



NOvA Project Status

April 3, 2007

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Status of CD-1

- DOE documents
 - Acquisition Strategy –
 - Signed by Carolan, Livengood, Procairo, Lehman
 - At last report was on Staffin's desk
 - PPEP – same list of signatures, same state?
- NOvA documents are all done
 - NOvA Conceptual Design Reports
 - Preliminary Hazard Analyses
 - signed now by Cooper, SSOs, Carolan
 - Risk Management Plan
- Webpage for ESAAB is ready
- ESAAB presentation nearly ready
 - Pepin needs info on contingencies?
- CD-1 Approval document written, ready to sign
- Date for ESAAB?
 - Last words were “in April”



Status of Cooperative Agreement

- DNFA (Determination of Non-Competitive Financial Assistance)
 - Ready for Procaro to sign
 - Similar signature chain + one more John Oliva (sp?)
- Budget info
 - to Mike from Project (3/12)
 - to Mike from Marvin Marshak (confirmed 4/2)
- P.O. to Minnesota for Project Eng (4 mo.) finally out
 - Minnesota reportedly has 25 bidders lined up
 - Steve Dixon will touch base with them.
 - Remember the concept is consensus.



EA Status

- Schuh / Cooper Draft to Fermilab ES&H on March 26
 - This draft depends on the Minnesota EAW
- Fermilab ES&H comments back on March 30
- Hope to get “final” draft to Sally Arnold on April 3
- No update on progress regarding U of Minnesota’s 3 stipulations before going to Regents
 - Marvin notes (4/2) that he hasn’t heard about the CA either.
- IPT views May 1 as ~ drop-dead date
 - If all stipulations not satisfied by then, then it looks like the EAW timescale is too long for our CD-2
 - We would likely back up and incorporate the EAW information into the EA
 - Meanwhile EAW needs updates as well, Steve talking to SEH:
 - Latest building drawings
 - Deal with methyl methacrylate and associated components. HAP, MPCA, <10 tons
 - I’ve suggested the EAW appendix on the NOvA Project (old, based on proposal) be replaced by the draft federal EA
 - Then an EA with an EAW Appendix looks exactly the same
 - Need all EAW updates by May 1



CD-2 Reviews

- Lehman on July 17, 18, 19 confirmed by Mike Procaro
- Still Director's on June 4, 5, 6



Method of Doing Business?

- Task codes are set up
- We are using them as of yesterday
- Where will the funding reside?
- What is the total funding available to NOvA?
 - Need March numbers to determine amounts spent before 4/1
- **New Wrinkle**
 - Mike Procario says TPC must include all costs of doing the CDR
 - Reconstructing the totals
 - How do we keep track of this one except by hand?



Other items from agenda/action list

- **Pending Detector/ANU integration issues**
 - Last step: ANU moved to Open Plan March 30
- **Status of acquiring additional Project Personnel**
 - PPD admin person is still part time
 - Worse yet will return to TD when we find a replacement
 - LHC crisis impacts NOvA FEA work
- **Space at Fermilab**
 - WideBand Lab(deep pit) agreed to on March 6 for a NOvA factory **8400 sq ft**
- **Again a warning that we will probably need additional storage space**
 - Funding profile appears to force this
 - Space for PVC extrusions
 - Hoping to control vendor production so that only a month of extrusions sit at Fermilab, will put something like this in the TDR / C&S
 - U of Minn will accumulate a similar months' worth, more rental space
 - Maybe 25 pallets of 5' x 53' objects at each place? **That's 6600 sq ft each**
 - May need space for Waveshifting Fiber earlier
 - MSU has space for QA, but only storage for a few months production
 - Will not know details for some time, so not useful as a continuing action item



CD-2 Worklist, Cooperative Agreement

NOvA Work List for CD-2 <i>(red means new since last version)</i>			Original Estimated Finish Date	Current Estimate of Finish Date	Actual Finish Date	comments
Cooperative Agreement						
	U of M proposal draft		30-Sep-06	6-Oct-06	30-Oct-06	
	U of M final draft		15-Oct-06	17-Nov-06	20-Nov-06	
	U of M submits proposal		31-Oct-06	1-Dec-06	1-Dec-06	RGU not stipulated
	Recipient Selected = Site Selection		1-Nov-06	28-Feb-07		DNFA written. <i>Signatures in process</i>
	Determination of Noncompetitive Financial Award signed			15-Mar-07		
	Letter sent to U of M to initiate negotiations		16-Mar-07			need letter for Regents action <i>by ~ May 1</i>
	Negotiations concluded		15-Jan-07	1-Jul-07		want to fund \$1M starting July 1
						(not needed for CD-2 review)
						(but do need for CD-2 sign-off)



CD-2 Worklist, NEPA and EA

NOvA Work List for CD-2 <i>(red means new since last version)</i>			Original Estimated Finish Date	Current Estimate of Finish Date	Actual Finish Date	comments
NEPA						
	Scoping Meeting		22-Jun-06		22-Jun-06	
	Environmental Impacts Analysis Plan and 5 point timeline		29-Jun-06		20-Jul-06	
	NEPA timeline in Envir. Impacts Analysis Plan					
	Determine EA (vs EIS or Categorical Exclusion)		22-Jun-07		22-Jun-06	Siebach to Livengood
	Notify Illinois, Wisconsin, Minnesota of EA intent		15-Jul-06		1-Aug-06	letters from Livengood
	1st draft EA completed		1-Nov-06	4-Jan-07	6-Jan-07	DOE review asks for revision
	2nd draft EA completed			3-Apr-07		still depends on EAW / RGU
	final EA ready		1-Dec-06	14-Jun-07		
	end State / Public Comment period		1-Jan-07	1-May-07		not required for CD-2 REVIEW
	FONSI drafted		1-Apr-07	1-Jul-07		not required for CD-2 REVIEW
	FONSI issued		1-Jun-07	1-Aug-07		not required for CD-2 REVIEW
						but do need for CD-3a sign-off
	Minnesota Part					
	Minnesota EAW for Ash River ready for EA		2-Jan-07		21-Dec-06	
	U of Minn to check with St.Louis County that OK with UM as RGU					requires a vote of county commissioners
	U of Minn to get letter of reliance from S E H					
	Alternate to letter of reliance is third party hire to review EAW					
	Some official CA notification in place before consulting Bd of Regents		1-May-07			will not propose to Regents without this
	First meeting of Bd of Regents on RGU question, no decision		11-May-07	11-May-07		
	RGU (Responsible Government Unit) in place (2nd Regents mtg)		15-Jan-07	11-Jun-07		Assumes CA notification sent March 15
	Send EAW to EQB		1-Apr-07	14-Jun-07		EQB submission deadline is June 25 for July 2 publication , need this action for CD-2 review
	EQB Monitor publish date		26-Mar-07	2-Jul-07		EQB follows preset deadlines for pub.
	End 30 day comment period on EAW		15-Jan-07	1-Aug-07		
	RGU response to comments		1-Mar-07	8-Aug-07		not needed for CD-2 review
	End 30 day judicial appeal period		1-Apr-07	7-Sep-07		not needed for CD-2 review
	RGU notice of decision published in the EQB Monitor		21-Apr-07	17-Sep-07		not needed for CD-2 review
						Do not need for CD-2 sign-off. Would need for -3a.
	Wetland Permit Processing by USACE		1-Apr-07	1-Oct-07		Need for construction, not for CD-2 review
	Fermilab NOvA Part					
	First Draft of Ch 3 - Proposed Actions		1-Nov-06	20-Dec-06	21-Dec-06	
	Water Task Force report		21-Sep-06	15-Dec-06	19-Dec-06	now thought to be a Technical Reference
	Second draft: revised Ch 3, 4, 5		8-Mar-07	14-Mar-07	18-Mar-07	may need a couple of edits still
	Ch 6: highest impact credible accidents		14-Mar-07	21-Mar-07	26-Mar-07	following scintillator spills at all sites



CD-2 Worklist, ANU

NOvA Work List for CD-2 <small>(red means new since last version)</small>		Original Estimated Finish Date	Current Estimate of Finish Date	Actual Finish Date	comments
Accelerator & NuMI Upgrades					
Morph Campaign into Project					
	GPP moved off project	17-Jan-07		24-Jan-07	justification letter done and agreed to
	R&D + Ops / MIE split done	17-Jan-07		30-Jan-07	may be minor changes before CD-2
	ON/Off project split done	17-Jan-07		30-Jan-07	may be minor changes before CD-2
	CDR done	31-Jan-07		31-Jan-07	will stand alone next to NOvA CDR
	CD-1 Cost and Schedule RANGE complete	31-Jan-07		31-Jan-07	
	Hazard Analysis done	31-Jan-07		7-Feb-07	
	Move to Open Plan	16-Mar-07		23-Mar-07	minor glitches, mostly went fine
	Move to NOvA Docdb	15-Mar-07		18-Mar-07	~ 280 documents moved over
	Scope of TDR Defined (on/off project and IL/EL designs to cost defined)	31-Jan-07		31-Jan-07	
	TDR				
	Draft Update NOvA TDR "Overview" sections to include ANU	1-Mar-07		19-Feb-07	
	Final Update NOvA TDR "Overview" sections to include ANU	30-Mar-07	15-Apr-07		
	draft TDR ANU chapter done	15-Mar-07		21-Mar-07	~75 pages (needs overview sections)
	"final" version back to Project Office control	30-Mar-07	30-Apr-07		Final version by L3's by 4/15 we hope
	Cost & Schedule R&D part done	30-Mar-07			not done, but close
	Cost & Schedule Construction part done	16-Apr-07			
	Risk assessment done	13-Apr-07	30-Apr-07		
	BOEs done	15-Mar-07	15-Apr-07		all but a handful done, some will need updates



CD-2 Worklist, Site and Building

NOVA Work List for CD-2 (red means new since last version)				Original Estimated Finish Date	Current Estimate of Finish Date	Actual Finish Date	comments
Site and Building							
Ash River Site							
		EAW update, draft from SEH	1-Nov-06	1-Dec-06	4-Dec-06	received SEH consultant draft, will iterate	
		final EAW	2-Jan-07		21-Dec-06		
		updated EAW	1-May-07			new building, methyl methacrylate, geology	
		Wetland Permit Application prepared	1-Dec-06	1-Apr-07		Needed for CD-3a ? Need RGU to submit Steve checking status.	
		Site Prep 100% design package ready	1-Dec-06	1-May-07		done for 25 kt, needs final building size	
Other Sites							
		EAW	1-Jul-07	30-Sep-07		no longer matters with unsolicited proposal	
Building							
		Independent Cost & Schedule Review	15-Sep-06	1-Sep-06	14-Sep-06		
		Decide overburden construction method	15-Oct-06		31-Oct-06	related to overburden thickness	
		Final conceptual design ready for 30% design effort	15-Oct-06		31-Oct-06		
		Second pass, updated conceptual design ready	16-Apr-07			just enough to get to estimators	
		Second pass, Two Outside Independent Cost & Schedule Reviews	31-May-07	NOTE late date		One=Sept06 firm, 2nd will be a Minn. Firm	
		30% Drawings	15-Dec-06	15-May-07		Stopped A&E work Jan 30. Now 1st pass will be in house	
TDR							
		Second draft based on Project Office first draft of Oct 17	9-Nov-06		7-Nov-06		
		"final" version back to Project Office control	9-Mar-07		6-Mar-07	34 pgs, need update to final building design	
		Cost & Schedule R&D part done	30-Mar-07		8-Mar-07		
		Cost & Schedule Construction part done	16-Apr-07			first pass to Bill	
		Risk assessment done	15-Apr-07		1-Mar-07		
		BOEs done	15-May-07				



CD-2 Worklist, Liquid Scintillator

NOvA Work List for CD-2 <i>(red means new since last version)</i>		Original Estimated Finish Date	Current Estimate of Finish Date	Actual Finish Date	comments
Liquid Scintillator					
	Tests of commercial Tintometer	21-Jul-06		16-Aug-06	tagged, sent on to Indiana for tests, 7/17
	Fermilab blending model description & cost	15-Aug-06	15-Nov-06	29-Nov-06	have "Fermilab response" to blending RFI
	issue RFI for off-site blending	1-Aug-06	31-Oct-06	10-Nov-06	following 11/3 consultant advice on bid list
	RFI responses for off-site blending	1-Sep-06	30-Nov-06	30-Nov-06	8 responses, meeting tomorrow to sort it out
	Decide on TDR and C&S blending model	14-Dec-06		7-Dec-06	TDR will have toll blending in Chicago area with Fermilab on-site blending as a backup.
	evaluate waveshifter concentration	15-Aug-06		16-Aug-06	light output vs. concentration
	evaluate pseudocumene concentration	15-Aug-06		1-Apr-06	CDR info good, additional meas in progress
	decide waveshifter/pseudocumene to match fiber diameter	9-Aug-06	13-Oct-06	26-Oct-06	No scintillator change, only fiber & PVC
	Consultant measurement of aerosol flamability	15-Jan-07		1-Feb-07	Can't ignite over wide range of droplet sizes with 10J spark
	<i>Consultant measurement of flash point</i>	<i>15-May-07</i>			<i>requested by Steve Dixon</i>
	TDR				
	Second draft based on Project Office first draft of Oct 17	9-Nov-06		23-Jan-07	
	"final" version back to Project Office control	9-Mar-07		23-Mar-07	28 pages, needs some work, but good start
	Cost & Schedule R&D part done	30-Mar-07			<i>close, Bill and Stuart iterating</i>
	Cost & Schedule Construction part done	16-Apr-07			
	Risk assessment done	15-Apr-07			
	BOEs done	15-May-07			



CD-2 Worklist, Fiber

NOvA Work List for CD-2 <small>(red means new since last version)</small>		Original Estimated Finish Date	Current Estimate of Finish Date	Actual Finish Date	comments
Wavelength Shifting Fiber					
	Updated Kuraray quote	1-Jun-06	1-Jul-06	6-Jul-06	
	evaluate fiber diameter	1-Aug-06	13-Oct-06		
	attenuation length of 0.7 mm fiber	15-Sep-06	30-Oct-06	24-Oct-06	OK, 17% acceptance loss, 1-2% atten. loss
	attenuation length of 0.6 mm fiber	30-Sep-06	30-Oct-06	24-Oct-06	not OK, 34% accept loss, 10% atten. Loss
	decide fiber diameter	9-Aug-06	30-Oct-06	26-Oct-06	0.7 mm with thicker cladding
	decide K27 waveshifter concentration (range is 150 - 500 ppm)	9-Feb-07	1-Apr-07		confused by data, 250 ppm looks low
	Need Procurement (?) help to avoid 5-8% duty on import	1-Oct-07			Bob Cibic estimates 9-12 months effort. Does this impact CD-3a?
	TDR				
	Second draft based on Project Office first draft of Oct 17	9-Nov-06		7-Feb-07	
	latest draft			2-Apr-07	Current draft requires measurements from additional R&D fiber to be delivered May 1
	"final" version back to Project Office control	9-Mar-07			Carl will talk with me this week
	Cost & Schedule R&D part done	30-Mar-07			close, Bill and Carl have talked several times
	Cost & Schedule Construction part done	16-Apr-07			
	Risk assessment done	15-Apr-07			
	BOEs done	15-May-07			



CD-2 Worklist, PVC extrusions

NOVA Work List for CD-2

(red means new since last version)

	Original Estimated Finish Date	Current Estimate of Finish Date	Actual Finish Date	comments
PVC Extrusions				
Horizontal Extrusion die				
Choose die proof resin (NOVA-2 with rutile TiO ₂)	5-May-06		5-Jun-06	
Proof 16 cell die at die manufacturer	26-Jun-06	31-Jul-06	24-Jul-06	done at Extrutech, not at die manufacturer
Tune 16 cell die at extruder	14-Jul-06	18-Aug-06	25-Jul-06	got samples but NOVA-2 resin clogged die
Rework die after initial tests	21-Aug-06		18-Sep-06	rework continues through March 07
2nd test with new rutile PVC resins and reworked die	1-Sep-06	18-Sep-06	18-Sep-06	
Rutile TiO₂ extrusions				
Issue RFP for 70,000 lb test resin + full detector option	5-Jun-06		23-Jun-06	but will have to do best & final, NOVA-2 clog
RFP responses for resin	5-Jun-06	21-Jul-06	21-Jul-06	able to update cost estimate with this info
Start modifications of rutile resin	1-Oct-06		16-Oct-06	Runs in Oct, Nov, Jan
End modifications of rutile resin	8-Oct-06		21-Nov-06	N-24 selected as baseline resin
Measure mechanical properties of rutile mixture in 16 cells	30-Sep-06	31-Dec-06	1-Jan-07	strength, creep, ... needed for structure FEA
Issue RFP for 70,000 lb rutile resin, BEST and FINAL	1-Sep-06	26-Dec-06	11-Jan-07	N-24
Order the 70,000 lb for 3500 m production		26-Dec-06	30-Jan-07	
Start production, 3500 m of 16 cell horizontal material in rutile	4-Aug-06	13-Mar-07	13-Mar-07	14 day effort truncated since 2nd vendor resin failed
Measure variations in rutile 16 cell material (width, thickness,...)	27-Mar-07			started, need info for structure details
Anatase TiO₂ extrusions				
Order first anatase versions of rutile resins	25-Sep-06	15-Sep-06	18-Sep-06	got N-20 and N-23
First test of anatase TiO ₂	7-Sep-06	25-Sep-06	3-Oct-06	light output measurements show 15% gain
Start modifications of anatase resin		21-Nov-06	21-Nov-06	Runs in Nov, Jan, Feb
End modifications of anatase resin			14-Feb-07	15%, 17%, and 18% versions all work
Measure mechanical properties of anatase mixture in 16 cells	30-Sep-06	31-Dec-06	1-Jan-07	strength, creep, ... needed for structure FEA
Order 30,000 lb resin for 1500 m of 16 cell material in anatase	15-Aug-06	1-Apr-07		
Start production 1500 m of 16 cell horizontal material in anatase	15-Apr-07			
Vertical Extrusion die (50% thicker walls & webs)				
Issue P.O. to modify existing die for vertical extrusions	1-Sep-06		24-Aug-06	Will be a 1 month window with no die.
Die returns after modification for vertical extrusions	15-Jan-06	1-Jun-07		die not available during May
Production extrusion of thicker vertical material	15-Jun-07			
Decide on TDR baseline resin: rutile or anatase	15-Oct-06	30-Oct-06	26-Oct-06	Anatase, but detailed mix still unresolved
Final 16 vs 32 cell decision			28-Sep-06	Plan is 16+16 = 32, only adhesive in question
Devcon adhesive tests of 32 cell from two 16 cell objects	21-Aug-06		21-Aug-06	ANL ES&H: Devcon-60 volatiles OK, Jan 24
RF welding test to make a 32 cell from two 16 cell objects	1-Nov-06		27-Oct-06	got first sample, abandoned this path Nov 9
TDR				
Second draft based on Project Office first draft of Oct 17	9-Nov-06		12-Jan-07	
latest draft			30-Mar-07	still missing some sections
"final" version back to Project Office control	9-Mar-07			working on it this week
Cost & Schedule R&D part done	30-Mar-07			discussions STILL in progress with Bill
Cost & Schedule Construction part done	16-Apr-07			
Risk assessment done	15-Apr-07			
BOEs done	15-May-07			



CD-2 Worklist, PVC Modules

NOVA Work List for CD-2 <i>(red means new since last version)</i>		Original Estimated Finish Date	Current Estimate of Finish Date	Actual Finish Date	comments
PVC Modules					
	evaluate 0.7 mm fiber fragility in Module Assembly	15-Sep-06		18-Sep-06	quantitative evaluation says OK on 10/24/06
	evaluate 0.6 mm fiber fragility in Module Assembly	22-Sep-06		5-Oct-06	~ OK, but worries remain
	test black PVC for conductivity	15-Sep-06		5-Dec-06	Not conductive enough. Insert a wire?
	final grounding scheme decided	9-Feb-07	15-Mar-07		Aeorsol study indicates grounding unnecessary?
	final endplate design	31-Aug-06	15-Oct-06	18-Oct-06	
	final manifold design	31-Aug-06	15-Oct-06	18-Oct-06	
	adhesive choice	30-Sep-06	15-Dec-06	15-Dec-06	DP-190 next to scintillator plus Plastic Welder for strength
	adhesive vs. RF welding	1-Dec-06	1-Apr-07	20-Nov-06	adhesive in TDR
	factory stringing machine	1-Oct-06	1-Nov-06	14-Nov-06	internal review approved design
	factory flycutting machine	1-Oct-06		15-Jul-06	MINOS flycutter tested successfully
	factory gluing machine	1-Nov-06	15-Dec-06	15-Dec-06	pneumatic, so easy
	Time & Motion studies with 16 cell, 12 ft(early) & 53 ft(later) objects	15-Dec-06	15-Feb-07	9-Feb-07	73% based on T&M, still need 53 ft handling
	Building selected for Factory #1 at Fermilab	22-Dec-06			need for TDR, want to say WideBand Lab
	Cost information in hand for loading dock conversion	5-Jan-07		5-Jan-07	need for Cost & Schedule
	Cost information in hand for pallet lifting fixture	1-Apr-07			
	Laboratory agrees with factory building selection	19-Jan-07			need for TDR
TDR					
	Second draft based on Project Office first draft of Oct 17	9-Nov-06		13-Dec-06	
	"final" version back to Project Office control	9-Mar-07		18-Mar-07	71 pages
	Cost & Schedule R&D part done	30-Mar-07			<i>Needs more work, not as close as others</i>
	Cost & Schedule Construction part done	16-Apr-07			
	Risk assessment done	15-Apr-07			
	BOEs done	15-May-07			



CD-2 Worklist, Electronics & DAQ

NOvA Work List for CD-2 <small>(red means new since last version)</small>		Original Estimated Finish Date	Current Estimate of Finish Date	Actual Finish Date	comments
Electronics					
	Receive 1st 10 APDs from Hamamatsu	1-Oct-06	5-Jan-07	6-Jan-07	as expected, some dead pixels, but performance of working pixels OK
	Receive 2nd 10 APDs from Hamamatsu	1-Mar-07	30-Mar-07		Nothing seen from them yet
	Get updated "target price" of APDs from Hamamatsu	1-Nov-06	15-Mar-07		follows test of 2nd 10 delivery in March
	completed studies of front end ASIC	10-Aug-06		28-Aug-06	Fermilab tests done, packaging for user tests
	Start testing of Front End Board prototype 2	1-Dec-07	1-Jan-07	9-Feb-07	1 under test, 4 more in assembly
	Front End Board prototype 2 testing complete	6-Oct-06	15-Mar-07		reading out, but tests not complete 3/23
	Cooling scheme choice for TDR: water or R-134a	1-Oct-06	1-Nov-06	26-Oct-06	Water, but Value Eng continues on R-134a.
	Outside review of cooling design	1-Nov-06		17-Nov-07	But will iterate for revised design
	TDR				
	Second draft based on Project Office first draft of Oct 17	9-Nov-06		6-Nov-06	
	"final" version back to Project Office control	9-Mar-07		27-Mar-07	24 pages, will need update with latest tests & final cable schemes to match Far Detector assembly, now more complete, 29 pgs
	Cost & Schedule R&D part done	30-Mar-07			06 done, looking at 07
	Cost & Schedule Construction part done	16-Apr-07			
	Risk assessment done	15-Apr-07			
	BOEs done	15-May-07			
Data Acquisition					
	prototype Data Concentrator boards ready to test	1-Jan-07		1-Feb-07	first board of 5
	prototype Data Concentrator tests complete	15-Dec-06	1-Apr-07		CPU working by late Feb, firmware in April
	TDR				
	Second draft based on Project Office first draft of Oct 17	9-Nov-06		6-Nov-07	
	"final" version back to Project Office control	9-Mar-07		27-Mar-07	More complete, also 29 pages.
	Cost & Schedule R&D part done	30-Mar-07			Close, missing a small part
	Cost & Schedule Construction part done	16-Apr-07			
	Risk assessment done	15-Apr-07			
	BOEs done	15-May-07			



CD-2 Worklist, Near Detector

NOVA Work List for CD-2 <i>(red means new since last version)</i>		Original Estimated Finish Date	Current Estimate of Finish Date	Actual Finish Date	comments
Near Assembly					
	Initial design of mechanical structure	19-Sep-06		19-Sep-06	have initial write-up, now revising
	Initial design of mechanical systems	19-Sep-06		19-Sep-06	have initial write-up, now revising
	Near design at TDR level	1-Nov-06		22-Nov-06	have 2nd draft of TDR chapter 15
	Cost information in hand for excavation schemes and rotation schemes	22-Dec-06		18-Dec-06	(still missing a NOVA fixture cost estimate)
	Lab support of decision on excavation in the tunnel	19-Jan-07		20-Mar-07	condition is that we must get out of 1/2 of tunnel without compromising 100% containment
	TDR				
	Second draft based on Project Office first draft of Oct 17	9-Nov-06		9-Nov-06	
	latest draft			6-Feb-07	waiting for tunnel decision
	"final" version back to Project Office control	9-Mar-07	6-Apr-07		coping with Montgomery challenge to write up a full scheme to get out of the way. Counter scheme being studied with more excavation and containment in floor excavation
	Cost & Schedule R&D part done	30-Mar-07		15-Mar-07	done
	Cost & Schedule Construction part done	16-Apr-07			
	Risk assessment done	15-Apr-07			
	BOEs done	15-May-07			



CD-2 Worklist, Far Detector Assembly

NOvA Work List for CD-2 <i>(red means new since last version)</i>		Original Estimated Finish Date	Current Estimate of Finish Date	Actual Finish Date	comments
Far Assembly					
	Validation of plane adhesive choice	16-May-06		11-Jul-06	3M-2216 initial choice revised to Devcon-60 on Feb 12
	Tests of 3 plane assemblies with 3M2216 and 16-cell extrusions	22-Sep-06	6-Oct-06	19-Oct-06	Held at 80 psi
	Tests of 3 plane assemblies with Devcon Plastic Welder and 16-cell extrusions	22-Sep-06	2-Jan-07		in progress, 11 plane test
	RF welding, plane to plane, 4 plane test at Ashland	31-Oct-06	1-Dec-06	27-Oct-06	have first sample
	RF welding, 3 plane assembly to compare			9-Nov-06	RF welding eliminated, Emabond withdraws
	settle baseline installation procedures	27-Jul-06	5-Oct-06	5-Oct-06	have initial write-up, now revising
	Validation of structural design	17-Aug-06	7-Nov-06		ongoing internal review in progress
	Initial design of access system for top of detector	30-Sep-06	19-Oct-06	31-Oct-06	linked to building design. Concrete ==> rolling platforms, now the baseline.
	Initial design of light tightening scheme	3-Oct-06	31-Jan-07	9-Feb-07	Paint identified.
	Initial design of scintillator filling scheme	26-Sep-06		26-Sep-06	linked to building design. Concrete ==> rolling platforms, now the baseline.
	final scintillator overflow tank design	5-Dec-06		5-Dec-06	task moved from modules to assembly
	Block Raiser design review	5-Dec-06	12-Dec-06	12-Dec-06	Block Pivoter selected, must iterate forks & baseplate, requires more PVC FEA.
	Designs of mechanical systems & tooling	8-Jan-07	15-Mar-07		working goal for structure and pivoter
TDR					
	Second draft based on Project Office first draft of Oct 17	9-Nov-06		9-Nov-06	
	"final" version back to Project Office control	23-Mar-07		23-Mar-07	137 pages, still missing some sections/figs
	Cost & Schedule R&D part done	30-Mar-07		15-Mar-07	done
	Cost & Schedule Construction part done	16-Apr-07			
	Risk assessment done	15-Apr-07			
	BOEs done	15-May-07			



CD-2 Worklist, Project Management

NOVA Work List for CD-2 <small>(red means new since last version)</small>		Original Estimated Finish Date	Current Estimate of Finish Date	Actual Finish Date	comments
Project Management					
final	Project Execution Plan	1-Aug-06	31-Jan-07	8-Feb-07	last proj part, Cost by L2
	draft of PMP including the Cooperative Agreement	2-Jan-07	31-Jan-07	16-Feb-07	includes org charts for CA
final	Project Management Plan	12-Jan-07			
final	Configuration Management Document	12-Jan-07			Elaine looking at ANU relative to plan
final	Risk Management Plan	12-Jan-07		26-Dec-07	
	Risk Registry done	13-Dec-06		13-Dec-06	have Excel version, examining WelcomRisk
draft	Procurement Plan (partial)	1-Aug-06		29-Aug-06	request from Lutha
		21-Jan-07		20-Dec-06	1/18 DOE response that it is OK, add ANU?
draft	Performance Management System Document (EVMS)	21-Jul-06		23-Aug-06	NOVA-doc-1084 (lab-wide plan)
final	Performance Management System Document (EVMS)	19-Jan-07			
QA Plan	- update CD-1 QA appendix into standalone plan	31-Jan-07	31-Jan-07	22-Feb-07	Nancy: iteration with 414.1c - goal is 4/15
draft	PSAD	1-Apr-06	1-May-07		had at CD-1 but not shown, Keith starts now
	Security Vulnerability Assessment Report	18-Sep-06		18-Sep-06	Steve Webster: just for nuclear facilities.
	Cyber Security Plan			16-Oct-06	Steve Webster: not needed if not IT project
draft	doc on High Performance Sustainable Bldg considerations	13-Sep-06		13-Sep-06	FESS Sustainable Design Review Procedure
final	doc on High Performance Sustainable Bldg considerations				LEED checklist by project team @ CD-3
	Begin monthly reports	1-May-06		27-Jun-06	May 2006 report finished June 27, 2006
	1st draft Technical Design Report (blanks identified)	1-Oct-06	6-Oct-06	17-Oct-06	
	2nd draft Technical Design Report, Chapters other than L2 work				
	Ch 1 Executive Summary	20-Jan-07	6-Apr-07		John
	Ch 2 Using the NuMI Beam	9-Nov-06	9-Mar-07	19-Mar-07	Mark, 5 pages
	Ch 3 Updated Science Case	9-Nov-06	9-Mar-07		Gary is working on it
	Ch 4 Scientific Design Criteria	9-Nov-06	9-Mar-07		Mark working on it
	Ch 5 Overview of NOVA Design	9-Nov-06	9-Mar-07		John + Nancy
	Ch 6 Performance of NOVA Design	9-Nov-06	9-Mar-07		Shanahan part in hand, need multicell test
	Ch 7 WBS structure	9-Nov-06	6-Apr-07		Ron has R&D done except ANU, construction to do
	Ch 18 Cost, Schedule, Scope	20-Jan-07	6-Apr-07		John
	Appendix A: Guide to Other NOVA Documents	20-Jan-07	9-Mar-07	2-Apr-07	Ron, 4 pgs
final	Technical Design Report	15-Dec-06	13-Apr-07		final updates, final edit by Project Office
update	R&D portion of C&S	30-Sep-06	11-Dec-06	15-Dec-06	needs modifications, needs ANU
final	R&D portion of C&S	15-Feb-07	30-Mar-07		now statusing through 3/31, MUST CLOSE
draft	construction 20 kt Cost & Schedule matching 2005 funding profile	10-Aug-06		15-Aug-06	"match" is approximate
					working on models so can focus on one for L2s, trying to advance building construction in 08/09. HOPE TO FINISH MODEL 4/5
	2nd draft construction 18 kt C & S following technical decisions & 2006 profile	1-Nov-06	16-Apr-07		
	3rd draft construction 18 kt C&S, adjust to profile	5-Dec-06	30-Apr-07		
final	Cost & Schedule	15-Dec-06	14-May-07		this would include full BOE & notes