



NOvA Project Status

October 16, 2007

John Cooper

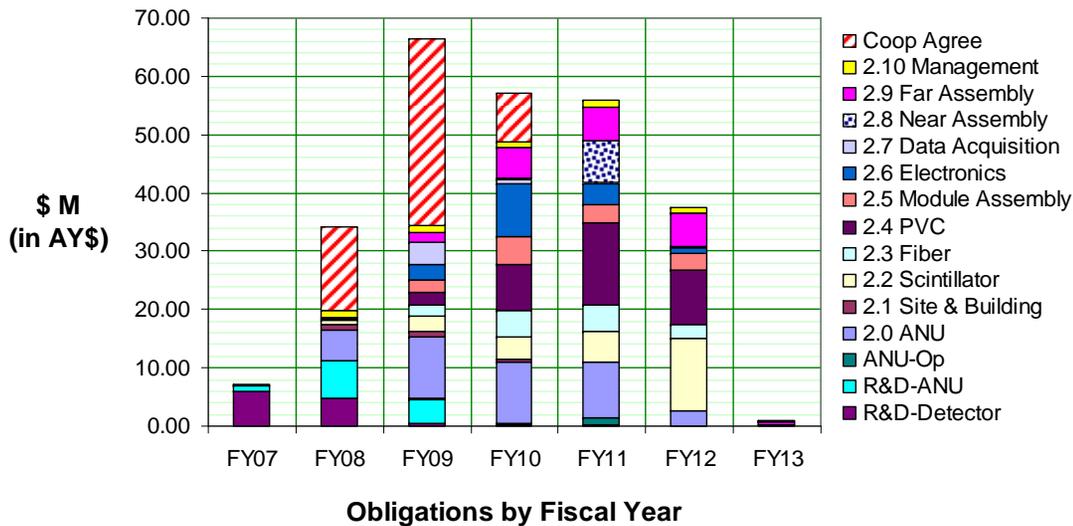
Ron Ray

Nancy Grossman



Finally matched the Obligations Profile (for base + contingency)

R&D-ANU	ANU-Op	2.0 ANU	2.1 Site & Bu	2.2 Scintillator	2.3 Fiber	2.4 PVC	2.5 Module	2.6 Electro	2.7 Data A	2.8 Near A	2.9 Far Ass	2.10 Mana	Coop Agree	Totals by YR
1.07	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	7.22
6.45	0.20	5.24	0.94	0.54	0.01	0.16	0.12	0.01	0.00	0.07	0.28	1.15	14.25	34.12
4.07	0.20	10.47	1.03	2.58	2.02	2.19	2.01	2.81	3.64	0.13	1.66	1.14	32.08	66.47
0.33	0.12	10.44	0.51	4.00	4.45	7.98	4.72	9.07	0.71	0.23	5.14	1.12	8.21	57.03
0.36	1.00	9.67	0.00	5.22	4.51	14.08	3.24	3.56	0.08	7.15	5.81	1.15	0.00	55.85
0.00		2.56	0.00	12.53	2.26	9.50	2.77	0.85	0.08	0.32	5.57	1.08	0.00	37.52
0.00		0.00	0.00	0.22	0.00	0.02	0.00	0.00	0.00	0.00	0.45	0.16	0.00	0.85
														259.06



	Totals by YR	Funding Profile	Delta	Integrated Delta from profile
FY07	7.22	7.97	0.75	0.75
FY08	34.12	36.05	1.93	2.67
FY09	66.47	65.00	-1.47	1.21
FY10	57.03	73.22	16.19	17.40
FY11	55.85	46.00	-9.85	7.55
FY12	37.52	31.76	-5.76	1.79
FY13	0.85	0.00	-0.85	0.94
	259.06	260.00	0.94	

All positive
Recall FY09 was problem year



Then the Cost sheet looks like

WBS	Items	NOVA 's Cost Estimate AY \$M										
		Estimated Cost (with indirects)			Contingency Estimate			Contingency %			Total Cost	
		M&S	Labor ¹	Total	M&S	Labor ¹	Total	M&S	Labor ¹	Total		
TEC	2.0	Accelerator & NuMI Upgrades	\$ 10.1	\$ 18.6	\$ 28.7	\$ 3.5	\$ 6.2	\$ 9.7	35%	33%	34%	\$ 38.4
	2.1	Far Detector Site and Building	\$ -	\$ 2.2	\$ 2.2	\$ -	\$ 0.3	\$ 0.3	0%	14%	14%	\$ 2.5
	2.2	Liquid Scintillator	\$ 19.3	\$ 0.4	\$ 19.6	\$ 5.3	\$ 0.2	\$ 5.5	27%	54%	28%	\$ 25.1
	2.3	Wave-Length-Shifting Fiber	\$ 9.6	\$ 0.9	\$ 10.5	\$ 2.7	\$ 0.1	\$ 2.8	28%	10%	27%	\$ 13.3
	2.4	PVC Extrusions	\$ 24.9	\$ 1.7	\$ 26.6	\$ 6.8	\$ 0.6	\$ 7.4	27%	35%	28%	\$ 34.0
	2.5	PVC Modules	\$ 6.3	\$ 3.8	\$ 10.1	\$ 1.5	\$ 1.3	\$ 2.7	23%	33%	27%	\$ 12.9
	2.6	Electronics Production	\$ 11.4	\$ 0.9	\$ 12.3	\$ 3.7	\$ 0.3	\$ 4.1	33%	35%	33%	\$ 16.3
	2.7	Data Acquisition System	\$ 1.7	\$ 1.8	\$ 3.5	\$ 0.5	\$ 0.5	\$ 1.0	27%	29%	28%	\$ 4.5
	2.8	Near Detector Assembly	\$ 3.7	\$ 0.5	\$ 4.2	\$ 3.4	\$ 0.3	\$ 3.8	94%	57%	90%	\$ 7.9
	2.9	Far Detector Assembly	\$ 5.7	\$ 5.7	\$ 11.4	\$ 3.7	\$ 3.8	\$ 7.5	65%	66%	66%	\$ 18.9
	2.10	Project Management	\$ 0.5	\$ 4.1	\$ 4.6	\$ 0.1	\$ 1.0	\$ 1.2	25%	25%	25%	\$ 5.8
	Management Reserve	\$ 0.6		\$ 0.6							\$ 0.6	
	Subtotal Construction	\$ 93.7	\$ 40.7	\$ 134.4	\$ 31.2	\$ 14.7	\$ 45.8	33%	36%	34%	\$ 180.2	
OPC	R&D - Accelerator	\$ 2.0	\$ 7.2	\$ 9.2	\$ 0.6	\$ 2.5	\$ 3.0	29%	34%	33%	\$ 12.2	
	R&D - Detector	\$ 5.2	\$ 4.8	\$ 10.1	\$ 0.4	\$ 0.5	\$ 0.9	8%	10%	9%	\$ 11.0	
	Cooperative Agreement	\$ 45.0	\$ -	\$ 45.0	\$ 9.9	\$ -	\$ 9.9	22%	0%	22%	\$ 54.8	
	Operating	\$ 0.2	\$ 1.0	\$ 1.2	\$ 0.1	\$ 0.4	\$ 0.5	34%	42%	41%	\$ 1.7	
	Total OPC:	\$ 52.4	\$ 13.1	\$ 65.5	\$ 10.9	\$ 3.4	\$ 14.3	21%	26%	22%	\$ 79.8	
TPC:		\$ 146.1	\$ 53.8	\$ 199.8	\$ 42.1	\$ 18.1	\$ 60.2	29%	34%	30%	\$ 260.0	



Cooperative Agreement Status

- Fermilab – U of Minn MOU on CA
 - Waiting for Marvin on a 3rd draft return of John's 2nd draft
 - Promised Oct 15
 - Pepin has provided a list of additional topics which should be covered in a 4th draft, and Marvin has agreed to take a stab at those in his current effort
 - Goal is to get Marvin and John to sign by Oct 19
 - **Schedule is now very tight**
 - other signatures will take longer.



EAW Status

- EAW public comment period got 2 comments, 1 request
 - Comment 1, Health Dept. May not be able to have well.
 - Comment 2,
 - Request, State Historical Preservation Office requested the Group 106 report (“106” is the Historic Preservation Act lingo)
 - provided & never heard from them again
- But late yesterday we saw 4 more comments from Voyageurs Nat’l Park
 - Traffic during construction. Too much heavy traffic, please consider additional measures
 - Sound from blasting. Please consider loading smaller shots to minimize.
 - Visibility of facility. Building is taller than expected (37’ vs. one story). Please analyze impact.
 - Exotic plants. 60,000 vehicle visits during construction will transport exotic seeds and plant parts which may migrate into the park. Please go beyond the measures in the EAW to control, e.g. restore native vegetation.
- U Minn is preparing a Record of Decision
 - (well, hopefully after Nat’l Park comments)
 - Regents expected to approve in Nov 8-9 meeting



EA Status

- **EA is still in preparation**
 - Pepin asked Pete Siebach and Vicki Prouty for a common set of comments on Sally's Oct 5 version, due Oct 15
 - Now promised Oct 16
 - Larry Luckett (& his URS team) are in parallel preparing a complete document based on Sally's changes
 - Also promised Oct 15, but...
 - We will post this for Lehman.
- **Recall we promised to notify nearest neighbors about the EA two weeks before it gets officially submitted**
 - The schedule would **still** seem to be
(at best, depends on number & scope of comments seen today):
 - Notify neighbors – earliest would be the week of November 5
 - Submit EA – November 19 - that starts the federal 30 day clock.



Documents Status for Lehman

NOvA Document List for CD-2	Post Date on Review Website	Review Period							who	comments
		8-Oct	11-Oct	12-Oct	14-Oct	15-Oct	16-Oct	17-Oct		
Project Execution Plan	12-Oct			1					Pepin	
Acquisition Strategy	12-Dec			1					Pepin	
Project Management Plan	11-Oct		1						Ron	
Configuration Management & Change Control Plan	11-Oct		1						Elaine	
List of Managed Documents							1		Elaine	updated Oct 15, ready
Risk Management Plan	11-Oct		1						Ron/Nancy	WelcomRisk and an Excel spreadsheet of High risks
Risk Registry	12-Oct			1					Nancy & Ron	
High risks documented in detail				1					Level 2s	11 docs via Excel in Risk Registry
Acquisition Plan	15-Oct					1			Ron	procurement overview, updated last week
"Laboratory" EVMS	11-Oct		1						Suzanne	In place for reviews (Revise in January?)
NOvA specific EVMS							1		Suzanne	need short NOvA specific document
QA Plan	11-Oct		1						Nancy	
ISM for NOvA							1		Nancy	
draft EA								1	DOE NEPA team	URS assembling
Tritium reference document								1	Mike M.	done
Accident reference document								1	URS	URS assembling
EAW	11-Oct		1						U Minn	
updated Hazard Analysis								1	Keith	revising to match FESHM, expect Oct 17
draft PSAD								1	Keith & Mike A.	done, will look at again after HA
Security Vulnerability Assessment Report	11-Oct		1						Ron	
Lab: High Performance Sustainable Bldgs									FESS	Sustainable Design Review Procedure
NOvA doc on High Performance Sustainable Bldg							1		Steve	LEED checklist NOVA-doc 1318
Monthly reports									John	Have May06 - July07. Aug & Sept close to done
Technical Design Report	8-Oct	1							NOvA	
Contingency Analysis Rules	11-Oct		1						Ron	
RLS (Cost& Schedule)	8-Oct	1							Bill	
Guide to the NOvA RLS	8-Oct	1							Bill	
BOEs	15-Oct					1			Level 2s + Harry	425 docs
Startup Plan	14-Oct				1				John + several	
Requirements documents							1		Level 2s	46 docs, need docdb list & link by WBS
Design Reviews									Level 2s	need docdb list & link by WBS
Value Engineering									Level 2s	need docdb list & link by WBS
Coop Agreement MOU									Marvin/John	Oct 15 draft?
MOUs									Institutions	have for ANL, UMinTC, UMinnd, IU
SOWs									Institutions	have for ANL
Work Authorizations									John & Suzanne	have draft for 2.10
Project Parameter Sheets								1	Level 2s	7 docs, need list & link
Organization Chart								1	Bob B.	NOVA-doc-2573 Aug29
Response to Recommendations from Reviews								1	Ron, John, Nancy	7 of them, all now available
SUM:	18	3	8	4	1	2				



Documents Status, different viewpoint

NOvA Document List for CD-2	Post Date on Review Website	8-Oct	11-Oct	12-Oct	14-Oct	15-Oct	16-Oct	17-Oct	pages	
Project Execution Plan	12-Oct			1					53	
Acquisition Strategy	12-Dec			1					27	
Project Management Plan	11-Oct		1						57	
Configuration Management & Change Control Plan	11-Oct		1						22	
List of Managed Documents										4
Risk Management Plan	11-Oct		1						14	
Risk Registry	12-Oct			1					78	
High risks documented in detail				1					29	
Acquisition Plan	15-Oct					1			28	
"Laboratory" EVMS	11-Oct		1						50	
NOvA specific EVMS									?	
QA Plan	11-Oct		1						23	
ISM for NOvA									?	
draft EA										
Tritium reference document										18
Accident reference document										22
EAW	11-Oct		1						47	
updated Hazard Analysis										86
draft PSAD										40
Security Vulnerability Assessment Report	11-Oct		1						10	
Lab: High Performance Sustainable Bldgs										?
NOvA doc on High Performance Sustainable Bldg										2
Monthly reports										292
Technical Design Report	8-Oct	1							670	
Contingency Analysis Rules	11-Oct		1						5	
RLS (Cost& Schedule)	8-Oct	1							748	
Guide to the NOvA RLS	8-Oct	1							30	
BOEs	15-Oct					1			850	
Startup Plan	14-Oct				1				23	
Requirements documents										250
Design Reviews										?
Value Engineering										?
Coop Agreement MOU										?
MOUs										21
SOWs										7
Work Authorizations										2
Project Parameter Sheets										17
Organization Chart										4
Response to Recommendations from Reviews										56
SUM:	18	3	8	4	1	2			2,764	821



MOUs / SOWs / WAs

- Have prototype project MOU
 - Have final for ANL, U Minn-TC, U Minn-Duluth, just need signatures
 - Have draft for IU
 - Have agreed on concept of a “Fermilab MOU” to cover all off-project items
 - Nancy estimates draft by Friday, October 19.
- Have prototype project SOW
 - Have final for ANL, just need signatures
- Have prototype Work Authorization
 - They are for a single FY
 - Allow for multiple iterations per year,
e.g. authorize only 1Q in continuing resolution
 - Have one for 2.10
 - Expect to get WBS 1.0 – 1.8 (1.9 is done) before review, maybe 2.9



Summary

- See webpage
 - http://www-nova.fnal.gov/nova_cd2_review/lehmann_rev_index_oct.html
- EIR website would be identical
 - Phone meeting with Brian Kong (OECM) & LMI EIR team on Thursday.