0.0	-184.6	0.0	0.0	184.6	0.0	-184.6	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	184.6	0.0	-184.6	0.0	0.0	184.6	0.0	-184.6	0.0	0.0	0.0
2.3.3 SECONDARY SYSTEMS - ON-SITE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	-0.2	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	-0.2	0.0	0.0	0.0
2.4 CAMPUS	0.0	0.0	169.3	0.0	-169.3	0.0	0.0	492.8	0.0	-492.8	0.0	0.0	0.0
LABOR	0.0	0.0	0.3	0.0	-0.3	0.0	0.0	0.5	0.0	-0.5	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	169.1	0.0	-169.1	0.0	0.0	492.3	0.0	-492.3	0.0	0.0	0.0
2.4.2 MAGNET LABORATORY	0.0	0.0	169.3	0.0	-169.3	0.0	0.0	492.8	0.0	-492.8	0.0	0.0	0.0
LABOR	0.0	0.0	0.3	0.0	-0.3	0.0	0.0	0.5	0.0	-0.5	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	169.1	0.0	-169.1	0.0	0.0	492.3	0.0	-492.3	0.0	0.0	0.0
2.5 AE/CM	0.0	0.0	2338.7	0.0	-2338.7	0.0	0.0	7771.4	0.0	-7771.4	0.0	0.0	0.0
LABOR	0.0	0.0	-3.1	0.0	3.1	0.0	0.0	88.8	0.0	-88.8	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	2341.8	0.0	-2341.8	0.0	0.0	7682.5	0.0	-7682.5	0.0	0.0	0.0
2.5.1 ARCHITECTURAL ENGINEERING	0.0	0.0	2078.5	0.0	-2078.5	0.0	0.0	6664.6	0.0	-6664.6	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	2078.5	0.0	-2078.5	0.0	0.0	6664.6	0.0	-6664.6	0.0	0.0	0.0
2.5.2 CONSTRUCTION MANAGEMENT	0.0	0.0	260.2	0.0	-260.2	0.0	0.0	1106.8	0.0	-1106.8	0.0	0.0	0.0
LABOR	0.0	0.0	-3.1	0.0	3.1	0.0	0.0	88.8	0.0	-88.8	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	263.4	0.0	-263.4	0.0	0.0	1018.0	0.0	-1018.0	0.0	0.0	0.0

ITEM	CURRENT PERIOD					CUMULATIVE TO DATE					AT COMPLETION		
	BUDGETED COST		ACTUAL COST	VARIANCE		BUDGETED COST		ACTUAL COST	VARIANCE				
	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	BUDGET	LATEST REVISED EST	VAR
3													
PROJECT MANAGEMENT & SUPPORT FUNCTION	0.0	0.0	333.4	0.0	-333.4	0.0	0.0	963.1	0.0	-963.1	0.0	0.0	0.0
LABOR	0.0	0.0	203.9	0.0	-203.9	0.0	0.0	500.3	0.0	-500.3	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	129.4	0.0	-129.4	0.0	0.0	462.8	0.0	-462.8	0.0	0.0	0.0
3.1													
PROJECT MANAGEMENT	0.0	0.0	315.1	0.0	-315.1	0.0	0.0	705.6	0.0	-705.6	0.0	0.0	0.0
LABOR	0.0	0.0	200.7	0.0	-200.7	0.0	0.0	491.5	0.0	-491.5	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	114.4	0.0	-114.4	0.0	0.0	214.0	0.0	-214.0	0.0	0.0	0.0
3.1.1													
PROJECT MANAGEMENT OFFICE	0.0	0.0	92.8	0.0	-92.8	0.0	0.0	180.5	0.0	-180.5	0.0	0.0	0.0
LABOR	0.0	0.0	67.3	0.0	-67.3	0.0	0.0	133.0	0.0	-133.0	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	25.5	0.0	-25.5	0.0	0.0	47.4	0.0	-47.4	0.0	0.0	0.0
3.1.2													
PLANNING	0.0	0.0	48.3	0.0	-48.3	0.0	0.0	130.8	0.0	-130.8	0.0	0.0	0.0
LABOR	0.0	0.0	44.4	0.0	-44.4	0.0	0.0	122.0	0.0	-122.0	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	3.9	0.0	-3.9	0.0	0.0	8.8	0.0	-8.8	0.0	0.0	0.0
3.1.3													
PMRS	0.0	0.0	59.3	0.0	-59.3	0.0	0.0	172.8	0.0	-172.8	0.0	0.0	0.0
LABOR	0.0	0.0	50.2	0.0	-50.2	0.0	0.0	136.6	0.0	-136.6	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	9.2	0.0	-9.2	0.0	0.0	36.2	0.0	-36.2	0.0	0.0	0.0
3.1.4													
ENGINEERING STANDARDS	0.0	0.0	70.5	0.0	-70.5	0.0	0.0	155.1	0.0	-155.1	0.0	0.0	0.0
LABOR	0.0	0.0	36.4	0.0	-36.4	0.0	0.0	93.3	0.0	-93.3	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	34.1	0.0	-34.1	0.0	0.0	61.8	0.0	-61.8	0.0	0.0	0.0
3.1.5													
ENVIRONMENTAL AFFAIRS	0.0	0.0	44.2	0.0	-44.2	0.0	0.0	66.4	0.0	-66.4	0.0	0.0	0.0
LABOR	0.0	0.0	2.4	0.0	-2.4	0.0	0.0	6.6	0.0	-6.6	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	41.8	0.0	-41.8	0.0	0.0	59.8	0.0	-59.8	0.0	0.0	0.0

ITEM	CURRENT PERIOD					CUMULATIVE TO DATE					AT COMPLETION		
	BUDGETED COST		ACTUAL COST	VARIANCE		BUDGETED COST		ACTUAL COST	VARIANCE				
	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	BUDGET	LATEST REVISED EST	VAR
3.2													
Projects Systems													
Engineering	0.0	0.0	18.2	0.0	-18.2	0.0	0.0	257.6	0.0	-257.6	0.0	0.0	0.0
LABOR	0.0	0.0	3.2	0.0	-3.2	0.0	0.0	8.8	0.0	-8.8	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	15.0	0.0	-15.0	0.0	0.0	248.8	0.0	-248.8	0.0	0.0	0.0
3.2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.4	0.0	-15.4	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.4	0.0	-15.4	0.0	0.0	0.0
3.2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.2	0.0	-42.2	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.2	0.0	-42.2	0.0	0.0	0.0
3.2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.7	0.0	-53.7	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.7	0.0	-53.7	0.0	0.0	0.0
3.2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.9	0.0	-41.9	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.9	0.0	-41.9	0.0	0.0	0.0
3.2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.6	0.0	1.6	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.6	0.0	1.6	0.0	0.0	0.0
3.2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.1	0.0	3.1	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.1	0.0	3.1	0.0	0.0	0.0
3.2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.5	0.0	1.5	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.5	0.0	1.5	0.0	0.0	0.0
3.2.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.3	0.0	1.3	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.3	0.0	1.3	0.0	0.0	0.0
3.2.14	0.0	0.0	18.2	0.0	-18.2	0.0	0.0	111.9	0.0	-111.9	0.0	0.0	0.0
LABOR	0.0	0.0	3.2	0.0	-3.2	0.0	0.0	8.8	0.0	-8.8	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	15.0	0.0	-15.0	0.0	0.0	103.2	0.0	-103.2	0.0	0.0	0.0
4													
R&D & PRE-OPERATIONS	0.0	0.0	10309.6	0.0	-10309.6	0.0	0.0	27540.6	0.0	-27540.6	0.0	0.0	0.0
LABOR	0.0	0.0	3349.8	0.0	-3349.8	0.0	0.0	8743.3	0.0	-8743.3	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	6959.7	0.0	-6959.7	0.0	0.0	18797.3	0.0	-18797.3	0.0	0.0	0.0

ITEM	CURRENT PERIOD					CUMULATIVE TO DATE					AT COMPLETION		
	BUDGETED COST		ACTUAL COST	VARIANCE		BUDGETED COST		ACTUAL COST	VARIANCE				
	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	BUDGET	LATEST REVISED EST	VAR
4.2 RESEARCH & DEVELOPMENT	0.0	0.0	7054.1	0.0	-7054.1	0.0	0.0	19082.8	0.0	-19082.8	0.0	0.0	0.0
LABOR	0.0	0.0	1733.5	0.0	-1733.5	0.0	0.0	4317.2	0.0	-4317.2	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	5320.6	0.0	-5320.6	0.0	0.0	14765.6	0.0	-14765.6	0.0	0.0	0.0
4.2.1 ACCELERATOR R&D	0.0	0.0	2526.9	0.0	-2526.9	0.0	0.0	7104.9	0.0	-7104.9	0.0	0.0	0.0
LABOR	0.0	0.0	1230.2	0.0	-1230.2	0.0	0.0	3199.2	0.0	-3199.2	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	1296.7	0.0	-1296.7	0.0	0.0	3905.7	0.0	-3905.7	0.0	0.0	0.0
4.2.2 MAGNET R&D	0.0	0.0	4527.2	0.0	-4527.2	0.0	0.0	11977.9	0.0	-11977.9	0.0	0.0	0.0
LABOR	0.0	0.0	503.3	0.0	-503.3	0.0	0.0	1117.9	0.0	-1117.9	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	4023.9	0.0	-4023.9	0.0	0.0	10859.9	0.0	-10859.9	0.0	0.0	0.0
4.3 LAB ADMINISTRATION SERVICES & SUPPORT	0.0	0.0	896.8	0.0	-896.8	0.0	0.0	2583.5	0.0	-2583.5	0.0	0.0	0.0
LABOR	0.0	0.0	513.8	0.0	-513.8	0.0	0.0	1411.2	0.0	-1411.2	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	383.0	0.0	-383.0	0.0	0.0	1172.3	0.0	-1172.3	0.0	0.0	0.0
4.3.1 LAB ADMINISTRATION SERVICES & SUPP OFFICE	0.0	0.0	269.1	0.0	-269.1	0.0	0.0	918.0	0.0	-918.0	0.0	0.0	0.0
LABOR	0.0	0.0	16.1	0.0	-16.1	0.0	0.0	46.1	0.0	-46.1	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	252.9	0.0	-252.9	0.0	0.0	871.9	0.0	-871.9	0.0	0.0	0.0
4.3.2 LAB ACCOUNTING & FINANCE	0.0	0.0	163.2	0.0	-163.2	0.0	0.0	434.2	0.0	-434.2	0.0	0.0	0.0
LABOR	0.0	0.0	138.8	0.0	-138.8	0.0	0.0	376.1	0.0	-376.1	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	24.4	0.0	-24.4	0.0	0.0	58.1	0.0	-58.1	0.0	0.0	0.0
4.3.3 LAB PROCUREMENT & CONTRACTS	0.0	0.0	257.4	0.0	-257.4	0.0	0.0	600.2	0.0	-600.2	0.0	0.0	0.0
LABOR	0.0	0.0	177.4	0.0	-177.4	0.0	0.0	472.6	0.0	-472.6	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	80.0	0.0	-80.0	0.0	0.0	127.6	0.0	-127.6	0.0	0.0	0.0

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	BUDGETED COST		ACTUAL COST	VARIANCE		BUDGETED COST		ACTUAL COST	VARIANCE				
	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	BUDGET	LATEST REVISED EST	VAR
4.3.5													
LAB HUMAN RESOURCES	0.0	0.0	174.9	0.0	-174.9	0.0	0.0	549.6	0.0	-549.6	0.0	0.0	0.0
LABOR	0.0	0.0	154.3	0.0	-154.3	0.0	0.0	442.6	0.0	-442.6	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	20.6	0.0	-20.6	0.0	0.0	107.0	0.0	-107.0	0.0	0.0	0.0
4.3.7													
LAB MINORITY PROGRAMS	0.0	0.0	32.1	0.0	-32.1	0.0	0.0	81.5	0.0	-81.5	0.0	0.0	0.0
LABOR	0.0	0.0	27.2	0.0	-27.2	0.0	0.0	73.8	0.0	-73.8	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	5.0	0.0	-5.0	0.0	0.0	7.7	0.0	-7.7	0.0	0.0	0.0
4.4													
LAB TECHNICAL SUPPORT	0.0	0.0	1232.3	0.0	-1232.3	0.0	0.0	3290.0	0.0	-3290.0	0.0	0.0	0.0
LABOR	0.0	0.0	688.4	0.0	-688.4	0.0	0.0	1883.3	0.0	-1883.3	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	544.0	0.0	-544.0	0.0	0.0	1406.7	0.0	-1406.7	0.0	0.0	0.0
4.4.1													
LAB TECHNICAL SUPPORT MANAGEMENT	0.0	0.0	110.8	0.0	-110.8	0.0	0.0	344.5	0.0	-344.5	0.0	0.0	0.0
LABOR	0.0	0.0	97.3	0.0	-97.3	0.0	0.0	308.2	0.0	-308.2	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	13.5	0.0	-13.5	0.0	0.0	36.3	0.0	-36.3	0.0	0.0	0.0
4.4.2													
LAB FACILITIES ENGINEERING SERVICES	0.0	0.0	148.7	0.0	-148.7	0.0	0.0	414.8	0.0	-414.8	0.0	0.0	0.0
LABOR	0.0	0.0	96.9	0.0	-96.9	0.0	0.0	241.2	0.0	-241.2	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	51.9	0.0	-51.9	0.0	0.0	173.7	0.0	-173.7	0.0	0.0	0.0
4.4.3													
MATERIAL & LOGISTIC SERVICES	0.0	0.0	141.0	0.0	-141.0	0.0	0.0	252.4	0.0	-252.4	0.0	0.0	0.0
LABOR	0.0	0.0	60.6	0.0	-60.6	0.0	0.0	158.4	0.0	-158.4	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	80.5	0.0	-80.5	0.0	0.0	94.1	0.0	-94.1	0.0	0.0	0.0
4.4.4													
LAB FABRICATION SHOPS	0.0	0.0	43.3	0.0	-43.3	0.0	0.0	300.3	0.0	-300.3	0.0	0.0	0.0
LABOR	0.0	0.0	23.7	0.0	-23.7	0.0	0.0	55.5	0.0	-55.5	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	19.7	0.0	-19.7	0.0	0.0	244.8	0.0	-244.8	0.0	0.0	0.0

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	BUDGETED COST		ACTUAL COST	VARIANCE		BUDGETED COST		ACTUAL COST	VARIANCE				
	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	BUDGET	LATEST REVISED EST	VAR
4.4.5													
LAB GENERAL COMPUTER SERVICES	0.0	0.0	244.5	0.0	-244.5	0.0	0.0	563.6	0.0	-563.6	0.0	0.0	0.0
LABOR	0.0	0.0	132.0	0.0	-132.0	0.0	0.0	360.6	0.0	-360.6	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	112.5	0.0	-112.5	0.0	0.0	203.0	0.0	-203.0	0.0	0.0	0.0
4.4.6													
DESIGN SUPPORT	0.0	0.0	54.6	0.0	-54.6	0.0	0.0	219.8	0.0	-219.8	0.0	0.0	0.0
LABOR	0.0	0.0	35.7	0.0	-35.7	0.0	0.0	108.4	0.0	-108.4	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	18.9	0.0	-18.9	0.0	0.0	111.4	0.0	-111.4	0.0	0.0	0.0
4.4.7													
LAB COMMUNICATIONS	0.0	0.0	244.2	0.0	-244.2	0.0	0.0	504.8	0.0	-504.8	0.0	0.0	0.0
LABOR	0.0	0.0	77.7	0.0	-77.7	0.0	0.0	216.4	0.0	-216.4	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	166.4	0.0	-166.4	0.0	0.0	288.4	0.0	-288.4	0.0	0.0	0.0
4.4.8													
ENGINEERING SUPPORT	0.0	0.0	24.9	0.0	-24.9	0.0	0.0	58.0	0.0	-58.0	0.0	0.0	0.0
LABOR	0.0	0.0	19.7	0.0	-19.7	0.0	0.0	49.0	0.0	-49.0	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	5.3	0.0	-5.3	0.0	0.0	9.1	0.0	-9.1	0.0	0.0	0.0
4.4.9													
METROLOGY LABORATORY	0.0	0.0	19.4	0.0	-19.4	0.0	0.0	106.1	0.0	-106.1	0.0	0.0	0.0
LABOR	0.0	0.0	16.3	0.0	-16.3	0.0	0.0	47.6	0.0	-47.6	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	3.1	0.0	-3.1	0.0	0.0	58.5	0.0	-58.5	0.0	0.0	0.0
4.4.10													
PROTECTIVE SERVICES	0.0	0.0	17.5	0.0	-17.5	0.0	0.0	38.9	0.0	-38.9	0.0	0.0	0.0
LABOR	0.0	0.0	12.7	0.0	-12.7	0.0	0.0	29.0	0.0	-29.0	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	4.8	0.0	-4.8	0.0	0.0	9.9	0.0	-9.9	0.0	0.0	0.0
4.4.11													
STAFF SERVICES	0.0	0.0	128.6	0.0	-128.6	0.0	0.0	348.0	0.0	-348.0	0.0	0.0	0.0
LABOR	0.0	0.0	75.2	0.0	-75.2	0.0	0.0	194.4	0.0	-194.4	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	53.4	0.0	-53.4	0.0	0.0	153.6	0.0	-153.6	0.0	0.0	0.0
4.4.12	0.0	0.0	7.1	0.0	-7.1	0.0	0.0	19.2	0.0	-19.2	0.0	0.0	0.0
LABOR	0.0	0.0	6.4	0.0	-6.4	0.0	0.0	18.5	0.0	-18.5	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	0.6	0.0	-0.6	0.0	0.0	0.7	0.0	-0.7	0.0	0.0	0.0

ITEM	CURRENT PERIOD					CUMULATIVE TO DATE					AT COMPLETION		
	BUDGETED COST		ACTUAL COST	VARIANCE		BUDGETED COST		ACTUAL COST	VARIANCE				
	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	BUDGET	LATEST REVISED EST	VAR
4.4.13	0.0	0.0	47.8	0.0	-47.8	0.0	0.0	119.4	0.0	-119.4	0.0	0.0	0.0
LABOR	0.0	0.0	34.4	0.0	-34.4	0.0	0.0	96.2	0.0	-96.2	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	13.4	0.0	-13.4	0.0	0.0	23.2	0.0	-23.2	0.0	0.0	0.0
4.5													
LAB DIRECTORATE	0.0	0.0	458.1	0.0	-458.1	0.0	0.0	858.8	0.0	-858.8	0.0	0.0	0.0
LABOR	0.0	0.0	213.6	0.0	-213.6	0.0	0.0	604.5	0.0	-604.5	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	244.5	0.0	-244.5	0.0	0.0	254.3	0.0	-254.3	0.0	0.0	0.0
4.5.1													
LAB DIRECTOR'S OFFICE	0.0	0.0	195.7	0.0	-195.7	0.0	0.0	364.4	0.0	-364.4	0.0	0.0	0.0
LABOR	0.0	0.0	82.9	0.0	-82.9	0.0	0.0	235.8	0.0	-235.8	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	112.8	0.0	-112.8	0.0	0.0	128.7	0.0	-128.7	0.0	0.0	0.0
4.5.2													
LAB EXTERNAL AFFAIRS	0.0	0.0	42.8	0.0	-42.8	0.0	0.0	67.4	0.0	-67.4	0.0	0.0	0.0
LABOR	0.0	0.0	24.7	0.0	-24.7	0.0	0.0	71.4	0.0	-71.4	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	18.1	0.0	-18.1	0.0	0.0	-4.0	0.0	4.0	0.0	0.0	0.0
4.5.3													
LAB LEGAL SERVICES	0.0	0.0	68.7	0.0	-68.7	0.0	0.0	142.0	0.0	-142.0	0.0	0.0	0.0
LABOR	0.0	0.0	37.6	0.0	-37.6	0.0	0.0	104.4	0.0	-104.4	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	31.1	0.0	-31.1	0.0	0.0	37.6	0.0	-37.6	0.0	0.0	0.0
4.5.5													
LAB USERS' OFFICE	0.0	0.0	70.3	0.0	-70.3	0.0	0.0	79.9	0.0	-79.9	0.0	0.0	0.0
LABOR	0.0	0.0	11.0	0.0	-11.0	0.0	0.0	36.7	0.0	-36.7	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	59.3	0.0	-59.3	0.0	0.0	43.2	0.0	-43.2	0.0	0.0	0.0
4.5.6													
LAB ENVIRONMENT HEALTH & SAFETY	0.0	0.0	52.6	0.0	-52.6	0.0	0.0	135.2	0.0	-135.2	0.0	0.0	0.0
LABOR	0.0	0.0	37.1	0.0	-37.1	0.0	0.0	100.3	0.0	-100.3	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	15.5	0.0	-15.5	0.0	0.0	34.9	0.0	-34.9	0.0	0.0	0.0
4.5.7													
LAB PLANNING OFFICE	0.0	0.0	27.9	0.0	-27.9	0.0	0.0	69.9	0.0	-69.9	0.0	0.0	0.0
LABOR	0.0	0.0	20.3	0.0	-20.3	0.0	0.0	56.0	0.0	-56.0	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	7.6	0.0	-7.6	0.0	0.0	13.9	0.0	-13.9	0.0	0.0	0.0

ITEM	CURRENT PERIOD					CUMULATIVE TO DATE					AT COMPLETION		
	BUDGETED COST		ACTUAL COST	VARIANCE		BUDGETED COST		ACTUAL COST	VARIANCE				
	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	BUDGET	LATEST REVISED EST	VAR
4.6 EXPERIMENTAL FACILITIES SUPPORT	0.0	0.0	418.3	0.0	-418.3	0.0	0.0	975.5	0.0	-975.5	0.0	0.0	0.0
LABOR	0.0	0.0	200.6	0.0	-200.6	0.0	0.0	527.1	0.0	-527.1	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	217.7	0.0	-217.7	0.0	0.0	448.4	0.0	-448.4	0.0	0.0	0.0
4.6.1 PHYSICS LIBRARY SERVICE	0.0	0.0	69.9	0.0	-69.9	0.0	0.0	183.3	0.0	-183.3	0.0	0.0	0.0
LABOR	0.0	0.0	40.5	0.0	-40.5	0.0	0.0	114.5	0.0	-114.5	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	29.4	0.0	-29.4	0.0	0.0	68.8	0.0	-68.8	0.0	0.0	0.0
4.6.2 TECHNICAL INFORMATION & PUBLICATIONS	0.0	0.0	92.9	0.0	-92.9	0.0	0.0	233.8	0.0	-233.8	0.0	0.0	0.0
LABOR	0.0	0.0	50.7	0.0	-50.7	0.0	0.0	131.7	0.0	-131.7	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	42.2	0.0	-42.2	0.0	0.0	102.1	0.0	-102.1	0.0	0.0	0.0
4.6.3 EXPERIMENTAL FACILITIES ADMINISTRATION	0.0	0.0	255.4	0.0	-255.4	0.0	0.0	558.5	0.0	-558.5	0.0	0.0	0.0
LABOR	0.0	0.0	109.4	0.0	-109.4	0.0	0.0	280.9	0.0	-280.9	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	146.0	0.0	-146.0	0.0	0.0	277.6	0.0	-277.6	0.0	0.0	0.0
4.7 LAB PRIME CONTRACTOR FEES	0.0	0.0	250.0	0.0	-250.0	0.0	0.0	750.0	0.0	-750.0	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	250.0	0.0	-250.0	0.0	0.0	750.0	0.0	-750.0	0.0	0.0	0.0
4.7.1	0.0	0.0	250.0	0.0	-250.0	0.0	0.0	750.0	0.0	-750.0	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	250.0	0.0	-250.0	0.0	0.0	750.0	0.0	-750.0	0.0	0.0	0.0
5 EXPERIMENTAL SYSTEMS	0.0	0.0	1304.0	0.0	-1304.0	0.0	0.0	3001.8	0.0	-3001.8	0.0	0.0	0.0
LABOR	0.0	0.0	251.6	0.0	-251.6	0.0	0.0	664.1	0.0	-664.1	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	1052.4	0.0	-1052.4	0.0	0.0	2337.7	0.0	-2337.7	0.0	0.0	0.0
5.2 DETECTORS	0.0	0.0	172.6	0.0	-172.6	0.0	0.0	269.8	0.0	-269.8	0.0	0.0	0.0
LABOR	0.0	0.0	29.8	0.0	-29.8	0.0	0.0	51.5	0.0	-51.5	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	142.8	0.0	-142.8	0.0	0.0	218.3	0.0	-218.3	0.0	0.0	0.0

ITEM	CURRENT PERIOD					CUMULATIVE TO DATE					AT COMPLETION		
	BUDGETED COST		ACTUAL COST	VARIANCE		BUDGETED COST		ACTUAL COST	VARIANCE				
	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	BUDGET	LATEST REVISED EST	VAR
5.2.1	0.0	0.0	172.6	0.0	-172.6	0.0	0.0	269.8	0.0	-269.8	0.0	0.0	0.0
LABOR	0.0	0.0	29.8	0.0	-29.8	0.0	0.0	51.5	0.0	-51.5	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	142.8	0.0	-142.8	0.0	0.0	218.3	0.0	-218.3	0.0	0.0	0.0
5.3 EXPERIMENTAL SYSTEMS COMPUTERS	0.0	0.0	359.2	0.0	-359.2	0.0	0.0	435.2	0.0	-435.2	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	359.2	0.0	-359.2	0.0	0.0	435.2	0.0	-435.2	0.0	0.0	0.0
5.3.1	0.0	0.0	359.2	0.0	-359.2	0.0	0.0	435.2	0.0	-435.2	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	359.2	0.0	-359.2	0.0	0.0	435.2	0.0	-435.2	0.0	0.0	0.0
5.4	0.0	0.0	4.0	0.0	-4.0	0.0	0.0	-52.6	0.0	52.6	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	4.0	0.0	-4.0	0.0	0.0	-52.6	0.0	52.6	0.0	0.0	0.0
5.4.1DX	0.0	0.0	4.0	0.0	-4.0	0.0	0.0	-52.6	0.0	52.6	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	4.0	0.0	-4.0	0.0	0.0	-52.6	0.0	52.6	0.0	0.0	0.0
5.2DX	0.0	0.0	510.9	0.0	-510.9	0.0	0.0	1811.7	0.0	-1811.7	0.0	0.0	0.0
LABOR	0.0	0.0	137.6	0.0	-137.6	0.0	0.0	377.6	0.0	-377.6	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	373.4	0.0	-373.4	0.0	0.0	1434.1	0.0	-1434.1	0.0	0.0	0.0
5.3DX	0.0	0.0	153.6	0.0	-153.6	0.0	0.0	406.6	0.0	-406.6	0.0	0.0	0.0
LABOR	0.0	0.0	84.2	0.0	-84.2	0.0	0.0	235.1	0.0	-235.1	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	69.3	0.0	-69.3	0.0	0.0	171.5	0.0	-171.5	0.0	0.0	0.0
5.1DX	0.0	0.0	11.9	0.0	-11.9	0.0	0.0	19.8	0.0	-19.8	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	11.9	0.0	-11.9	0.0	0.0	19.8	0.0	-19.8	0.0	0.0	0.0
5.2DE	0.0	0.0	-1.1	0.0	1.1	0.0	0.0	2.3	0.0	-2.3	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	-1.1	0.0	1.1	0.0	0.0	2.3	0.0	-2.3	0.0	0.0	0.0
5.3DE	0.0	0.0	92.9	0.0	-92.9	0.0	0.0	109.1	0.0	-109.1	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	92.9	0.0	-92.9	0.0	0.0	109.1	0.0	-109.1	0.0	0.0	0.0
6 LAB OPERATIONS SUPPORT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

ITEM	CURRENT PERIOD					CUMULATIVE TO DATE					AT COMPLETION		
	BUDGETED COST		ACTUAL COST	VARIANCE		BUDGETED COST		ACTUAL COST	VARIANCE				
	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	BUDGET	LATEST REVISED EST	VAR
6.1													
PHYSICS PROGRAM SUPPORT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.1.1													
PHYSICS ADMIN AND SUPPORT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7													
ESCALATION & CONTINGENCY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.1													
ESCALATION: 1/2/3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.2													
ESCALATION: 4/5/6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.3													
CONTINGENCY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
99	0.0	0.0	-1.1	0.0	1.1	0.0	0.0	336.9	0.0	-336.9	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	-1.1	0.0	1.1	0.0	0.0	336.9	0.0	-336.9	0.0	0.0	0.0
99.1	0.0	0.0	50.0	0.0	-50.0	0.0	0.0	311.2	0.0	-311.2	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	50.0	0.0	-50.0	0.0	0.0	311.2	0.0	-311.2	0.0	0.0	0.0
99.1.1	0.0	0.0	40.1	0.0	-40.1	0.0	0.0	288.9	0.0	-288.9	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	40.1	0.0	-40.1	0.0	0.0	288.9	0.0	-288.9	0.0	0.0	0.0
99.1.2	0.0	0.0	9.9	0.0	-9.9	0.0	0.0	22.2	0.0	-22.2	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	9.9	0.0	-9.9	0.0	0.0	22.2	0.0	-22.2	0.0	0.0	0.0

ITEM	CURRENT PERIOD					CUMULATIVE TO DATE					AT COMPLETION		
	BUDGETED COST		ACTUAL COST	VARIANCE		BUDGETED COST		ACTUAL COST	VARIANCE				
	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	BUDGET	LATEST REVISED EST	VAR
99.2	0.0	0.0	-51.1	0.0	51.1	0.0	0.0	25.7	0.0	-25.7	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	-51.1	0.0	51.1	0.0	0.0	25.7	0.0	-25.7	0.0	0.0	0.0
99.2.1	0.0	0.0	5.7	0.0	-5.7	0.0	0.0	22.2	0.0	-22.2	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	5.7	0.0	-5.7	0.0	0.0	22.2	0.0	-22.2	0.0	0.0	0.0
99.2.2	0.0	0.0	-42.4	0.0	42.4	0.0	0.0	17.9	0.0	-17.9	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	-42.4	0.0	42.4	0.0	0.0	17.9	0.0	-17.9	0.0	0.0	0.0
99.2.3	0.0	0.0	-14.4	0.0	14.4	0.0	0.0	-14.4	0.0	14.4	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	-14.4	0.0	14.4	0.0	0.0	-14.4	0.0	14.4	0.0	0.0	0.0
8	0.0	0.0	-26.7	0.0	26.7	0.0	0.0	-21.1	0.0	21.1	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	-26.7	0.0	26.7	0.0	0.0	-21.1	0.0	21.1	0.0	0.0	0.0
8.1	0.0	0.0	-26.7	0.0	26.7	0.0	0.0	-21.1	0.0	21.1	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	-26.7	0.0	26.7	0.0	0.0	-21.1	0.0	21.1	0.0	0.0	0.0
8.1.1	0.0	0.0	-26.7	0.0	26.7	0.0	0.0	-21.1	0.0	21.1	0.0	0.0	0.0
OTHER DIRECT COSTS	0.0	0.0	-26.7	0.0	26.7	0.0	0.0	-21.1	0.0	21.1	0.0	0.0	0.0

CONTRACTOR: SSC LABORATORY LOCATION: DALLAS, TX	COST PERFORMANCE REPORT - FUNCTIONAL CATEGORIES			SIGNATURE,TITLE & DATE 30-DEC-90	FORM APPROVED OMB NUMBER 22R0280
RDT&E [X] PRODUCTION [ ]	CONTRACT TYPE/NO: DE-AC02-89ER40486	PROGRAM NAME/NUMBER:	REPORT PERIOD From: 26-NOV-90 To: 31-DEC-90		

QUANTITY	NEG COST	EST COST AUTH UNPR	TARGET PROFIT/FEE	EST PRICE	TGT PRICE	SHARE RATIO	CONTR CEILING	EST CEILING
0	$0	$0	$0 / 0.00%	$0	$0	0	$0	$0

ITEM	CURRENT PERIOD					CUMULATIVE TO DATE					AT COMPLETION		
	BUDGETED COST		ACTUAL COST WORK PERF	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERF	VARIANCE			LATEST REVISED EST	VAR
	WORK SCHED	WORK PERF		SCHED	COST	WORK SCHED	WORK PERF		SCHED	COST	BUDGET		
D													
DIRECTORATE	0.0	0.0	458.1	0.0	-458.1	0.0	0.0	858.8	0.0	-858.8	0.0	0.0	0.0
B													
PROJECT MANAGEMENT	0.0	0.0	333.4	0.0	-333.4	0.0	0.0	963.1	0.0	-963.1	0.0	0.0	0.0
A													
ACCELERATOR SYSTEMS	0.0	0.0	3382.2	0.0	-3382.2	0.0	0.0	8880.3	0.0	-8880.3	0.0	0.0	0.0
C													
CONVENTIONAL CONST	0.0	0.0	3461.2	0.0	-3461.2	0.0	0.0	9434.3	0.0	-9434.3	0.0	0.0	0.0
T													
TECHNICAL SERVICES	0.0	0.0	1232.3	0.0	-1232.3	0.0	0.0	3290.0	0.0	-3290.0	0.0	0.0	0.0
G													
ADMINISTRATIVE SRVC	0.0	0.0	896.8	0.0	-896.8	0.0	0.0	2583.5	0.0	-2583.5	0.0	0.0	0.0
P													
PHYSICS RESEARCH	0.0	0.0	1555.4	0.0	-1555.4	0.0	0.0	3613.0	0.0	-3613.0	0.0	0.0	0.0
M													
MAGNET SYSTEMS	0.0	0.0	6385.0	0.0	-6385.0	0.0	0.0	16961.8	0.0	-16961.8	0.0	0.0	0.0
F													
PHYSICS INDIRECT	0.0	0.0	162.8	0.0	-162.8	0.0	0.0	417.0	0.0	-417.0	0.0	0.0	0.0

ITEM	CURRENT PERIOD					CUMULATIVE TO DATE					AT COMPLETION		
	BUDGETED COST		ACTUAL COST	VARIANCE		BUDGETED COST		ACTUAL COST	VARIANCE				
	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST	BUDGET	LATEST REVISED EST	VAR
Q													
WRK FOR OTHERS	0.0	0.0	50.0	0.0	-50.0	0.0	0.0	311.2	0.0	-311.2	0.0	0.0	0.0
V													
WRK FOR OTHERS EXC OH	0.0	0.0	-51.1	0.0	51.1	0.0	0.0	25.7	0.0	-25.7	0.0	0.0	0.0
W													
LAB GENERAL INDIRECT	0.0	0.0	250.0	0.0	-250.0	0.0	0.0	750.0	0.0	-750.0	0.0	0.0	0.0
Y													
LAB GENERAL DIRECT	0.0	0.0	-22.7	0.0	22.7	0.0	0.0	-73.7	0.0	73.7	0.0	0.0	0.0
SUBTOTAL	0.0	0.0	18093.4	0.0	-18093.4	0.0	0.0	48014.9	0.0	-48014.9	0.0	0.0	0.0
COST OF MONEY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GEN AND ADMIN (NON ADD)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UNDISTRIBUTED BUDGET	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	0.0	0.0	XXXXXX
SUBTOTAL	0.0	0.0	18093.4	0.0	-18093.4	0.0	0.0	48014.9	0.0	-48014.9	0.0	0.0	0.0
MANAGEMENT RESERVE	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	0.0	0.0	0.0
TOTAL	0.0	0.0	18093.4	0.0	-18093.4	0.0	0.0	48014.9	0.0	-48014.9	0.0	0.0	0.0

MAGNET DIVISION

DIVISION PROJECT STATUS REPORT

DESIGN
CONSTRUCTION
PRODUCTION
RESEARCH & DEVELOPMENT

PART I

1. IDENTIFIERS:

1a. PROJECT TITLE/NUMBER
SUPERCONDUCTING SUPER COLLIDER LABORATORY

1b. REPORTING PERIOD
1 December 90 - 31 December 90

1c. MANAGING DIVISION

Magnet Systems Division

1d. DIVISION/OFFICE CONTACT

Roosevelt Baker, Jr. X 2084

1e. DIVISION MANAGER

Tom Bush X 2023

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

2 DIVISION MANAGER'S PERSONAL ASSESSMENT:

2a. Summary Status

Green	Yellow	Red
G	Y	R

	LAST PERIOD	THIS PERIOD
COST	G	G
SCHEDULE	G	G
TECHNICAL	G	G
OVERALL DIVISION	G	G

DIVISION PROJECT STATUS REPORT PART I	PROJECT TITLE:

2b. NARRATIVE HIGHLIGHTS AND KEY ISSUES (See item 5 for details on problems and variances)

WBS 1.2.1 Program Management: Continued negotiations for the CDM contract. Continued development of critical path schedules. Began development of cost account budgets identified to WBS elements.

WBS 1.2.2 HEB Magnets: The Advanced Acquisition Plan, Dipole Industrialization RFP, and Internal Budget SOW are in process. Began Quad design budget estimates. Supporting KEK filament size and FNAL AC loss analyses. Aperture study in process.

WBS 1.2.3 Collider Ring Magnets: Continued efforts on the technology transfer to industry plan. Continued discussions and negotiations for the Collider Dipole Magnet product development phase with both General Dynamics, leader, and Westinghouse, follower. Collider Quadrupole Magnet draft RFP is planned for release to industry on 4 Jan 1991.

WBS 1.2.4 Magnet Facilities Equipment and Tooling: Requisitions and orders are being written for equipment and tooling to support MDL operations. This equipment and tooling will start arriving in April of 1991 and we expect to have it completely installed by the end of December 1991. Selected the MTL power supply vendor.

WBS 4.2.2 MAGNET R&D:

FNAL: All critical parts have been released for the 50mm long magnet except for the collar pack pin, rivet and some interconnection components. DS0321 is complete and has been shipped for testing. DS0313 testing is complete. Completion of magnet DS0315 concludes the SSC 40mm short magnet program. No more 40mm short magnets are planned.

LBL: 1m Quad Magnets: QSC-403 is fully assembled and welded.
5m Quad Magnets: Installation of the tapered coil end clamps on QCC-401 is complete. All the coils for the second long quad (QCC-402 have been wound and cured.

BNL: First 50mm aperture 1 meter long model magnet to be built in the USA is successfully tested at BNL. The magnet did not train and operated up to 8.7KA at reduced temperature. Authorization to BNL to accelerate program and to increase the number of laboratory prototype dipoles to seven.

DIVISION PROJECT STATUS REPORT PART II	REPORTING DIVISION: Magnet System Division	
8. MILESTONE LOG		
SIGNIFICANT MILESTONES ACCOMPLISHED SINCE LAST REPORT	BASELINE DATE	ACTUAL DATE
• Completed AC loss experiment test plan of HEB magnets	4 Dec 90	4 Dec 90
• Selected MTL power supply vendor	26 Oct 90	11 Dec 90
• ASST 15m CDM design review	12 Dec 90	20 Dec 90
SIGNIFICANT MILESTONES OPEN	BASELINE DATE	FORECAST DATE
• Release of Draft CQM RFP	30 Nov 90	4 Jan 91
• Vendor selection for superconducting wire	9 Nov 90	2 Jan 91
KEY MILESTONES UPCOMING - NEXT THREE MONTHS	BASELINE DATE	FORECAST DATE
• Release CQM RFP	17 Dec 90	18 Jan 91
• CDM Contract Awards	28 Feb 91	28 Feb 91
• CDM Vendor Team mobilized at FNAL	31 Dec 90	29 Mar 91
• Complete 60mm aperture study for HEB Magnets	15 Jan 91	30 Jan 91
• Release HEB Dipole Industrialization RFP	15 Feb 91	15 Feb 91

DIVISION PROJECT STATUS REPORT PART II					REPORTING DIVISION: Magnet System Division			
9. TECHNICAL PERFORMANCE PARAMETERS					*bold indicates a difference in the baseline and forecast parameters			
ITEM	BASELINE DESCRIPTION				FORECAST			
Dipole Vendor	F	L	A	Prod. Qty.	F	L	A	Prod. Qty
CDM 15m	6.6T	15.17	50	7956	6.6T	15.17	50	7956
CDM 13m	6.6T	12.64	50	504	6.6T	12.64	50	504
BV2+	6.6T	12.64	50	48	6.6T	12.64	50	48
BV1+	4.4079T	5.00	75-100	32	4.4079T	5.00	75-100	32
BV2-	6.6T	12.64	50	24	6.6T	12.64	50	24
BV1-	4.4079T	5.00	75-100	32	4.4079T	5.00	75-100	32
Quadrupole Vendor								
206 T/m Design								
CQM (QF)	**204 T/m**	**5.20**	**40**	**1664**	**211 T/m**	**5.07**	**40**	**1664**
QSD/QSF	**204 T/m**	**7.05**	**40**	**72**	**211 T/m**	**6.87**	**40**	**72**
QSD1/QSF1	**204 T/m**	**6.12**	**40**	**48**	**211 T/m**	**5.97**	**40**	**48**
180 T/m Design								
M-1 (QVF-QVD)	180 T/m	14.25	50	64	180.01 T/m	14.25	50	64
HEB Vendor								
HEBDM	6.39T	15.17	50	432	6.39 T	15.17	5	432
HEBQM (short)	200 T/m	1.23	50	234	200 T/m	1.23	50	234
HEBQM (long)	200 T/m	3.64	50	44	200 T/m	3.64	50	44
SSCL								
230 T/m Design								
QL1	**230 T/m**	**15.14**	**40**	**4**	**208.60 T/m**	**15.14**	**40**	**4**
QL2	223.6 T/m	11.22	40	8	223.55 T/m	11.22	40	8
QL4	**230 T/m**	**11.22**	**40**	**8**	**218.05 T/m**	**11.22**	**40**	**8**
QM3	**230 T/m**	**11.22**	**40**	**4**	**225.08 T/m**	**11.22**	**40**	**4**
QM4	**230 T/m**	**11.22**	**40**	**8**	**212.71 T/m**	**11.22**	**40**	**8**
QL3	**218.6 T/m**	**12.96**	**40**	**4**	**230.86 T/m**	**12.96**	**40**	**4**
QM1	188.2 T/m	8.5	40	4	188.23 T/m	8.5	40	4
QM2	219.6 T/m	8.5	40	8	219.61 T/m	8.5	40	8

DIVISION PROJECT STATUS REPORT PART II	REPORTING DIVISION: Magnet System Division

9. TECHNICAL PERFORMANCE PARAMETERS

***bold indicates a difference in the baseline and forecast parameters**

ITEM	BASELINE DESCRIPTION				FORECAST			
	F	L	A	Prod. Qty.	F	L	A	Prod. Qty
204 T/m Design	**206 T/m**	**7.05**	**40**	**8**	**211 T/m**	**6.87**	**40**	**8**
QU3	**204 T/m**	**7.05**	**40**	**8**	**211 T/m**	**6.87**	**40**	**8**
QU4	**158.5 T/m**	**4.896**	**40**	**8**	**162.35 T/m**	**4.78**	**40**	**8**
QL6	**151.8 T/m**	**4.896**	**40**	**8**	**155.48 T/m**	**4.78**	**40**	**8**
QM6								
180 T/m Design	**89.8**	**14.25**	**50**	**8**	**162.14 T/m**	**14.25**	**50**	**8**
QL5	**97.7 T/m**	**14.25**	**50**	**8**	**151.31 T/m**	**14.25**	**50**	**8**
QM5								
	180 T/m	6.76	50	8	180.01 T/m	6.76	50	8
QU1	180 T/m	6.76	50	8	180.01 T/m	6.76	50	8
QU2								

ACCELERATOR SYSTEMS DIVISION

DIVISION PROJECT STATUS REPORT

DESIGN ✱ PRODUCTION
CONSTRUCTION RESEARCH & DEVELOPMENT ✱ **PART I**

1. IDENTIFIERS:

1a. PROJECT TITLE/NUMBER
SUPERCONDUCTING SUPER COLLIDER LABORATORY

1b. REPORTING PERIOD
December 1, 1990 thru December 30, 1990

1c. MANAGING DIVISION
Accelerator Systems Division

1d. DIVISION/OFFICE CONTACT
Steve McNiel
Ext. 6070

1e. DIVISION MANAGER
Ted Kozman
Ext.1049

1f. PERFORMING ORGANIZATION(S)
Mechanical Engineering
Electrical Engineering
Instrumentation Diagnostics
RF
Cryogenics
Controls
Business Operations
Technical Systems Management

2 DIVISION MANAGER'S PERSONAL ASSESSMENT:

2a. Summary Status

Green	Yellow	Red
G	Y	R

	LAST PERIOD	THIS PERIOD
COST	G	G
SCHEDULE	G	G
TECHNICAL	G	G
OVERALL DIVISION	G	G

DIVISION PROJECT STATUS REPORT PART I	REPORTING DIVISION:

2b. DIVISION MANAGER'S NARRATIVE HIGHLIGHTS **(PAGE ONE)** (See item 5 for details on problems and variances)

WBS

Mechanical Engineering

Spool Pieces (4.2.1)--Bids were received for Vacuum Barrier (VB) and VB test vessel. Decision was made to expand the bid requirements to include two additional spools for the Fermilab ER test. This was based on management review of the ER/ASST procurement plan. Final bids were received and the contract was awarded to Ability Engineering.

Corrector Magnets (4.2.1)--TAC has tested quadrupoles no. 6 and 7. Quad no. 7 exceeded its operational design current of 86 amps without quenching. After reassembly Quad no. 7 reached 101 amps after only 3 quenches. This is excellent progress. LBL has produced the first correction dipole using the new Outokumpu wire with a high density coil The magnet reached short sample field of 3.6 Tesla in less than 10 quenches. Nine km (30,000 ft) of superconductor was successfully insulated with Dupont CI insulation by the Tensolite Co. This will be used by our industrial collaborator Cadwell Electric to produce the coils for the first real prototype dipole correction magnets. Superconducting wire Contracts have been awarded for 0.457 million kilometers to Supercon Co. and 1.067 million kilometers to Outukumpu Co. The cost of the contracts is $140,000 below the allocated $450,000.

Collider Magnet Installation (4.2.1) --A performance spec was written for the SSC magnet towing dollies in preparation for issuing a purchase requisition. Work has started on a mockup of the fixture that will be used to connect dipoles together.

R&D Cooling Water System (4.2.1)--This water system will support the RF testing lab in Bldg. 4. The computer/installation wiring diagram was completed and installation of cable trays, cables and instrumentation modules was completed. The Cooling tower water loop was filled and tested. Hose bibs were installed on the supply and return headers.

Machine Shop (4.2.1)-- Work continues on fabrication of parts for spool pieces, installation of vacuum components into the RF test chamber.

Cryogenic Engineering 4.2.1 (ASST) : 1.1.6.0.1.11 (E1)

Interaction with Vendors-- The Koch Process Systems (KPS) technical activities remain on schedule. The final E1 cryogenic building layout has been sent to KPS and their comments have been received. There is also agreement on the layout of both the MTL and the ASST/N15 plants. The contract milestone for the second P&ID submission was met when packages of drawings covering the MTL and the ASST/N15 systems were delivered to us and to outside reviewers. Review of this submission is underway. KPS has also met the contract milestone covering the placement of the heat exchanger order for the three cold boxes. This is an important milestone involving the longest lead time items in the procurement. An extension of the letter of contract with KPS through January 1991, together with spending authority for an additional $5M, has been approved. This decision is based on the comparison of cost estimates submitted by both KPS and PB/MK. The detailed layout of the cryogenics has been iterated with both KPS and with PB. MK and is becoming part of the conventional facilities design. The 6 replies to our CBD announcement seeking a support contractor for the Cryogenics Group. One of the companies is a leader in the field of process technology and has the full range of capabilities that we need. Three other replies show no experience in cryogenics and are therefore not fully responsive to the terms of the announcement. A draft RFP for the solicitation is complete.

DIVISION PROJECT STATUS REPORT PART I	REPORTING DIVISION:

2b. DIVISION MANAGER'S NARRATIVE HIGHLIGHTS (PAGE TWO) (See item 5 for details on problems and variances)

Fermilab ER String Test (4.2.1)--The string operated at helium temperature throughout the holidays. Warm-up will begin Jan. 7. A complete range of testing was accomplished during the operating period. Heat-leak data for the 20-K and 80-K shields was taken, other cryogenic performance of the string was assessed,and data was taken during a number of magnet quenches, both spontaneous and initiated. Analysis of the data accumulated during the operating period has begun.

Electrical Engineering

ASST/FERMILAB ER Systems (4.2.1)--Dynapower was chosen as the vendor for the ASST and ER power supplies, and a schedule of delivery was worked out. Preparation of remaining technical documentation in support of the contract award is complete. The first copy of the ASST and ER isolation amplifier printed circuit board was received, loaded, and successfully tested. The ASST Preliminary Requirements Design Review (PRDR) demonstrated a good level of planning for the ASST equipment.

LINAC Systems (4.2.1)--A prototype of the pulsed part of the Ion Source extraction cone pulser is working. All prototype circuits for the cone pulser have been tested individually. System testing is starting. Working group discussions on LINAC technical and construction requirements have been long but fruitful.

Ring Magnet Power Supplies (4.2.1)--Progress has been made on the analysis of the voltage ripple requirements. Ripple is now included in the beam dynamics equations used in accelerator beam simulations. The cost impact decision of 10 Hz vs 1 Hz cycle time for the LEB has been completed. Alternative MEB dipole magnet coil designs were evaluated for impact on the magnet power supplies. It was concluded that six turns per pole is preferable over the present 4 turn SCDR version. Recent changes in the National Electric Code requirements for cable trays will require additional magnet power supply cable trays in the Collider tunnel. There is concern that the present tunnel diameter is not large enough to accommodate these trays.

Quench Protection (4.2.1)--When a quench occurs, heater units are fired to raise the temperature of the superconducting cable, thereby increasing its heat capacity. A new heater strip design was tested in a 1 meter magnet at Fermilab. Results verified expectations, but indications are that more energy may be required to the heater firing units than estimated in the SCDR. Further testing of short and long magnet heaters will be necessary.

Pulsed Power Systems (4.2.1)--It has been recommended that the Collider Injection Kicker power supplies be moved to the surface rather than being housed in underground galleries. Work has begun on developing a thyatron test facility as part of the Pulsed Power Lab, which is presently being outfitted. It appears that the aperture requirements for larger than originally assumed by the Electrical Engineering Group. This is still under study but it is likely that the SCDR will be modified and the cost will increase.

EE Design/Drafting (4.2.1)--An RFI for Electronics CAE/CAD has been completed and submitted to vendors. A commercial electromagnetic field analysis program has been selected and will be leased for one year..

DIVISION PROJECT STATUS REPORT PART I	REPORTING DIVISION:

2b. DIVISION MANAGER'S NARRATIVE HIGHLIGHTS **(PAGE THREE)** (See item 5 for details on problems and variances)

RF Engineering

RF Test Stand (4.2.1)--Control system wiring is on schedule. Vacuum leaks have been found. They will be repaired when the center conductor is installed into the prototype LEB cavity. The center conductor is being plated. An RFP has been issued for the ferrites going into the cavity tuner. Calculations show that although we will not have the full complement of ferrites required for a working cavity, we will be able to make meaningful electromagnetic stress tests of the ferrites with the Test Stand.

LINAC (1.1.2.1.12)--The specifications for the RF system have been internally reviewed and are now a working document. Procurement specifications for the klystrons are under review. Draft specifications for the RF buncher amplifiers have been generated. Procurement specifications for the Klystron modulators are being drafted. The CBD ad for the 400 kw RFQ amplifier have been sent to Procurement.

LEB (4.2.1)--A Design Review/Workshop on the RF system is set for Feb. 5-8. Six proposed designs will be reviewed. Two of the designs can be tested on the RF Test Stand. The other proposals are in the conceptual stage. If the beam injection and extraction can be done in one straight section, then five 5-meter straights are available for rf. This will ease voltage requirements on the rf cavities.

Collider (4.2.1)--The layout of the rf cavities has been changed so that the cavities for the top ring are not stacked over the cavities for the bottom ring. This will ameliorate maintenance problems. A future option for the collider is to increase the beam current by a factor of 10. It has been determined that could lead to different rf cavity designs than now being considered. Relocation of the E-1 shaft moves it away from the rf galleries, and hence decisions on details of the galleries can be postponed.

Instrumentation & Diagnostics

Diagnostics and Simulations (4.2.1;1.1.8.8.1.19)--The Hypercube computer has been received and applications programs are being installed. Work is continuing on LEB simulations and introducing acceleration ramping into TEAPOT. The Hypercube has been installed, configured, and brought on line. A help desk to assist users of the UNIX workstation system has been implemented.

Instrumentation (4.2.1)--Considerable effort has been devoted to defining LINAC beam instrumentation needs and address the requirement they impose on LINAC civil construction. The synchronization section has succeeded in programming their digital frequency synthesizer through the Digital Signal Processor (DSP) and in establishing communication between the DSP and the Time-to-Digital convertor module as part of their program of simulating synchronization circuitry for transferring beams between booster rings.

DIVISION PROJECT STATUS REPORT PART I	REPORTING DIVISION:

2b. DIVISION MANAGER'S NARRATIVE HIGHLIGHTS (PAGE FOUR) (See item 5 for details on problems and variances)

Technical Systems Management (1.1.1.1.1)

Personal/Recruiting--The number of new hires for the past three months are:

	ASD	ADOD	Total
Oct. 31:	166	38	204
Nov. 30:	181	50	231
Dec. 31:	186	51	237

Personnel/Recruiting assists both ASD and ADOD in recruiting. The slowdown in recruiting is due to current SSCL hiring policy.

Safety Requirements (1.1.8.8.20)-- The Preliminary Hazard Analysis document has been sent to Accelerator System Division Office for review. ASD Office has approved the Safety Program Manual. The safety officer has completed radiation dosimeter training. Safety has made inputs to design reviews for the Accelerator Shop Building (ASB), the E-1 Shaft, the LINAC facilities, the LINAC klystrons and other ES&H in the Directors Office on Emergency Preparedness planning.

Systems Engineering (1.1.1.1.1)--Work is in three areas: Specifications/Analysis (S/A), Reliability Analysis (RA),. and Configuration Management (CM). Under (S/A) the Critical Items Development Specifications (CIDS) for the spool piece requirements for the E1 service area infrastructure has been completed. Technical reviews of the following specifications have been completed: Level II Accelerator Systems, IIIA Collider Accelerator, IIIA HEB,IIIA MEB, IIIA LEB, and IIIA LINAC. Compilation of the ASST/N15 (E1) water treatment plant functional requirements has been completed. Reliability Analyses have been performed for the RF Group. Preliminary reliability predictions for the LINAC second tier subsystems have been completed. RA was also done on the Fermilab quench protection system. Recommendations have been made for acquisition of reliability engineering software tools. We have started the development of configuration management procedures for ASD and ADOD.

Business Operations

Budget Planning (1.1.1.1.1)-- Lack of a firm ASD budget has made detailed planning difficult.

C/SCS, Reporting and CCP (1.1.1.1.1)---Several offers have been made key personnel have not yet on board for C/SCS. Detail LINAC schedules are currently under review and networks are being developed. See section 8 for details of scheduling activities.

Quality Assurance (1.1.8.8.1)--The results of the DOE QA audit have been reviewed. The completion of the Quality Implementation Plan and the Division-specific Procedural Controls Plan have been rescheduled for February.

Procurement Actions(1.1.1.1.1)--The Collider Corrector Magnet Industrialization draft RFP was released to industry.

DIVISION PROJECT STATUS REPORT PART I	REPORTING DIVISION:		
5. SIGNIFICANT PROBLEMS/VARIANCE ANALYSIS			
5a. PROBLEMS, IMPACT ON PROJECT, CORRECTIVE ACTION			RESPONSIBLE GROUP
PROBLEM IDENTIFICATION	IMPACT	CORRECTIVE ACTION	
1. LEB/MEB Kicker Aperture increase..	Extend Prototype Development Schedule and increase cost	Redesign kicker magnets; extend schedule and costs	ASD
2. Procurement response.	Schedule delays	Procurement dept. has increased staff and will examine simplifying procedures. Better requisition tracking is needed and will now be implemented.	Procurement
3. Quench protection heater firing units require way more energy.	Increase costs	Requires further analysis to find solution.	ASD
4. Network support for PC's in Electrical Engineering.	Slows output printing of wordprocessing, schematic diagrams, and circuit simulations.	New system or more support from Computer Services.	ASD/LTS
5. Designers needed in Mechanical Engineering.	Design of welding fixture, cutout fixtures, lead solder fixture and leak check systems not initiated. No impact on schedule yet.	Simplify hiring procedures and approval cycle.	Admin/PMO
5b. ITEMS REQUIRING PMO/DIRECTORATE/DOE ACTION			
1. Time required to process personnel requisitions and employment offers.	Could impact schedules; good candidates are being lost because they take other offers.	Recommend formation of committee to find simplified procedures and authorizations required for hiring.	PMO

DIVISION PROJECT STATUS REPORT PART II	REPORTING DIVISION:	
8. MILESTONE LOG		
SIGNIFICANT MILESTONES ACCOMPLISHED SINCE LAST REPORT	BASELINE DATE	ACTUAL DATE
Power Supply PDR	30 Nov 90	30 Nov 90
Cryo 4K Plant FDR/PDR	17 Dec 90	17 Dec 90
4CM Final Design Review	19 Dec 90	19 Dec 90
SIGNIFICANT MILESTONES OPEN	BASELINE DATE	FORECAST DATE
KEY MILESTONES UPCOMING - NEXT THREE MONTHS	BASELINE DATE	FORECAST DATE
Power Supplies Contract Award	15 Jan 91	15 Jan 91
Spool Piece HSPRF, ENDBOX, & SPR/SPA (PDRR)	16 Jan 91	16 Jan 91
Spool Piece - HSPRF, SPA/SPR, END BOX, (PDR)	25 Feb 91	25 Feb 91
4CM Spool Piece Recooler Delivery	01 Feb 91	01 Feb 91
4CM Cold Tube Test Assembly (FDR)	25 Feb 91	25 Feb 91
4CM Cryostat Weldment (FDR)	28 Feb 91	28 Feb 91
4CM Vacuum Barrier Complete	28 Feb 91	28 Feb 91
Installation Equipment Prel. Design Review (PDR)	01 Nov 90	01 Nov 90
Installation Equipment Final Design Review (FDR)	04 Mar 91	04 Mar 91
Inter Connect & Vacuum (PDR)	27 Mar 91	27 Mar 91
Utilities (PDRR)	29 Jan 91	29 Jan 91
Control Systems (PDRR)	19 Feb 91	19 Feb 91
Rsch Instr - List of Logging Points Avail	31 Dec 90	31 Dec 90

ACCELERATOR DESIGN
AND
OPERATIONS DIVISION

DIVISION PROJECT STATUS REPORT

DESIGN ❑ PRODUCTION ❑
CONSTRUCTION ❑ RESEARCH & DEVELOPMENT ❑ **PART I**

1. IDENTIFIERS:

1a. PROJECT TITLE/NUMBER
SUPERCONDUCTING SUPER COLLIDER LABORATORY

1b. REPORTING PERIOD
December 1, 1990 - December 30, 1990

1c. MANAGING DIVISION

Accelerator Design and Operations Division

1d. DIVISION/OFFICE CONTACT

Don Edwards

1e. DIVISION MANAGER

Don Edwards

1f. PERFORMING ORGANIZATION(S)

Collider
HEB
LEB
MEB
Beamlines
Linac

2 DIVISION MANAGER'S PERSONAL ASSESSMENT:

2a. Summary Status

Not Applicable

	Green	Yellow	Red	LAST PERIOD	THIS PERIOD
COST					
SCHEDULE					
TECHNICAL					
OVERALL DIVISION					

DIVISION PROJECT STATUS REPORT PART I	REPORTING DIVISION: ADOD

2b. DIVISION MANAGER'S NARRATIVE HIGHLIGHTS **PAGE ONE** (See item 5 for details on problems and variances)

MEB

MEB work during this past month has dealt with a number of details. Priority was given to issues which could ultimately effect lattice choices. Among these were: further explorations of slow extraction with different lattice parameters, inclusion in the lattice of g_t jump quadrupoles to insure that the new lattice did not preclude them, and the precise siting of the MEB with respect to the HEB injection insertions and the test beams lines.

Effort was expended to develop tools to calculate rf parameters through out the acceleration cycle. Much of the work in this area was previously done using resources at other laboratories, or by people that are no longer here.

Additionally, work has begun to reevaluate hardware choices made in the SCDR. Much of this work was done at other laboratories, and we are now getting SSC people assigned to work on these devices. Thus the SCDR designs are being studied and reevaluated in light of modifications to the lattice. The kickers that are used for injection and extraction are a particular example of devices which have been under study in the past month.

LEB

During the last month, significant effort with respect to the LEB has been in the evaluation of a specific high g_{tr} ($\approx$20) lattice design. In particular, tracking studies under the condition of a perturbed (misaligned, mispowered, and with multipoles) lattice to determine the sensitivity to errors are continuing and nearing completion. The present circumference of the LEB remains at the SCDR value (540 m). In conjunction with this activity, the lattice drift space requirements necessary for belows, flanges, pumps, sextupoles, and corrective elements continue to be investigated at a more detailed level.

A preliminary engineering concept for a 10 Hz vacuum chamber has been completed and a more detailed evaluation initiated. The multipole contributions due to eddy currents within a particular chamber geometry have been evaluated and will provide a basis for the vacuum chamber design and for an estimated of the effect of the transverse optics.

A preliminary design for the laminations necessary for the LEB dipoles, quadrupoles, and sextupoles has been completed and will be used to initiate the engineering designs for these magnets.

The engineering design of hardware necessary for the beam diagnostics has been initiated.

LINAC

Most of the linac effort this month has been to define the requirements for the linac facilities. This required extensive tabularization of the linac components to define the locations and extent of the numerous requirements for utilities, space, penetrations, cable tray, etc. The documentation required for the start of Title I design should be completed in January. The einzelens LEBT was delivered from TAC and prepared for installation at the next source maintenance period in early January. The rf specifications were reviewed and finalized, and the klystron procurement package has been drafted and is under review.

DIVISION PROJECT STATUS REPORT PART I	REPORTING DIVISION:

2b. DIVISION MANAGER'S NARRATIVE HIGHLIGHTS **PAGE TWO** (See item 5 for details on problems and variances)

COLLIDER

Presentations were made concerning collider vacuum and synchrotron radiation intercept issues, and Collider quadrupole magnet aperture issues at the Machine Advisory Committee held December 7-8, 1990, at SSCL. Detailed development of the technical system requirements for the N15 (E1) shaft and the first section of Collider tunnel began this month as did those for the Accelerator Systems String Test (ASST). Studies continued on energy deposition in the superconducting quadrupoles in the IRs, placement of scraper elements for emittance control, and on an alternative beam dump optical system. Work continued on correction magnet designs for the Collider spool pieces with 5 cm apertures. Successful powering of correction element designs at TAC show high field correctors which achieve short sample in 1 -2 quench cycles, just as in the LBL designs reported earlier.

LINAC-LEB BEAM-LINE

Preliminary studies of the effects of random errors in the positions and magnetic fields of the Linac-LEB transport line were carried out. These studies help in determining steering requirements and emittance growth estimation. TRANSPORT code was modified to study beam line optic calculations under the effect of up to 250 different sets of random errors. General requirements on the Linac-LEB transfer line components/equipment for the purposes of conventional construction were determined and tabulated.

LEB-MEB BEAM-LINE

Work on the LEB-MEB transport optics has been initiated by studying this transfer line as laid out in the SCDR. Studies of changes required for new LEB and MEB lattices are in progress. Some initial detail design work on the extraction from that design may be difficult.

MEB-HEB BEAM-LINE

The geometrical relationship between the MEB and the HEB as it relates to the transport system is being studied. Also MEB beam extraction transport simulation is in progress.

HEB COLLIDER BEAM-LINE

Calculations has been made for the HEB-Collider 14m separation (conventional magnet optics Nov. 20, 90 version) to determine criteria for magnet field qualities and beam line component alignment. A beam position correcting scheme is under development. A program to simulate beam transfer line misalignment and field errors was developed. It makes use of the same method as in TRANSPORT bus has the advantage speed for running multiple trials and ease to modify for various beam optics configurations.

CONVENTIONAL CONSTRUCTION DIVISION

DIVISION PROJECT STATUS REPORT

DESIGN ❑ PRODUCTION ❑
CONSTRUCTION ❑ RESEARCH & DEVELOPMENT ❑ **PART I**

1. IDENTIFIERS:

1a. PROJECT TITLE/NUMBER
SUPERCONDUCTING SUPER COLLIDER LABORATORY

1b. REPORTING PERIOD
December 1—31, 1990

1c. MANAGING DIVISION

Conventional Construction Division

1d. DIVISION/OFFICE CONTACT

Robin Scott, ext. 4001

1e. DIVISION MANAGER

Jon R. Ives, ext. 4028

1f. PERFORMING ORGANIZATION(S)
- Conventional Construction Division
- The PB/MK Team (A-E/CM subcontractor)

2 DIVISION MANAGER'S PERSONAL ASSESSMENT:

2a. Summary Status

Green	Yellow	Red
G	Y	R

	LAST PERIOD	THIS PERIOD
COST		
SCHEDULE		
TECHNICAL		
OVERALL DIVISION		

DIVISION PROJECT STATUS REPORT PART I	REPORTING DIVISION: Conventional Construction Division

2b. DIVISION MANAGER'S NARRATIVE HIGHLIGHTS (See item 5 for details on problems and variances)

WBS 2.1
- Continued Title I design of Accelerator Systems String Test Facility (ASST).
- Continued defining requirements and configuration for E1 shaft, first tunnel sector. Established E1 Shaft/first tunnel sector Working Group.
- The Linac Working Group continued to meet to establish Linac conventional construction requirements.
- Supported DOE review of definitized PB/MK subcontract.
- Land acquisition and turnover to DOE/SSC is being coordinated with TNRLC and is proceeding well. No problems are anticipated.
- Commenced a tunnel diameter study with civil input from PB/MK and technical systems input from the SSCL technical divisions.

WBS 2.2
- Work Package Authorization for Pre-Title I design of the Experimental Facilities transmitted to PB/MK.
- Letter of Intent Proposals and Resource Requirements Reports transmitted to PB/MK.
- Phase A conceptual designs of underground hall structures proceeding to work plan schedule.

WBS 2.3
- Continued site planning for E1 site and developing Design Requirements Document for E1 infrastructure. Issued Work Authorization Package.
- Coordinated with TNRLC on roads, water services, real estate issues.
- Began review of service areas for site acquisition, issued Work Authorization Package to PB/MK.
- Continued permit coordination between PB/MK, SSCL, and TNRLC.
- Coordinated CCD review, input to the Mitigation Action Plan (MAP).
- Reviewed and participated in development of Environmental Compliance Plan (ECP) for ASST.
- Reviewed adequacy of FM 664 and FM 55 for construction access.
- Continued coordination with Ellis County Waste Management Committee and Soil Conservation Service.

WBS 2.4
- Commenced Title I design of the Magnet Test Lab (MTL).
- Continued MDL building steel fabrication off-site and continued construction (foundations and site work) for Magnet Development Lab.
- Continued development of requirements document for Accelerator Shop Building (ASB).

WBS 2.5
- Continued Site Development Plan.
- Continued conceptual studies for method of construction for Interaction Halls at WN and WS.

DIVISION PROJECT STATUS REPORT PART I	REPORTING DIVISION: Conventional Construction Division		
5. SIGNIFICANT PROBLEMS/VARIANCE ANALYSIS			
5a. PROBLEMS, IMPACT ON PROJECT, CORRECTIVE ACTION			RESPONSIBLE GROUP
PROBLEM IDENTIFICATION	IMPACT	CORRECTIVE ACTION	
(1) CCD staff shortfalls	(1) Design Requirements Documents preparation behind schedule.	(1) CCD organizational review completed; Head of CCD has approved personnel requisitions for the hiring of seven additional employees.	CCD
(2) FY91 budgeted activities	(2) Unable to establish firm milestone dates through FY91.	(2) CCD and PMO will collaborate in January 1991 on a close, coordinated review of the Baseline Master Schedule.	CCD, PMO, and Directorate Planning
5b. ITEMS REQUIRING PMO/DIRECTORATE/DOE ACTION			
(1) Approved Project Master Schedule needed.	(1) Unable to set firm milestone dates through FY'91	(1) Issue approved Project Master Schedule	PMO

DIVISION PROJECT STATUS REPORT PART II	REPORTING DIVISION: Conventional Construction Division	
8. MILESTONE LOG		
SIGNIFICANT MILESTONES ACCOMPLISHED SINCE LAST REPORT	BASELINE DATE	ACTUAL DATE
WBS 2.1: Commenced Collider Tunnel Diameter Study (Level 4)	N/A	December 1990
WBS 2.4: Commenced Title I design on MTL (Level 3)		December 1990
SIGNIFICANT MILESTONES OPEN	BASELINE DATE	FORECAST DATE
• WBS 2.5: Award A-E/CM definitized contract (level 1)	June 1990	January 4, 1991
KEY MILESTONES UPCOMING - NEXT THREE MONTHS	BASELINE DATE	FORECAST DATE
Level		
0 • Start of civil construction	• March 1991	• April 1991
1 • None		
2 • ASST: advertise for construction bid	• January 1991	• March 1991
2 • MDL Partial BOD	• February 1991	• April 1991
3 • Initiate Title I design of E1 Shaft and First Tunnel Segment	• August 1990	• January 1991

PHYSICS RESEARCH DIVISION

DIVISION PROJECT STATUS REPORT

DESIGN ❑ PRODUCTION ❑
CONSTRUCTION ❑ RESEARCH & DEVELOPMENT ❑ **PART I**

1. IDENTIFIERS:

1a. PROJECT TITLE/NUMBER
SUPERCONDUCTING SUPER COLLIDER LABORATORY

1b. REPORTING PERIOD
December 1-31, 1990

1c. MANAGING DIVISION
Physics Research Division

1d. DIVISION/OFFICE CONTACT
Newton Norman ext. 6035

1e. DIVISION MANAGER
Fred Gilman ext. 6113

1f. PERFORMING ORGANIZATION(S)
SDC Collaboration -- LBL
L* Collaboration -- MIT
EMPACT/TEXAS Collaboration -- SUNY, Stony Brook

2a. DIVISION MANAGER'S PERSONAL ASSESSMENT

The Physics Research Division appears to be on the specified baseline with respect to cost, schedule and technical accomplishments. However the presently proposed FY91 funding for detector R&D in the Physics Research Division budget is significantly below the recommendations of the R&D Committee and it is not clear that the R&D work necessary to lead to an SDC proposal in FY92 can be accomplished with available funds.

Green	Yellow	Red
G	Y	R

	LAST PERIOD	THIS PERIOD
COST	G	G
SCHEDULE	G	G
TECHNICAL	G	G
OVERALL DIVISION	G	G

DIVISION PROJECT STATUS REPORT PART I	PROJECT TITLE: PHYSICS RESEARCH DIVISION

2b. NARRATIVE HIGHLIGHTS AND KEY ISSUES (See item 5 for details on problems and variances)

•WBS 4.6.3 Experimental Facilities

A report on test beams was prepared to be presented at the HEPAP meeting in early January. The apparent lack of good fixed target facilities in the period when detectors will need test beams is a serious problem. We will be working on developing a long term plan for test beams with the detector collaborations in the coming year.
Georges Leskens has arrived at the SSCL and will work with Bob Lavelle to write the safety guidelines for SSC detectors. This work has a projected completion date of March.
Work continues on the Technical Information Center with initial indications that this work is proceeding very satisfactorily.

•WBS 5.1 Experimental Systems, Detector R&D

Each of the collaborations that submitted a detector subsystem R&D proposal related to SDC was contacted with regard to the level of recommended funding by the Laboratory's Detector R&D Committee. Three reformulated proposals were submitted to the SSCL in December. They were each reviewed by appropriate members of the R&D Committee. These three have now been accepted for support but at funding levels significantly below those requested. The presently proposed funding for detector R&D in the Physics Research Division FY91 budget is significantly below the recommendations of the R&D Committee and it is not clear that the R&D work necessary to lead to an SDC proposal in FY92 can be accomplished with available funds.

•WBS 5.2 Experimental Systems, Detector Engineering

The staff of the Research Division performed a detailed examination of the Letters of Intent and associated documents submitted by the collaborations. During the first week in December meetings were held with the SDC, L*, and EMPACT/TEXAS collaborations on the 3rd, 5th, and 7th, respectively, with the primary aim of achieving a detailed understanding of the cost estimates. During that same period there were internal Research Division meetings evaluating the LOI's as a whole. The cost estimates of the collaborations, together with additional detector-related items which were identified by the Laboratory, were put into a common format and set of categories. These, plus the cost of the associated collider halls and surface facilities, were compiled into a Preliminary SSC Detector Cost Report for use by the Program Advisory Committee.

The Program Advisory Committee met on December 13 - 15, 1990. There were two-hour long (including questions) public presentations of each of the Letters of Intent on December 13th. This was followed by written questions and answers from the collaborations on the 14th of December. The PAC evaluated and debated all the material related to the Letters of Intent in meetings which lasted into the evenings of the 13th, 14th, and 15th. In attendance at much of this discussion were members of the Laboratory's Scientific Policy Committee and representatives of the DOE and URA. The PAC presented its recommendations to the Laboratory at the conclusion of the meeting on the 15th.

Pursuant to these recommendations, the Laboratory has decided that:

(1) Formal proposals/design reports for the very large initial-round detectors will be due by April 1, 1992. Final decisions on the proposals are expected by September, 1992 so that detector construction can begin at the start of the 1993 fiscal year.

(2) A substantial portion of Total Project Cost funds will be reserved for smaller experiments that will be selected later. A schedule for selecting these experiments will be established in the summer of 1991, following additional PAC discussions.

(3) The Solenoidal Detector Collaboration (SDC) is approved for support in its development of a formal proposal/design report. The SSC Project Manager is authorized to begin planning the collision hall and other facilities that will be needed to accommodate the SDC detector.

DIVISION PROJECT STATUS REPORT PART I	PROJECT TITLE: PHYSICS RESEARCH DIVISION

(4) The L* Collaboration is not approved at this time, pending further PAC review and recommendations. The Laboratory will carry out a detailed cost review of the proposed L* detector through the Physics Research Division, as requested by the PAC. The Director will work with the L* spokesman on the serious personnel and collaboration-governance issues raised by the PAC.

(5) The EMPACT/TEXAS Collaboration is not approved for SSCL support in the development of a formal proposal/design report. The Laboratory will make every effort to encourage and facilitate participation by members of this collaboration in the SSC's scientific program.

Following the meeting of the PAC, the Laboratory has been in contact with each of the collaborations regarding these decisions and their implementation. These discussions are continuing.

A second allocation of funds ($200,000) from the SSCL for engineering, systems integration, and coordination work leading to the Letters of Intent for each of the three collaborations was given in December. The final installment of support for work on the Letters of Intent should follow in January.

•WBS 5.3 Detector Computing

The Request for Proposals for 30 workstations which will make up the 500 MIPS front end was issued. Proposals are due January 4 and selection will be made January 8. The 500 MIPS project is on schedule with operation slated for March, 1991.

DIVISION PROJECT STATUS REPORT PART I	PROJECT TITLE: PHYSICS RESEARCH DIVISION		
5. SIGNIFICANT PROBLEMS/VARIANCE ANALYSIS			
5a. PROBLEMS, IMPACT ON PROJECT, CORRECTIVE ACTION			RESPONSIBLE GROUP
PROBLEM IDENTIFICATION	IMPACT	CORRECTIVE ACTION	
•WBS 5.1 The presently proposed FY91 funding for detector R&D in the Physics Research Division budget is significantly below the recommendations of the R&D Committee.	It is not clear that the R&D work necessary to lead to an SDC proposal in FY92 can be accomplished with available funds.	More funds may be required for detector R&D relevant to SDC.	Directorate and/or PMO
•WBS 5.2 Funding uncertainities have caused delays in commiting funds to the Detector Collaborations involved in submitting Letters of Intent.	The impact on the collaborations is not evident. The Letters of Intent were submitted on schedule as they are assuming funding for this work in the near future.	Some additional funding was provided to each of the collaborations in December.	PRD
5b. ITEMS REQUIRING DIVISION/PMO/DIRECTORATE ACTION			
Resolution of funding issues.	Delays in commitment of proper funding levels.	Commitment of Texas and DOE funds.	

DIVISION PROJECT STATUS REPORT PART II	PROJECT TITLE: PHYSICS RESEARCH DIVISION	
8. MILESTONE LOG		
SIGNIFICANT MILESTONES ACCOMPLISHED SINCE LAST REPORT	BASELINE DATE	ACTUAL DATE
•WBS 5.2 Experimental Systems, Detector Development The Program Advisory Committee met on December 13 - 15, 1990. The PAC presented its recommendations to the Laboratory at the conclusion of the meeting on the 15th for large general purpose detectors.	December 1990	December 15, 1990
SIGNIFICANT MILESTONES OPEN	BASELINE DATE	FORECAST DATE
KEY MILESTONES UPCOMING - NEXT THREE MONTHS	BASELINE DATE	FORECAST DATE
• WBS 5.2 Experimental Systems, Detector Development		
Decision on Large Detectors going forward to proposals.	January, 1991	January, 1991
Start conceptual design reports for large detectors	February, 1991	February, 1991
•WBS 5.3 Experimental Systems, Detector Computing		
Delivery of 500 MIPs computing capability	None	March, 1991

LABORATORY TECHNICAL SERVICES DIVISION

DIVISION PROJECT STATUS REPORT

DESIGN ❑ PRODUCTION ❑
CONSTRUCTION ❑ RESEARCH & DEVELOPMENT ❑ PART I

1. IDENTIFIERS:

1a. PROJECT TITLE/NUMBER
SUPERCONDUCTING SUPER COLLIDER LABORATORY

1b. REPORTING PERIOD
Dec.1, 1990 - Dec 31, 1990

1c. MANAGING DIVISION

Laboratory Technical Services

1d. DIVISION/OFFICE CONTACT

David L. Pells

1e. DIVISION MANAGER

E. Jack Story

1f. PERFORMING ORGANIZATION(S)

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

2 DIVISION MANAGER'S PERSONAL ASSESSMENT:

2a. Summary Status

Green	Yellow	Red
G	Y	R

	LAST PERIOD	THIS PERIOD
COST	G	G
SCHEDULE	G	G
TECHNICAL	G	G
OVERALL DIVISION	G	G

DIVISION PROJECT STATUS REPORT PART I	REPORTING DIVISION: LTS December 1990

2b. DIVISION MANAGER'S NARRATIVE HIGHLIGHTS **PAGE ONE** *(See item 5 for details on problems and variances)*

Continuing support was provided to TNRLC in their efforts to establish a facility in Ellis County. Criteria was developed and passed on to their A-E and CM contractors. Electrical upgrades to Stoneridge Building #4 for the RF experiments for the Accelerator Systems Division were completed. Remodeling of portions of Stoneridge #2 to provide more space for the Magnet Systems Division was initiated. (WBS 4.4.2)

Controlled property at the SSCL is now at 7300 units, with a value of $22.4M. Meetings were held with PB/MK to set up a property control system based on the approved SSCL system. A 20' X 60' modular building for secure storage of hi-value equipment was installed in the warehouse in Stoneridge Building #2 for storage of electronic equipment and software. Warehouse facilities at Parkerville and Stoneridge Bldg. #2 are 100% full. (WBS 4.4.3)

Sixty six percent of the Interim Shops core staffing have been hired. Interim Instrumentation, Machine and Welding Shops are now providing fabrication support to SSCL technical divisions. (WBS 4.4.4)

Extensive support was provided by MIS programming, analysis and operations support personnel to SSCL Finance for Deltek calendar year end accounting activities. Custom programs to tailor Deltek software to specific SSCL needs were installed. DOE-Chicago Operations Office approved the release of proposed acquisitions of ADP equipment over $25K, including workstation servers, CAD networks and software licenses, totalling about $1 Million. Approval was also received for the PB/MK portion of the FY91 Short Range Plan. The Information Technology Resources Plan was submitted to DOE/Chicago Operations Office. During the month 82 SSCL employees were trained on Apple applications.Meetings were held with Digital Equipment Corp. to develop a special class addressing UNIX for VMS users. (WBS 4.4.5)

CAD System support personnel installed and configured CAD/CAE equipment for the Physics Research Division and the Conventional Construction Division. Central CAD support equipment operated by LTS was expanded. Programs were created during December to help automate engineering data extraction, drawing generation and plotting. Designers and drafters continued to support ASD mechanical engineering efforts and the Facilities Engineering Group. (WBS 4.4.6)

SSCL Networking representatives participated in design reviews for the E1 shaft and first tunnel segment communications infrastructure, for the MDL and N15 Infrastructure communications requirements and for the Physics Research Division 500 MIPS Detector Simulation Facility network configuration. In the Telecommunications area, continuing activities included updating the Microcall on-line accounting system daily, monitoring DID and two-way trunks, preparing a conceptual design for voice communications for Ellis County, and developing communications services to Eagle Park offices. In the Visual Media area major activities included setting up a Communications Laboratory in SR Bldg.4, installing antennas on Bldgs. 2 & 4, and establishing a weather computer in Bldg. 4. A Quality Assurance video was researched, written and taped. (WBS 4.4.7)

Work continued on the Engineering Standards Management Plan. First drafts of two QA Practices for Engineering Standards were completed. Procedures for *Bill of Materials* and *Software Libraries and Repositories* were submitted to Program Management. (WBS 4.4.8)

An Incoming Inspection Job Qualification Standard (JQS) was developed. The Incoming Inspection/Calibration/Repair Lab's modular building was completed. During December 33 visual inspections and 2 performance checks were completed. Twenty three Calibration Recall Notifications were sent out, two performance verifications were completed and two items were repaired by the Metrology Lab. (WBS 4.4.9)

DIVISION PROJECT STATUS REPORT PART I	REPORTING DIVISION: LTS December, 1990

2b. DIVISION MANAGER'S NARRATIVE HIGHLIGHTS **PAGE TWO** (See item 5 for details on problems and variances)

SSCL Security began reprogramming the Security Access System. An Emergency Preparedness Coordinating Committee meeting was held in December. Meetings were held with Waxahachie and Midlothian Fire Chiefs to discuss emergency response facilities and response times. A meeting was also held with Ellis County Sheriff and Police Chiefs of Waxahachie, Ennis and Midlothian to discuss emergency preparedness and response planning for the west and east campuses. A meeting was held with the PB/MK Safety Manager to discuss emergency procedures for the E1 Site. E,S & H activity included formalization of a plan for the monitoring and maintenance of the 42 water wells in Ellis County. (WBS 4.4.10)

A draft of the Central Files Policies and Procedures Manual was completed. SSCL Central Files head met with DOE/OSSC Records Management to review their imaging system. Approximately 3000 documents have been coded and shelved. GSA vehicle management and support continued. Furniture purchased at a local bank auction was transferred to the Parkerville warehouse. Approved policies for convenience copiers and freestanding furniture were distributed. There were 202 visits to the SSCL medical office during December, including 4 job related injuries, 121 non occupational illness/injuries, 41 pre-employment physicals, and 36 blood drive participants. Ambulance service in Ellis County was investigated, resulting in the discovery that no advance life-support service is currently available for the West Campus. A meeting was held with Care-Flite, the helicopter medical evacuation service based in Dallas, to discuss emergency evacuation service for the West Campus. A draft policy regarding medical care for visiting foreign scientists was prepared. (WBS 4.4.11)

Quantitative data on the SSCL'S FY 1990 technology transfer-related activities and expenditures was submitted to DOE. An information sheet was written to provide SSCL authors with guidelines on copyright protection. An Application Assessment form was created for evaluating SSCL inventions. (WBS 4.4.12)

The floor plans and electrical requirements for the computer operations room for Phase 1 of the Detector Simulation Facility have been detailed. The Detector Simulation Users Guide was completed. The average monthly CPU utilization on the Scientific VAX was 80.6% for December, with average users at 87. The Computer Operations Manual is currently in review. (WBS 4.4.13)

Technical Publications support continued, including reproduction services, technical editing, document production and graphics support. Authorization was received from DOE to purchase printing services from U.S. Government facilities. (WBS 4.4.14)

DIRECTORATE DIVISION

DIVISION PROJECT STATUS REPORT

DESIGN ❑ PRODUCTION ❑
CONSTRUCTION ❑ RESEARCH & DEVELOPMENT ❑ **PART I**

1. IDENTIFIERS:

1a. PROJECT TITLE/NUMBER
SUPERCONDUCTING SUPER COLLIDER LABORATORY

1b. REPORTING PERIOD
December 1, 1990 - December 31, 1990

1c. MANAGING DIVISION

Directorate

1d. DIVISION/OFFICE CONTACT

Neil Baggett

1e. DIVISION MANAGER

Raph Kasper

1f. PERFORMING ORGANIZATION(S)

Education/External Affairs
Environment, Safety, & Health
International Coordination
Legal Counsel
Planning
Users' Office

2 DIVISION MANAGER'S PERSONAL ASSESSMENT:

2a. Summary Status

Green	Yellow	Red
G	Y	R

	LAST PERIOD	THIS PERIOD
COST	G	G
SCHEDULE	G	G
TECHNICAL	G	G
OVERALL DIVISION	G	G

DIVISION PROJECT STATUS REPORT PART I	REPORTING DIVISION: Directorate

2b. DIVISION MANAGER'S NARRATIVE HIGHLIGHTS (See item 5 for details on problems and variances)

- The Program Advisory Committee met from December 13-15 to consider letters of intent for major experiments at the SSC. The committee recommended that the Solenoidal Detector Collaboration (SDC) be supported to proceed toward a full technical proposal. These proposals will be due in the spring of 1992. It did not recommend approval of the L* collaboration at this time but recommended a detailed, independent cost review of L*. The committee did not recommend proceeding further with the EMPACT/Texas effort. 4.5.1

- The Machine Advisory Committee met from December 7-8, 1990. The committee heard presentations by Laboratory staff relating to vacuum, synchrotron radiation intercept and quadrupole aperture in the Collider, and the issue of the Injector design. 4.5.1

- Professor Hirotaka Sugawara, Director General of KEK, visited the Laboratory during December 2-4, 1990. He met with SSCL staff and others to discuss many topics related to Japanese involvement in the SSC project. 4.5.1

ADMINISTRATION DIVISION

DIVISION PROJECT STATUS REPORT

DESIGN ❑ PRODUCTION ❑
CONSTRUCTION ❑ RESEARCH & DEVELOPMENT ❑ **PART I**

1. IDENTIFIERS:

1a. PROJECT TITLE/NUMBER
SUPERCONDUCTING SUPER COLLIDER LABORATORY

1b. REPORTING PERIOD
December 1990

1c. MANAGING DIVISION

ADMINISTRATION

1d. DIVISION/OFFICE CONTACT

ADMINISTRATION
Bob Van Ness
Janice Westmoreland

1e. DIVISION MANAGER

Bob Van Ness

1f. PERFORMING ORGANIZATION(S)

2 DIVISION MANAGER'S PERSONAL ASSESSMENT:

2a. Summary Status

Green	Yellow	Red
G	Y	R

	LAST PERIOD	THIS PERIOD
COST	G	G
SCHEDULE	G	G
TECHNICAL	G	G
OVERALL DIVISION	G	G

DIVISION PROJECT STATUS REPORT PART I	REPORTING DIVISION: ADMINISTRATION

2b. DIVISION MANAGER'S NARRATIVE HIGHLIGHTS **PAGE ONE** (See item 5 for details on problems and variances)

PROCUREMENT

- Fact-finding is nearly complete on the Collider Dipole Magnet RFP's. Major thrust at this time centers on definition of the Subcontract requirements for the product development phase(s). Updated proposals from both firms (GD and Westinghouse) due in mid January.
- DOE approval of the definitive Subcontract with PB/MK is imminent with full execution by the parties now expected to take place the first week in January.
- During December, Procurement made awards totalling $5,900,708 of which $2,046,105 was to Small Business and $521,584 was to Small Disadvantaged business as defined in Public Law 101-101.

PERSONNEL

- We coordinated 100 interviews with hiring managers this month. Twenty-nine new employees joined the Laboratory for a total employee population of 912 as of 12/28/90.
- Major effort was expended on the Deltek conversion to the Advanced Payroll.
- Implemented GEM (National Consortium for Graduate Degrees for Minorities in Engineering, Inc.) pre-selection process. We received 450 resumes of top minority engineering students.
- The Laboratory "Travel Authorization" form was revised and distributed and a "Request for Foreign Travel Funds" form was developed to aid in that process.
- Major progress was made during December on the Exempt Classification structure.

FINANCE

- Completed calendar year-end closing of payroll files
- Tested Property Accounting System
- Tested 3.3 accounts payable, regular payroll and advanced payroll, year-end close programs
- Tested 3.2 accrual program updates
- Initiated preliminary testing of 3.3 version of Deltek
- Organized the presentation material for the first January Laboratory Management Review (LMR)
- Met with External Audit and URA Corporate Office on Laboratory Management responses to FY90 Audit Findings and Recommendations
- Continued incrementally funding and monitoring major sub-contracts
- Tested SP/FIS requisition system and prepared for conversion of files in January

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MINORITY AFFAIRS

- The Director of Minority Affairs participated as speaker at several functions including the Horizons '90 Minority/Woman Business Enterprise Procurement Conference and the Southern Dallas Development Corporation vendor seminar.
- The Manager of EEO/AA participated in meetings with the SSC Manager of Staffing and College Recruitment to complete the Spring College Recruitment Schedule and to finalize the Co-op Educational Program.
- Participated with representatives from Texas State Technical Institute and Baylor University to discuss co-op opportunities and summer intern positions, and also with the President of 'Administrations at Mountain View Junior College to discuss the Technical Program of the College.
- Assisted the PB/MK Personnel Director with minority employment recruitment.
- The SADBU Manager scheduled numerous SDB communication system vendors in anticipation of an SDB procurement set-aside.
- The SADBU Manager, the Director of Minority Affairs and Director of Procurement met jointly with the PB/MK team represented by their Director of Procurement, Corporate (MK) SADBU Director and the Director of Human Resources to review our P.L. mandated requirements.
- The Director of Minority Affairs and the Manager of SADBU met with the Washington, D.C., National Deputy SBA Administrator, Dallas Regional SBA Administrator and several other civic and business leaders to discuss the SSCL project.
- The SADBU Manager and the Director of Minority Affairs in conjunction with procurement personnel briefed sixteen visiting members of the Waco, Texas Chamber of Commerce to discuss business development opportunities with the SSCL.
- A separate meeting was held with a Fort Worth Chamber of Commerce Officer to review and discuss the Fort Worth area SSCL procurement activities.