QUARTERLY REPORT

Report Date: **01/28/2004**	U. S. DOE Federal Project Director's Progress Report	Office of Science
Project Number: MIE-41-NL	Title: **GammaRay EnergyTrack. In-Beam Nuclear Array**	Program: **SC-90**
Report Period: **Oct - Dec 2004**	Location: **Lawrence Berkeley National Laboratory**	Project Office: **BSO**

SUMMARY ASSESSMENT

	Current Quarter	Previous Quarter
Cost:	**Satisfactory**	**Satisfactory**
Schedule:	**Satisfactory**	**Satisfactory**
Technical:	**Satisfactory**	**Satisfactory**
Overall:	**Satisfactory**	**Satisfactory**

PROJECT MANAGEMENT

DOE Office of Nuclear Physics Program Manager: **Jehanne Simon-Gillo**
Phone: **301-903-3613**
DOE Federal Project Director: **Barry Savnik**
Phone: **510-486-6108**
Contractor Manager: **I-Yang Lee**
Phone: **510-486-5727**

COST/FUNDING ($K)

	Baseline	Current Estimate	Funding Received
DOE TEC:	**17,000**	**17,000**	**1,000**
OPC:	**1,200**	**1,200**	**1,200**

CRITICAL DECISIONS

Number	Title	Baseline	Actual/Forecast
0	Mission Need	**08/03**	**08/03 A**
1	Preliminary Baseline Range	**Q2 FY04**	**02/04 A**
2A/3A	Performance Baseline/LL Items	**Q3 FY05**	**Q3 FY05**
2B/3B	MIE Construction	**Q4 FY07**	**Q4 FY07**
4	Start of Operations	**Q3 FY10**	**Q3 FY10**

FUNDING PROFILE

Per Latest Approved Budget (FY 2004) ($K)

	FY04	FY05	FY06	FY07	FY08	FY09	FY10	Total
TEC	**1,000**	**2,500**	**3,000**	**3,900**	**4,400**	**2,000**	**200**	**17,000**
OPC	**1,200**							**1,200**
TPC	**2,200**	**2,500**	**3,000**	**3,900**	**4,400**	**2,000**	**200**	**18,200**

Cumulative through June 30, 2004

	TEC	OPC	TPC ($)
Remaining Contingency:	**3,094**	**-**	**3,094**
Costs Accrued:	**444**	**654**	**1,098**
Uncosted Commitments:	**46**	**101**	**147**

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SCHEDULE SUMMARY

	Start Date		Completion Date		Percent Complete	
Subsystem	Baseline	Forecast/Actual	Baseline	Forecast/Actual	Baseline	Actual
Design	**03/01/04**	**03/01/04 A**	**02/08**	**02/08**	**27.5%**	**16.3%**
Procurement	**06/01/05**	**06/01/05**	**05/09**	**05/09**	**- 0 -**	**- 0 -**
Construction	**06/01/07**	**06/01/07**	**04/10**	**04/10**	**- 0 -**	**- 0 -**

Milestones Accomplished Since Last Report	Baseline Date	Actual Date

Upcoming Milestones	Baseline Date	Planned Date
L2 - Detector Test Procedures and Apparatus Complete	12/04	01/05
L1 - CD-2A/3A for Long Lead-time Items	FY05/Q3	FY05/Q3
L2 - Award Detector Module Contract	FY05/Q4	FY05/Q4
L2 - Design and Drawings of Mechanical Support Structure Complete	FY06/Q1	FY06/Q1

NARRATIVE HIGHLIGHTS

The document describing the basis for a decision between warm vs. cold FET and 3 vs. 4 crystals was reviewed and the concept was approved. The contract with Eurisys to design the 4-crystal, warm FET detector module is progressing. A Sole Source document has been prepared. We have received the refurbished Prototype II detector to compare the performance of warm and cold FETs. The Support Structure Mechanical Requirements document was completed and reviewed. The conceptual design of the support structure started. The Memorandum of Understanding with Washington University at Saint Louis is in place and the contract for the liquid nitrogen with Oak Ridge National Lab signed. Development of the EPICS-based, cpu/crystal version of the data acquisition code is well underway. In-beam testing of the triple prototype was done and the data analysis is underway and preliminary results indicate that we have enough data for a detailed study of the in-beam triplet performance.

BACKUP INFORMATION

Baseline Document

Document Title: **Preliminary Project Execution Plan** Date of Document: **February 2004**

Approving Official: **Dennis G. Kovar, Associate Director, Office of Nuclear Physics, Office of Science**

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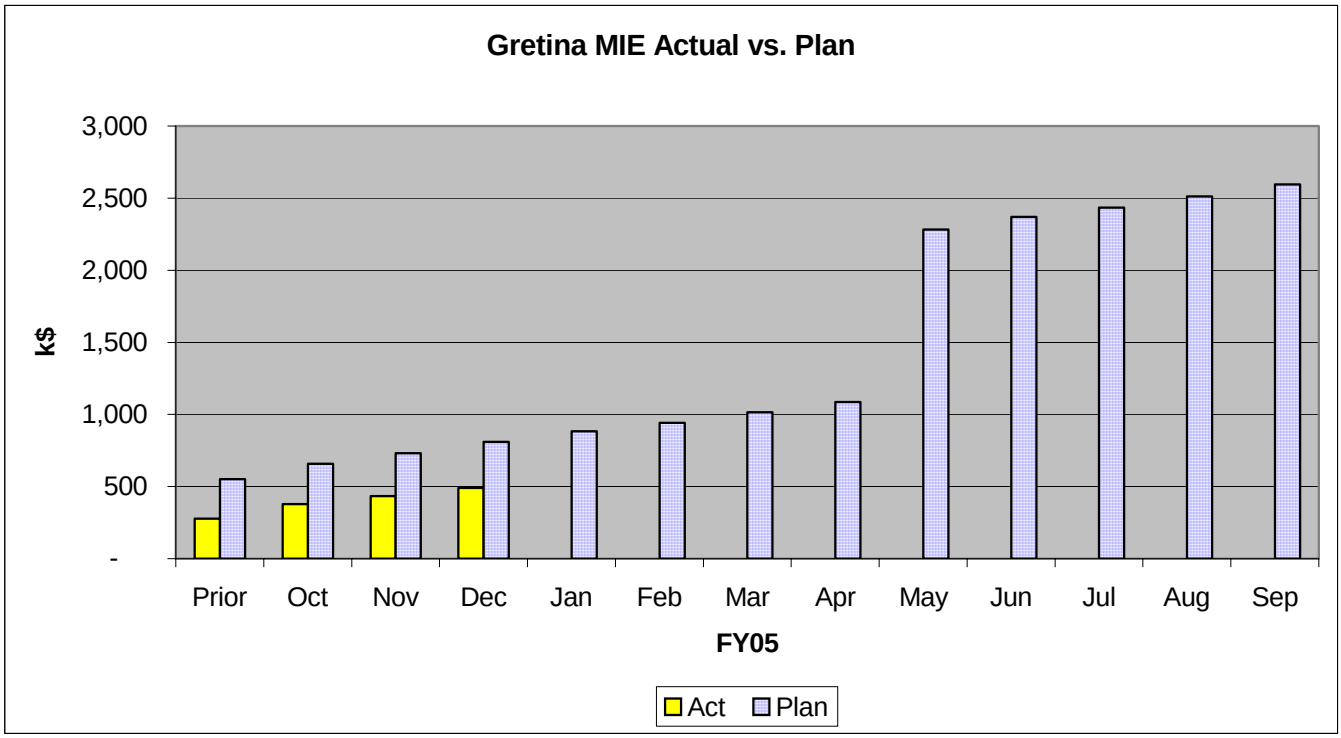
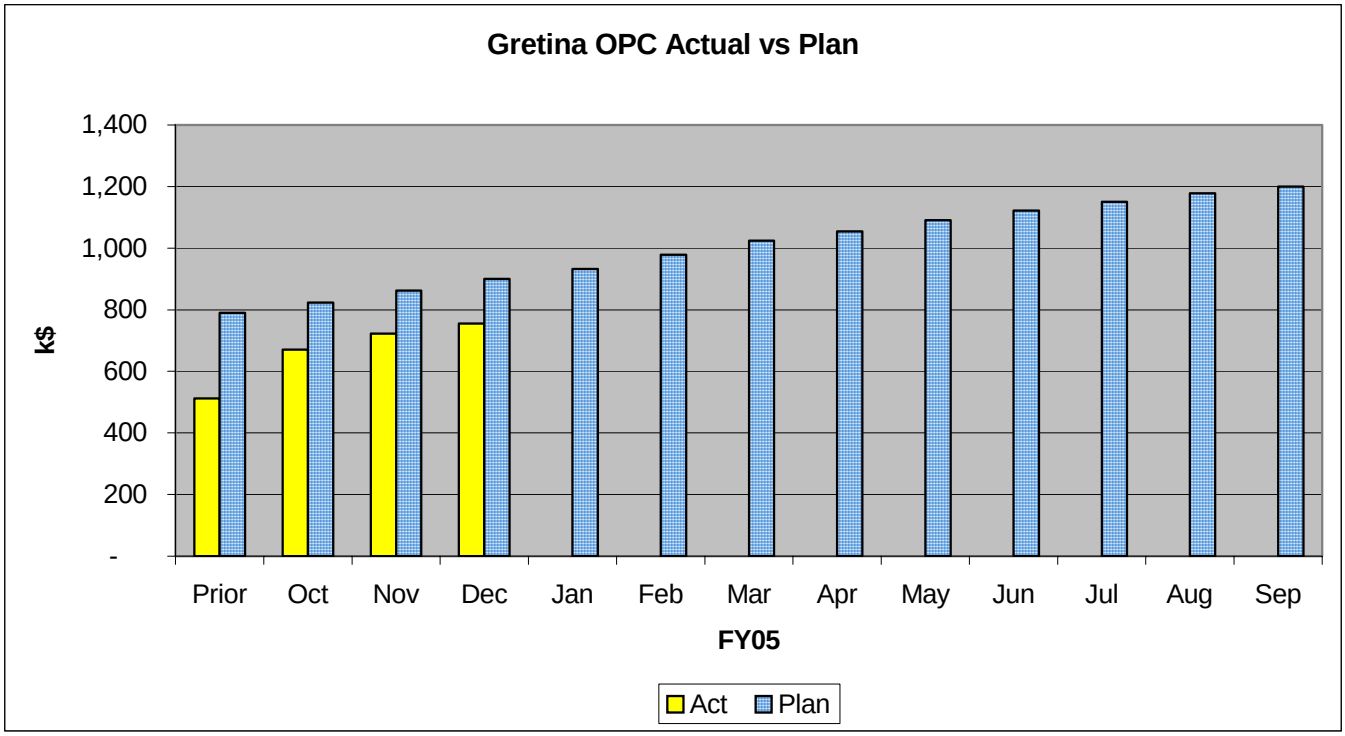
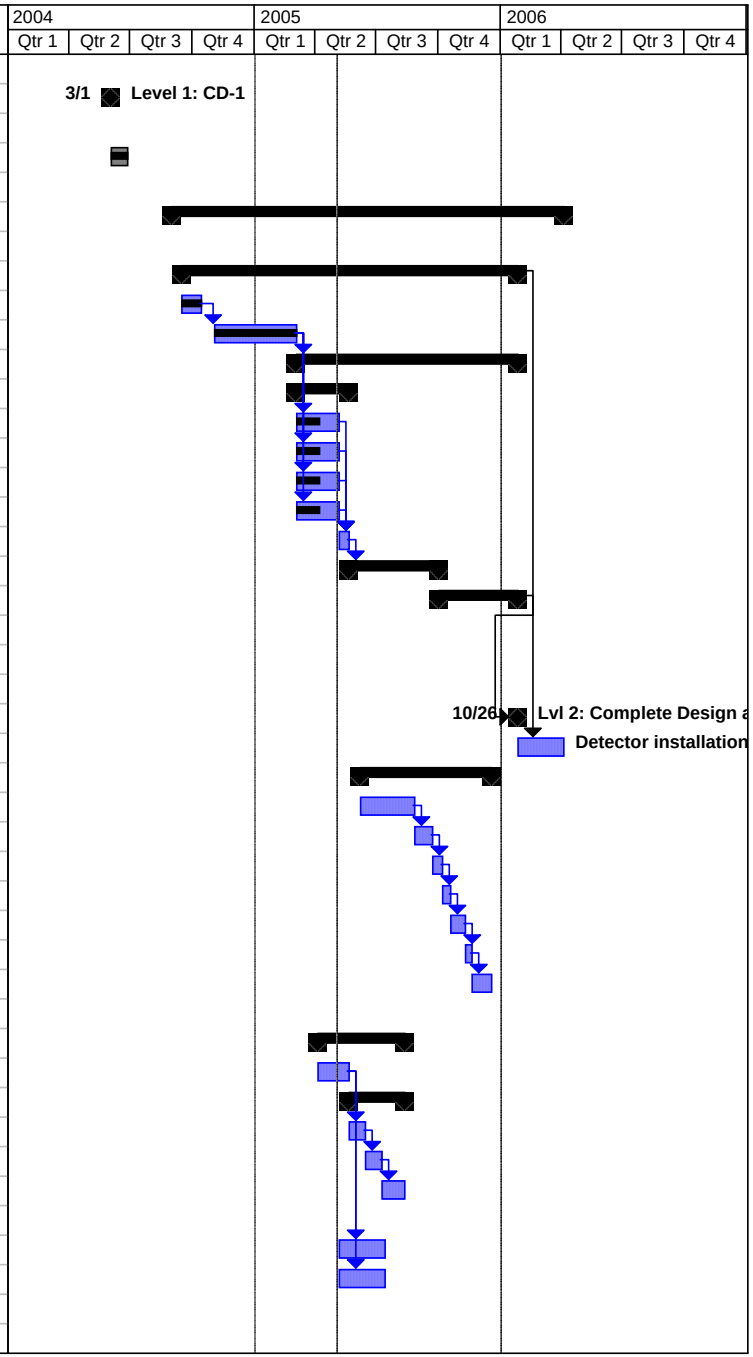
COST SUMMARY





QUARTERLY REPORT

ID	Work reakdow	Task Name	% Complete	Start
1	**1**	**GRETINA**	**9%**	**10/1/03**
2		**Level 1: CD-1**	0%	3/1/04
3	**1.1**	**Mechanical**	**9%**	**3/1/04**
4	**1.1.1**	Requirement document	100%	3/1/04
5			100%	3/26/04
6	**1.1.2**	**Design**	**15%**	**6/1/04**
7				
8	**1.1.2.1**	**Support structure**	**21%**	**6/15/04**
9		Define requirements/spec	100%	6/15/04
10		Conceptual design to Nov	100%	8/2/04
11		**New Design Schedule**	**10%**	**12/1/04**
12		**Conceptual Design**	**47%**	**12/1/04**
13		Split Hemisphere	50%	12/1/04
14		Rotation System	50%	12/1/04
15		Translating Structure	50%	12/1/04
16		Site Interface	50%	12/1/04
17		Conceptual design review	0%	2/3/05
18		**Final design**	**0%**	**2/18/05**
24		**Detail Dwgs**	**0%**	**7/1/05**
28				
29				
30				
31		**Lvl 2: Complete Design and Drawings of Me**	0%	10/26/05
32	**1.1.2.2**	**Detector installation tool**	0%	**10/27/05**
33	**1.1.2.3**	**Target chamber Washington Univ.**	**0%**	**3/7/05**
34		Define requirements	0%	3/7/05
35		Design Specifications	0%	5/26/05
36		Conceptual design	0%	6/22/05
37		Conceptual design review	0%	7/7/05
38		Final design	0%	7/19/05
39		Final design review	0%	8/9/05
40		Detail Dwgs	0%	8/19/05
41				
42	**1.1.2.4**	**LN system**	**0%**	**1/3/05**
43		Define requirements/specifications	0%	1/3/05
44		**Mechanical**	**0%**	**2/18/05**
45		Conceptual design	0%	2/18/05
46		Final design	0%	3/15/05
47		Detail Dwgs	0%	4/7/05
48				
49		Electrical	0%	2/3/05
50		Computer control	0%	2/3/05
51	**1.1.3**	**Production**	**0%**	**9/6/07**
85		**Level 2: Mechanical Production Complete**	0%	5/30/08



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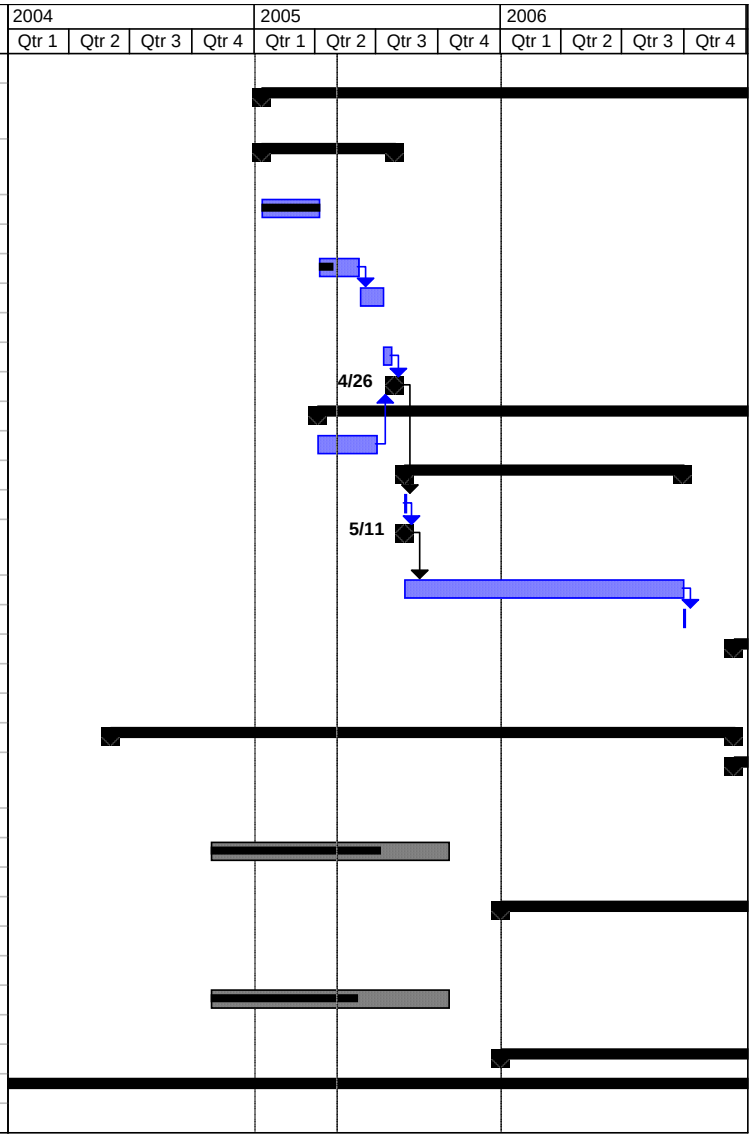
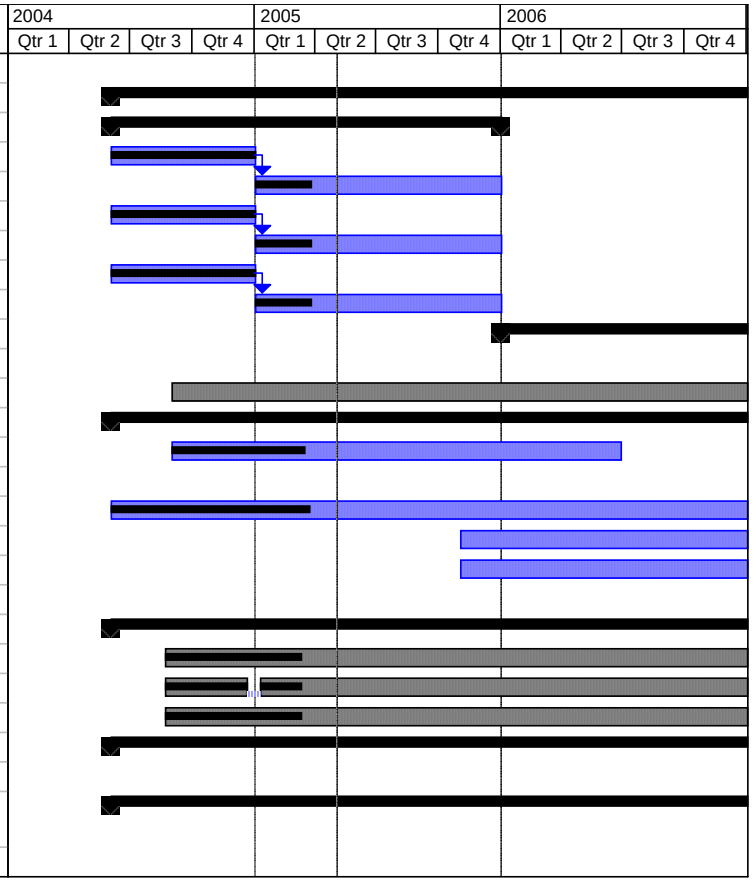
ID	Work reakdow	Task Name	% Complete	Start
86	**1.2**	**Detector Module**	**12%**	**3/1/04**
87	**1.2.1**	**Purchasing**	**4%**	**10/11/04**
88	**1.2.1.1**	**Write detector requirements and specs and procurement specs**	**52%**	**10/11/04**
89		Write Detector requirements	100%	10/11/04
90			0%	1/5/05
91		Define interfaces	30%	1/6/05
92		Write procurement specification	0%	3/7/05
93				
94		Receive bids	0%	4/11/05
95		**LVL 1: CD 2/3A**	0%	4/26/05
96	**1.2.1.2**	**Detector Procurement**	**0%**	**1/3/05**
97		Detector Design Contract	0%	1/3/05
98		**FY05: Detector Module 1**	**0%**	**5/11/05**
99		Procure dectector module 1	0%	5/11/05
100		**LVL 2: Award Detector Module Contract**	0%	5/11/05
101		Delivery of module 1	0%	5/12/05
102		Flat Procurement Burden	0%	6/28/06
103		**FY06: Dectector Module 2 thru 3**	**0%**	**9/12/06**
108		**FY07: Dectector Module 4 thru 6**	**0%**	**8/30/07**
114		**FY08: Dectector Module 7**	**0%**	**2/13/08**
118	**1.2.2**	**Test/Characterize Module 1**	**30%**	**3/1/04**
148	**1.2.3**	**Test/Char Mod 2 thru 7**	**0%**	**9/12/06**
190	**1.3**	**Electronics**	**11%**	**7/28/04**
191	**1.3.1**	Requirement document	70%	7/28/04
192				
193	**1.3.2**	**Electronics Prototype**	**0%**	**10/3/05**
278	**1.3.3**	**Electronics Production**	**0%**	**9/6/07**
348	**1.4**	**Computing Systems**	**5%**	**10/1/03**
349	1.4.1	Requirement document	60%	7/28/04
350			0%	7/28/04
351	**1.4.2**	**Prototype**	**0%**	**10/3/05**
425	**1.4.3**	**CS Production**	**0%**	**10/1/03**
525	**1.5**	**System Assembly**	**0%**	**6/28/07**



QUARTERLY REPORT

ID	Work reakdow	Task Name	% Complete	Start
578	**1.6**	**Project Management**	**10%**	**3/1/04**
579	**1.6.1**	**Management**	**9%**	**3/1/04**
580	**1.6.1.1**	**Initial phase (FY04-FY05)**	**52%**	**3/1/04**
581		Contractor Project Manager - FY04	100%	3/1/04
582		CPM - FY05	23%	10/1/04
583		Project Engineer - FY04	100%	3/1/04
584		Proj Engineer - FY05	23%	10/1/04
585		Project Control Analyst - FY04	100%	3/1/04
586		Project Controls Analyst - FY05	23%	10/1/04
587	**1.6.1.2**	**Long term**	**0%**	**10/3/05**
591	**1.6.1.3**	**Final phase (~0.5 of FY10)**	**0%**	**10/1/09**
596	**1.6.1.4**	Quality Assurance Manager	0%	6/1/04
597	**1.6.1.5**	**Subsystem Managers**	**8%**	**3/1/04**
598		Mechanical (Design)	30%	6/1/04
599		Mechanical (Production)	0%	8/14/07
600		Detector	15%	3/1/04
601		Electronics	0%	8/1/05
602		Computing Systems	0%	8/1/05
603		Systems assembly	0%	4/29/09
604	**1.6.2**	**General Project Expenses**	**10%**	**3/1/04**
605	**1.6.2.1**	Network security & remote access	10%	5/20/04
606	**1.6.2.2**	System Support	10%	5/20/04
607	**1.6.2.3**	Misc. Expenses	10%	5/20/04
608	**1.6.2.4**	**Travel**	**9%**	**3/1/04**
619	**1.7**	**Environment and Safety**	**18%**	**3/1/04**
620	**1.7.1**	**Perform safety analysis of all subsystems**	**19%**	**3/1/04**
637	**1.7.2**	Conduct global safety review	0%	9/10/09