



NOvA Project Status

October 2, 2007

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Discussions with DOE

- Guidance from Mike Procario on September 28
 - “Robin has agreed to having the project present a second scenario with a TPC of \$272 M. We believe that we can best support that scenario by adding \$6 M to FY 2011 and \$6M to FY 2012.”
- This goes in the 10 min talk by me at the end of the plenary on Oct 23
 - General outline
 - We believe our contingency estimate
 - But our management reserve is small
 - We will show the additional \$ 12 M in management reserve
 - Note \$ 12 M is equivalent to ~ 1.5 kt
- We do not discuss this as part of the EIR, so we use the same RLS and contingency analysis for both reviews
- Noticed by all that the guidance came one day after Robin’s talk to OMB.



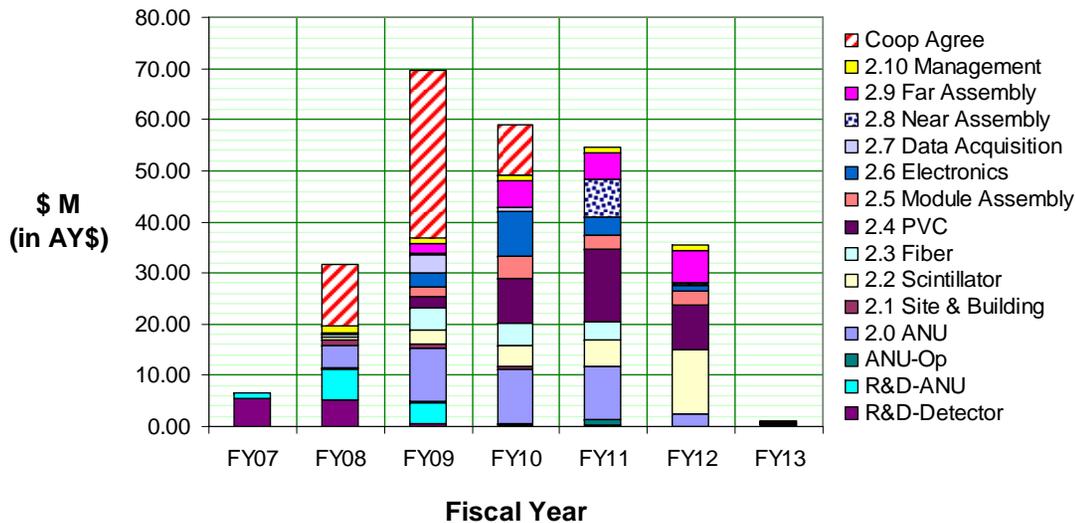
More Progress on matching funding profile

- 3rd iteration shown last meeting matched profile
 - but only by \$ 50 K in FY11
 - And we knew we had 20 – 30 cost additions to put in.
 - 15 kt complete date at Oct 16, 2012
- 4th iteration on September 18 moved Far Detector assembly 3 months further downstream.
 - Better match to profile, under by ~ \$ 4 M in FY 08,09,11
 - 15 kt complete date at Dec 27, 2012
- 5th iteration on Oct 1 added back in all known cost changes
 - Shifted Minnesota factory downstream to match Far Detector assembly (start some warehouse conversion in FY09 still)
 - Also went back to 25% management contingency everywhere
 - Since we were unable to convince anyone of our “0% on full time” plan
 - 15 kt complete date at Feb 21, 2013
 - We will still have to look at this, now a little too late



5th Iteration (10/1) vs. funding profile

	R&D-Detector	R&D-ANU	ANU-Op	2.0 ANU	2.1 Site & Building	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 As	2.10 Mana	Coop Agree	Totals by YR
FY07	5.40	1.04	0.17	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.63
FY08	5.16	6.12	0.20	4.43	0.96	0.54	0.65	0.16	0.09	0.01	0.00	0.05	0.00	1.15	12.10	31.64
FY09	0.45	4.27	0.20	10.31	1.00	2.58	4.39	2.22	1.79	2.77	3.64	0.18	1.90	1.14	32.86	69.70
FY10	0.01	0.33	0.12	10.83	0.51	4.00	4.45	8.61	4.41	8.90	0.71	0.05	5.13	1.12	9.88	59.04
FY11	0.00	0.36	1.00	10.36	0.00	5.07	3.62	14.19	2.92	3.43	0.08	7.33	5.14	1.15	0.00	54.65
FY12	0.00	0.00		2.51	0.00	12.56	0.01	8.73	2.77	1.11	0.08	0.33	6.23	1.08	0.00	35.40
FY13	0.00	0.00		0.00	0.00	0.35	0.00	0.00	0.01	0.10	0.00	0.00	0.37	0.16	0.00	0.98
																258.05



	Totals by YR	Funding Profile	Delta	Integrated Delta from profile
FY07	6.63	7.97	1.34	1.34
FY08	31.64	36.05	4.41	5.75
FY09	69.70	65.00	-4.70	1.05
FY10	59.04	73.22	14.18	15.23
FY11	54.65	46.00	-8.65	6.57
FY12	35.40	31.76	-3.64	2.94
FY13	0.98	0.00	-0.98	1.95
	258.05	260.00	1.95	

All positive



Obligations Profile

- All iterations up to now have spread SWF linearly over each task
 - This is OK
 - OK even outside of Fermilab since we can keep the obligations inside a given FY via SOWs and quarterly allocations of funds against SOWs
- All iterations up to now have spread M&S linearly over each task
 - This is not OK for some procurements requiring budget authority up front, authority which may be required in a previous FY
 - Most detector procurements are deliberately tied to FYs
 - ANU has some 72 procurements with a P.O. earlier than a Receive task
 - Leftover from Microsoft Project features



Obligations Profile continued

- To extract an obligations profile, Bill and Ken do the following:
 - Ken baselines the ANU portion of the schedule, then brings the 72 ANU receive tasks start dates earlier to match the obligation date
 - The schedule gets screwed up, but the obligations appear in the proper places
 - Ken leaves all other ANU tasks with linear spread M&S since all these tasks spend throughout their durations with no particular lumps
 - Bill takes all the rest of the schedule and moves M&S costs to the start of every task
 - This may overestimate the obligations a bit for true linear spending tasks, but most detector tasks are short and so we can't make much of an error
- Would have shown this to you today, but a glitch developed late yesterday preventing the final step.
 - Expect to solve this today
 - need to baseline cost + contingency, not just cost
 - Need to remove all tasks from before May 1
 - Will take one more iteration to match the profile



Bill's first shot on obligations last night

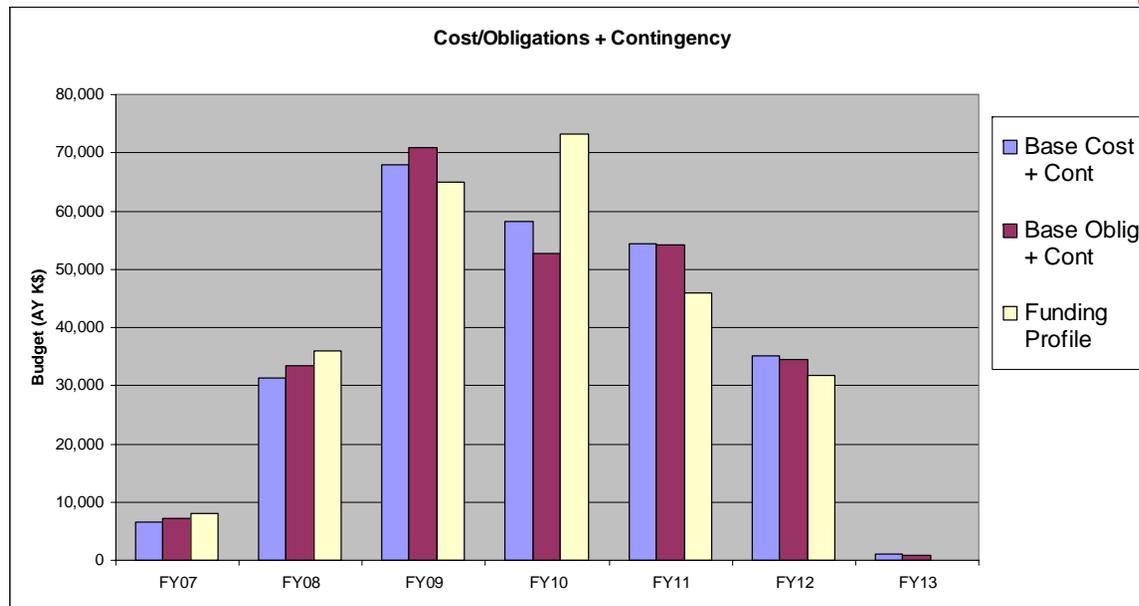
cost

oblig

AY k\$	FY07	FY08	FY09	FY10	FY11	FY12	FY13	Total
Labor - Cost + Cont.	3,399	11,581	16,059	11,549	17,871	9,992	534	70,986
Material - Cost + Cont.	3,121	19,760	51,827	46,694	36,614	25,228	442	183,686
Base Cost + Cont	6,520	31,342	67,886	58,244	54,484	35,220	976	254,672
Delta (Cost)	1,450	4,708	-2,886	14,976	-8,484	-3,460	-976	5,328
Integrated Delta (Cost)	1,450	6,158	3,272	18,248	9,764	6,304	5,328	
Labor - Oblig + Cont.	3,399	11,679	16,553	11,129	17,603	9,992	534	70,889
Material - Oblig + Cont.	3,885	21,852	54,320	41,515	36,518	24,593	309	182,993
Base Oblig + Cont	7,284	33,531	70,873	52,644	54,121	34,585	843	253,882
Delta (Oblig)	686	2,519	-5,873	20,576	-8,121	-2,825	-843	6,118
Integrated Delta (Oblig)	686	3,205	-2,669	17,907	9,787	6,961	6,118	

Not
258.05

Not positive



- Expect to post RLS "books" in pdf on Oct 8



TDR update status

NOVA Technical Design Report Status		Size (pages)	Status of May 25 draft	Status of CD-2 Draft	Size (pages)	DONE pages	
	Cover & Preface	2	"done"	DONE	2	2	
	Author List	2	"done"	DONE	2	2	
	Table of Contents	18	at start of each Ch	now a unified version	8		
Ch 1	Executive summary (John)	2	"done"	DONE	2	2	
Ch 2	Using the NuMI beam for NOvA (Gary and Mark)	5	"done"	DONE	5	5	
Ch 3	Updated Science Case (Gary and Mark)	13	"done"	in progress	13		
Ch 4	NOvA Scientific Design Criteria (Gary and Mark)	6	"done"	DONE	6	6	
Ch 5	Overview of NOvA Design (John)	20	"done"	needs new figures from Ch 8-17	20		
Ch 6	Performance of the NOvA Design (John, Leon, Peter S)	23	"done"	started	23		
Ch 7	Work Breakdown Structure (Ron)	15	"done"	DONE	39	39	
Ch 8	Accelerator and NuMI Beamline (Nancy)	109	"done"	DONE	113	113	
Ch 9	Site and Far Detector Hall (Steve)	34	"done"	DONE	35	35	
Ch 10	Liquid Scintillator (Stuart)	30	"done"	DONE	29	29	
Ch 11	Fiber (Carl)	12	"done"	DONE	12	12	
Ch 12	Extrusions (Rich)	36	"done"	DONE	46	46	
Ch 13	PVC Modules (Ken)	56	"done"	DONE	49	49	
Ch 14	Photodetector & Electronics (Leon)	23	"done"	DONE	27	27	
Ch 15	DAQ System (Leon)	24	"done"	DONE	26	26	
Ch 16	Near Detector Assembly (Peter L)	9	"done"	DONE	11	11	
Ch 17	Far Detector Assembly (Dave A)	160	"done"	DONE	179	179	
Ch 18	Cost, Schedule, Scope (John)	0	missing	30-Sep	5		
Appendix A	Guide to Project Documents (Ron)	4	"done"	DONE	4	4	
	TOTAL	603			656	587	89%

- 90% done, Still need to check all changes
- Still need to extract a complete Table of Contents but Alan has done that with the previous June 4 version OK
- Expect to post a final version on Monday, October 8



Cooperative Agreement Status

- **The Cooperative Agreement was signed by all parties effective September 27 !**
 - So both the CA and MIE got started in FY07
- Fermilab – U of Minn MOU on CA
 - Waiting for Marvin on a 3rd draft return of John's 2nd draft
 - 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
 - other signatures will take longer.



EA Status

- EAW was submitted with signatures on Aug 31
 - This is an Appendix to the federal EA
 - Minnesota Environmental Quality Board publication date was Sept 10.
 - This started the 30 day public comment clock.
 - A public meeting was held Sept 26 in Orr, Minn.
 - Marvin reported “no issues”.
- EA is still in preparation
 - Most chapters are now in Revision 6 or beyond relative to the April version.
 - Sally Arnold has passed back changes for all 6 chapters
 - But she is now gone until October 22
 - While Sally is gone we intend to take all her changes and comments and assemble a complete document for the DOE team
 - I expect Larry Lockett (& his URS team) to do this & have talked with Bob Grant about funding.



EA Status #2

- Recent changes:
 - The Alternates section in Ch 3 will be reduced to a list of bullets and the 8 pages of details on the alternates considered will be removed
 - All these alternates were considered at the CDR stage, but all are determined NOT to satisfy the “purpose and need of the proposed action”. We gained nothing by having them in the document, just argued more about each one.
 - Ch 6 (Accident Analysis) will spin off into a new referenced document
 - Currently details 16 separate accident scenarios in response to comments
 - The EA Ch 6 will be reduced from 28 to 5 pages.
 - Fermilab scintillator blending is still the default in the EA.
 - Toll blending has been removed and re-inserted during the last week
- Recall we promised to notify nearest neighbors about the EA two weeks before it gets officially submitted
 - We have not gained on the schedule at all during the last 6 weeks
 - The schedule would seem to have slipped to:
 - Notify neighbors – earliest would be the week of November 5
 - Submit EA – November 19 - that starts the federal 30 day clock.
 - We will have a draft for Lehman and will still be in the 30 day process during the EIR



Other Documents

NOvA Document List for CD-2	who	comments
Project Execution Plan	Pepin	9/7 draft, comments received
Acquisition Strategy	Pepin	signed at CD-1, check if needs changes
Project Management Plan	Ron	last change was to remove change control
Configuration Management & Change Control Plan	Elaine	major new version exists
List of Managed Documents	Elaine	updated yesterday
Risk Management Plan	Ron/Nancy	done
Risk Registry	Nancy	Nancy has WelcomeRisk, updating
High risks documented in detail	Level 2s	most in place, some missing
Acquisition Plan	Ron	procurement overview, updated last week
"Laboratory" EVMS	Suzanne	In place for reviews (Will be revised by January?)
NOvA specific EVMS	Suzanne	need short NOvA specific document
QA Plan	Nancy	done, revised Feb 22
EA	DOE NEPA team	discussed above
updated Hazard Analysis	Keith	done
draft PSAD	Keith and Mike A.	done
Tritium reference document	Mike M.	done
Accident reference document	URS	in progress
Security Vulnerability Assessment Report	Ron	done
Lab: High Performance Sustainable Bldgs	FESS	Sustainable Design Review Procedure
NOvA doc on High Performance Sustainable Bldg	Steve	LEED checklist by project team @ CD-3
Monthly reports	John	Now have through June 2007. July and August close to
Technical Design Report	NOvA	revising, see previous slide
RLS cost & profile	Bill	already discussed
RLS links	Bill	need to check this final schedule
RLS PMTs	Bill and L2s	these are in place, need a final look
RLS Milestones & Level Assignments	Bill, Ron, John	discussed with Pepin, revising
BOEs	Level 2s	in place, need to review all for 15 kt.
Startup Plan	several	Nancy did draft based on Jlab, John has revised, will spin off writing task when TDR in hand
Requirements documents	Level 2s	in approval process
Design Reviews	Level 2s	organizing in docdb, then approvals
Value Engineering	Level 2s	organizing in docdb, then approvals
Project Parameter Sheets	Level 2s & Proj. Man	organizing in docdb, then approvals
Organization Chart	Bob B.	current about a month ago



Update: Need additional help

- Docdb approval path
 - Now working,
 - thanks to CD and Eric



MOUs / SOWs

- Have prototype project MOU with ANL
- Have prototype project SOW with ANL for FY08
 - Still need to tweak language
 - Trying to satisfy work “authorization”
- Have agreed on concept of a “Fermilab MOU” to cover all off-project items
 - “An MOU with the Directorate probably makes more sense anyway. The memos to Joanna on GPP and gap kickers were written by the Directorate and her replies were to the Directorate. GPP is managed by the Directorate. The statement on re-use of Tevatron “hot spares” comes from the Directorate. The rest is small, consisting of ES&H support via AD and PPD line management, Admin support from PPD, some docdb support from CD, and “procurement expert” support from BSS. Offices, lights, heat,”
 - This will put all these items together in one place and show we have thought about them and agree on the plan.



Summary

- Should be able to post many documents on Monday
 - TDR and RLS for sure
 - Many others as well
 - But will still be updating a few during next week
- Web site will be a clone of the June 4 / Aug 21 versions
 - For document lists, it is still a challenge to get a list that is easily accessible by reviewers.
 - But Alan believes it can be done, aim is
 - One click on web site for (e.g.) Requirements Documents
 - Pops up a list by WBS L2
 - One click then gets the list for any L2, sometimes a long list
- EIR website would be identical