

WBS 2.4 FY Costs

11/26/00

Uniq	WBS	Name	Start	Finish	FY98 Costs	FY99 Costs	FY00 Costs	FY01 Costs	FY02 Costs	FY03 Costs	Burd Costs
4	2.4	Far Detector Installation	8/3/98	4/3/03	\$0	\$3,679	\$11,266	\$2,111,554	\$2,634,476	\$1,299,959	\$6,060,934
1779	2.4.0.1	Install SM1	3/2/01	4/30/02	\$0	\$0	\$0	\$0	\$0	\$0	\$0
1780	2.4.0.2	Install SM2	5/1/02	4/3/03	\$0	\$0	\$0	\$0	\$0	\$0	\$0
194	2.4.1	Infrastructure	7/1/99	4/12/01	\$0	\$3,679	\$11,266	\$562,554	\$0	\$0	\$577,499
11871	2.4.1.0.MS	Infrastructure Setup Complete	4/12/01	4/12/01	\$0	\$0	\$0	\$0	\$0	\$0	\$0
195	2.4.1.1	EDIA	7/1/99	11/7/00	\$0	\$3,679	\$11,266	\$0	\$0	\$0	\$14,945
11868	2.4.1.1.1	EDIA - Soudan	10/1/99	11/7/00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
193	2.4.1.1.1.0.MS.1	Complete SoudanTitle II outfitting review	5/12/00	5/12/00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
196	2.4.1.1.1.1	Input to infrastructure design	10/1/99	12/23/99	\$0	\$0	\$0	\$0	\$0	\$0	\$0
197	2.4.1.1.1.2	Complete Title 1 specifications	11/19/99	1/28/00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
198	2.4.1.1.1.3	Review/coordinate design	2/11/00	4/28/00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
199	2.4.1.1.1.4	Ongoing liaison and oversight	4/6/00	11/7/00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11869	2.4.1.1.2	EDIA - FNAL	7/1/99	7/6/00	\$0	\$3,679	\$11,266	\$0	\$0	\$0	\$14,945
11870	2.4.1.1.2.1	Electronics Rack & Cabling Design	7/1/99	7/6/00	\$0	\$3,679	\$11,266	\$0	\$0	\$0	\$14,945
200	2.4.1.2	Area preparation & training	10/2/00	4/12/01	\$0	\$0	\$0	\$535,429	\$0	\$0	\$535,429
12256	2.4.1.2.0.MS.1	Counting House Beneficial Occupancy	10/2/00	10/2/00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
12257	2.4.1.2.0.MS.2	Soudan Mezzanine Beneficial Occupancy	10/31/00	10/31/00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
202	2.4.1.2.1	Counting House/Office set up	10/2/00	2/14/01	\$0	\$0	\$0	\$54,361	\$0	\$0	\$54,361
203	2.4.1.2.1.1	Labor costs (Counting House/Office Set-up)	11/13/00	2/14/01	\$0	\$0	\$0	\$15,644	\$0	\$0	\$15,644
204	2.4.1.2.1.2	Purch PC's	10/2/00	10/2/00	\$0	\$0	\$0	\$7,885	\$0	\$0	\$7,885
205	2.4.1.2.1.3	Purch Fax machine	10/2/00	10/2/00	\$0	\$0	\$0	\$1,355	\$0	\$0	\$1,355
206	2.4.1.2.1.4	Purch Printers	10/2/00	10/2/00	\$0	\$0	\$0	\$989	\$0	\$0	\$989
207	2.4.1.2.1.5	Purch Copiers	10/2/00	10/2/00	\$0	\$0	\$0	\$12,571	\$0	\$0	\$12,571
208	2.4.1.2.1.6	Purch Desks	10/2/00	10/2/00	\$0	\$0	\$0	\$7,062	\$0	\$0	\$7,062
209	2.4.1.2.1.7	Purch Chairs	10/2/00	10/2/00	\$0	\$0	\$0	\$2,064	\$0	\$0	\$2,064
210	2.4.1.2.1.8	Purch Misc. supplies	10/2/00	10/2/00	\$0	\$0	\$0	\$6,790	\$0	\$0	\$6,790
211	2.4.1.2.2	Mechanical Work Areas	10/2/00	4/12/01	\$0	\$0	\$0	\$311,749	\$0	\$0	\$311,749
201	2.4.1.2.2.0.MS.1	Begin setup of infrastructure	10/2/00	10/2/00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
12258	2.4.1.2.2.1	Actives Test & Storage Area	10/31/00	3/1/01	\$0	\$0	\$0	\$87,722	\$0	\$0	\$87,722
212	2.4.1.2.2.1.1	Set-up Actives test and storage area	10/31/00	12/13/00	\$0	\$0	\$0	\$33,672	\$0	\$0	\$33,672
12259	2.4.1.2.2.1.2	Scintillator Storage System	10/31/00	3/1/01	\$0	\$0	\$0	\$54,050	\$0	\$0	\$54,050
213	2.4.1.2.2.2	Shop Area	10/31/00	3/8/01	\$0	\$0	\$0	\$52,049	\$0	\$0	\$52,049
214	2.4.1.2.2.2.1	Labor setup costs (Shop Area)	12/14/00	3/8/01	\$0	\$0	\$0	\$8,963	\$0	\$0	\$8,963
215	2.4.1.2.2.2.2	Purch steel and Al stock	10/31/00	10/31/00	\$0	\$0	\$0	\$8,148	\$0	\$0	\$8,148
216	2.4.1.2.2.2.3	Purch nuts and bolts	10/31/00	10/31/00	\$0	\$0	\$0	\$3,395	\$0	\$0	\$3,395
217	2.4.1.2.2.2.4	Purch welder smoke hoods	10/31/00	10/31/00	\$0	\$0	\$0	\$3,880	\$0	\$0	\$3,880
218	2.4.1.2.2.2.5	Purch 54 inch metal shear	10/31/00	10/31/00	\$0	\$0	\$0	\$2,130	\$0	\$0	\$2,130
219	2.4.1.2.2.2.6	Purch 48 inch 12 gap pan brake	10/31/00	10/31/00	\$0	\$0	\$0	\$3,126	\$0	\$0	\$3,126
220	2.4.1.2.2.2.7	Purch misc. hand tools	10/31/00	10/31/00	\$0	\$0	\$0	\$6,790	\$0	\$0	\$6,790
221	2.4.1.2.2.2.8	Purch shelves, racks and storage bins	10/31/00	10/31/00	\$0	\$0	\$0	\$2,037	\$0	\$0	\$2,037

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222	2.4.1.2.2.2.9	Install shop electrical outlets	10/31/00	10/31/00	\$0	\$0	\$0	\$13,580	\$0	\$0	\$13,580
223	2.4.1.2.2.3	Assemble 1st workstation	3/2/01	4/12/01	\$0	\$0	\$0	\$41,310	\$0	\$0	\$41,310
224	2.4.1.2.2.3.1	Construct 1st workstation Area	3/2/01	3/29/01	\$0	\$0	\$0	\$24,112	\$0	\$0	\$24,112
225	2.4.1.2.2.3.2	Assemble 1st strongback	3/30/01	4/12/01	\$0	\$0	\$0	\$14,504	\$0	\$0	\$14,504
12279	2.4.1.2.2.3.3	Work Station 1 Capital Equipment	3/2/01	3/29/01	\$0	\$0	\$0	\$2,695	\$0	\$0	\$2,695
226	2.4.1.2.2.4	Assemble 2nd workstation	3/2/01	4/12/01	\$0	\$0	\$0	\$41,310	\$0	\$0	\$41,310
227	2.4.1.2.2.4.1	Construct 2nd workstation area	3/2/01	3/29/01	\$0	\$0	\$0	\$24,112	\$0	\$0	\$24,112
228	2.4.1.2.2.4.2	Assemble 2nd strongback	3/30/01	4/12/01	\$0	\$0	\$0	\$14,504	\$0	\$0	\$14,504
12280	2.4.1.2.2.4.3	Work Station 2 Capital Equipment	3/2/01	3/29/01	\$0	\$0	\$0	\$2,695	\$0	\$0	\$2,695
12260	2.4.1.2.2.5	Surface Building	1/2/01	2/12/01	\$0	\$0	\$0	\$89,358	\$0	\$0	\$89,358
12261	2.4.1.2.2.5.0.MS.1	Surface Building Beneficial Occupancy	1/2/01	1/2/01	\$0	\$0	\$0	\$0	\$0	\$0	\$0
12262	2.4.1.2.2.5.1	Surface Building Outfitting	1/2/01	2/12/01	\$0	\$0	\$0	\$89,358	\$0	\$0	\$89,358
229	2.4.1.2.3	Electronics Work Area	10/31/00	11/13/00	\$0	\$0	\$0	\$15,210	\$0	\$0	\$15,210
12263	2.4.1.2.4	Communications	10/2/00	3/8/01	\$0	\$0	\$0	\$60,731	\$0	\$0	\$60,731
230	2.4.1.2.4.1	Shaft Fiber Optics	10/2/00	10/4/00	\$0	\$0	\$0	\$20,370	\$0	\$0	\$20,370
12264	2.4.1.2.4.2	Underground LAN	3/2/01	3/8/01	\$0	\$0	\$0	\$20,398	\$0	\$0	\$20,398
12265	2.4.1.2.4.3	Surface Wireless LAN	10/2/00	10/6/00	\$0	\$0	\$0	\$19,963	\$0	\$0	\$19,963
232	2.4.1.2.5	Control Room Set-up	3/2/01	3/29/01	\$0	\$0	\$0	\$34,548	\$0	\$0	\$34,548
12266	2.4.1.2.6	Set-up Electronics Racks	3/2/01	4/12/01	\$0	\$0	\$0	\$36,884	\$0	\$0	\$36,884
12278	2.4.1.2.7	Set-up Cable Trays	3/2/01	4/12/01	\$0	\$0	\$0	\$21,946	\$0	\$0	\$21,946
233	2.4.1.3	DNR Costs	10/2/00	3/1/01	\$0	\$0	\$0	\$27,125	\$0	\$0	\$27,125
234	2.4.1.3.1	Hoistman	10/2/00	3/1/01	\$0	\$0	\$0	\$12,390	\$0	\$0	\$12,390
235	2.4.1.3.2	Hoist charges	10/2/00	3/1/01	\$0	\$0	\$0	\$14,735	\$0	\$0	\$14,735
236	2.4.2	Materials Receiving & Handling	4/1/99	3/21/03	\$0	\$0	\$0	\$423,787	\$634,153	\$307,620	\$1,365,560
237	2.4.2.1	EDIA	4/1/99	4/11/01	\$0	\$0	\$0	\$23,206	\$0	\$0	\$23,206
242	2.4.2.1.0.MS.1	Obtain Materials Handling ORC	11/29/00	11/29/00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
239	2.4.2.1.1	Develop far materials handling procedure	4/1/99	4/28/00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
240	2.4.2.1.2	Determine Title 1 outfitting specs	6/17/99	1/27/00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
241	2.4.2.1.3	Validate procedures at Soudan	11/21/00	11/29/00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
12267	2.4.2.1.4	Materials Handling Start-up - Scintillator	11/30/00	4/11/01	\$0	\$0	\$0	\$23,206	\$0	\$0	\$23,206
243	2.4.2.2	Effort	4/12/01	3/21/03	\$0	\$0	\$0	\$246,822	\$634,153	\$307,620	\$1,188,596
244	2.4.2.2.1	Materials staging - SM1 startup	4/13/01	7/9/01	\$0	\$0	\$0	\$44,326	\$0	\$0	\$44,326
245	2.4.2.2.2	Steel & Scintillator Module Handling - SM1 startup	4/12/01	7/6/01	\$0	\$0	\$0	\$56,711	\$0	\$0	\$56,711
246	2.4.2.2.3	Materials staging - SM1	7/9/01	4/17/02	\$0	\$0	\$0	\$54,906	\$131,058	\$0	\$185,964
247	2.4.2.2.4	Steel & Scintillator Module Handling - SM1	7/9/01	4/17/02	\$0	\$0	\$0	\$90,879	\$216,923	\$0	\$307,802
248	2.4.2.2.5	Materials staging - SM2	4/23/02	3/21/03	\$0	\$0	\$0	\$0	\$107,779	\$115,857	\$223,636
249	2.4.2.2.6	Steel & Scint Module Handling - SM2	4/23/02	3/21/03	\$0	\$0	\$0	\$0	\$178,393	\$191,763	\$370,156
253	2.4.2.3	Surface Equipment	1/2/01	1/2/01	\$0	\$0	\$0	\$119,269	\$0	\$0	\$119,269
254	2.4.2.3.1	Lease Boom Truck	1/2/01	1/2/01	\$0	\$0	\$0	\$32,593	\$0	\$0	\$32,593
255	2.4.2.3.2	Lease Utility Truck	1/2/01	1/2/01	\$0	\$0	\$0	\$28,519	\$0	\$0	\$28,519
256	2.4.2.3.3	Purch Boom Rigging	1/2/01	1/2/01	\$0	\$0	\$0	\$29,640	\$0	\$0	\$29,640
257	2.4.2.3.4	Lease Fork Lift	1/2/01	1/2/01	\$0	\$0	\$0	\$28,519	\$0	\$0	\$28,519

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12281	2.4.2.4	Underground Equipment	10/2/00	10/2/00	\$0	\$0	\$0	\$34,490	\$0	\$0	\$34,490
12282	2.4.2.4.1	Shaft Station Horizontal Tugger	10/2/00	10/2/00	\$0	\$0	\$0	\$10,778	\$0	\$0	\$10,778
12283	2.4.2.4.2	Plane Installation Man Lift	10/2/00	10/2/00	\$0	\$0	\$0	\$23,712	\$0	\$0	\$23,712
261	2.4.3	Detector Assembly	8/3/98	4/3/03	\$0	\$0	\$0	\$756,392	\$1,685,928	\$832,378	\$3,274,698
262	2.4.3.1	EDIA	8/3/98	10/2/01	\$0	\$0	\$0	\$12,092	\$0	\$0	\$12,092
263	2.4.3.1.1	Magnet Coil	8/3/98	10/2/01	\$0	\$0	\$0	\$0	\$0	\$0	\$0
269	2.4.3.1.1.0.MS.1	Magnet Coil Installation ORC granted	10/2/01	10/2/01	\$0	\$0	\$0	\$0	\$0	\$0	\$0
264	2.4.3.1.1.1	Input to design/installation	8/3/98	10/26/98	\$0	\$0	\$0	\$0	\$0	\$0	\$0
266	2.4.3.1.1.2	Far Inst Review of Coil Systems Design	12/9/99	8/18/00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
267	2.4.3.1.1.3	Magnet Coil Installation review	9/4/01	9/4/01	\$0	\$0	\$0	\$0	\$0	\$0	\$0
268	2.4.3.1.1.4	Rework installation procedures	9/4/01	10/2/01	\$0	\$0	\$0	\$0	\$0	\$0	\$0
270	2.4.3.1.2	Scintillator Mounting (Liaison)	12/21/98	6/19/00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
275	2.4.3.1.2.0.MS.1	Complete review of scintillator installation	6/19/00	6/19/00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
271	2.4.3.1.2.1	Input to scintillator mounting procedures	12/21/98	11/12/99	\$0	\$0	\$0	\$0	\$0	\$0	\$0
276	2.4.3.1.3	Detector Electronics (Liaison)	2/4/00	8/8/00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
280	2.4.3.1.3.0.MS.1	Complete electronics installation review	8/8/00	8/8/00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
277	2.4.3.1.3.1	Input to electronics installation	2/4/00	7/10/00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
278	2.4.3.1.3.2	Electronics Review	7/11/00	7/11/00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
279	2.4.3.1.3.3	Rework procedures	7/11/00	8/8/00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
281	2.4.3.1.4	Assembly Procedures	12/1/00	3/12/01	\$0	\$0	\$0	\$12,092	\$0	\$0	\$12,092
285	2.4.3.1.4.0.MS.1	Detector Assembly ORC granted	3/12/01	3/12/01	\$0	\$0	\$0	\$0	\$0	\$0	\$0
282	2.4.3.1.4.1	Validate assembly procedures at Soudan	12/8/00	1/26/01	\$0	\$0	\$0	\$1,239	\$0	\$0	\$1,239
283	2.4.3.1.4.2	Detector installation review	1/29/01	1/29/01	\$0	\$0	\$0	\$0	\$0	\$0	\$0
284	2.4.3.1.4.3	Rework procedures	1/29/01	3/12/01	\$0	\$0	\$0	\$1,239	\$0	\$0	\$1,239
12268	2.4.3.1.4.4	Scintillator Testing Start-up	12/1/00	3/1/01	\$0	\$0	\$0	\$9,615	\$0	\$0	\$9,615
286	2.4.3.2	Supermodule 1 - SM1	3/2/01	4/30/02	\$0	\$0	\$0	\$469,381	\$672,693	\$0	\$1,142,073
291	2.4.3.2.0.MS.1	Start SM1 Installation	3/2/01	3/2/01	\$0	\$0	\$0	\$0	\$0	\$0	\$0
294	2.4.3.2.0.MS.2	Full Rate Assembly - SM1	7/6/01	7/6/01	\$0	\$0	\$0	\$0	\$0	\$0	\$0
292	2.4.3.2.1	Start-up Period	4/12/01	7/6/01	\$0	\$0	\$0	\$193,600	\$0	\$0	\$193,600
293	2.4.3.2.2	Obtain electronics ORC	4/18/01	4/23/01	\$0	\$0	\$0	\$619	\$0	\$0	\$619
295	2.4.3.2.3	Assembly Supervision - SM1	4/12/01	4/17/02	\$0	\$0	\$0	\$0	\$0	\$0	\$0
296	2.4.3.2.4	Scintillator tester - SM1	7/9/01	4/17/02	\$0	\$0	\$0	\$0	\$0	\$0	\$0
297	2.4.3.2.5	Workstation Crew - SM1	7/9/01	4/17/02	\$0	\$0	\$0	\$227,197	\$542,308	\$0	\$769,506
298	2.4.3.2.6	Plane installer - SM1	7/9/01	4/17/02	\$0	\$0	\$0	\$11,991	\$28,622	\$0	\$40,613
299	2.4.3.2.7	Electronics installer - SM1	7/9/01	4/17/02	\$0	\$0	\$0	\$35,973	\$85,866	\$0	\$121,838
301	2.4.3.2.8	Coil Installation - SM1	4/18/02	4/22/02	\$0	\$0	\$0	\$0	\$13,329	\$0	\$13,329
305	2.4.3.2.9	Coil electrical/cooling connections - SM1	4/22/02	4/29/02	\$0	\$0	\$0	\$0	\$2,568	\$0	\$2,568
306	2.4.3.2.10	Inspection of Coil before Turnon - SM1	4/30/02	4/30/02	\$0	\$0	\$0	\$0	\$0	\$0	\$0
308	2.4.3.3	Supermodule 2 - SM2	4/23/02	4/3/03	\$0	\$0	\$0	\$0	\$538,564	\$586,279	\$1,124,842
11958	2.4.3.3.0.MS.1	Start SM2 Installation	5/1/02	5/1/02	\$0	\$0	\$0	\$0	\$0	\$0	\$0
313	2.4.3.3.1	Assembly Supervision - SM2	4/23/02	3/26/03	\$0	\$0	\$0	\$0	\$0	\$0	\$0
314	2.4.3.3.2	Scintillator tester - SM2	4/23/02	3/19/03	\$0	\$0	\$0	\$0	\$0	\$0	\$0

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315	2.4.3.3.3	Workstation Crew - SM2	4/23/02	3/19/03	\$0	\$0	\$0	\$0	\$444,686	\$472,479	\$917,164
316	2.4.3.3.4	Plane installer - SM2	4/23/02	3/19/03	\$0	\$0	\$0	\$0	\$23,470	\$24,936	\$48,406
317	2.4.3.3.5	Electronics installer - SM2	4/23/02	3/19/03	\$0	\$0	\$0	\$0	\$70,409	\$74,809	\$145,218
319	2.4.3.3.6	Coil Installation - SM2	3/20/03	3/26/03	\$0	\$0	\$0	\$0	\$0	\$11,416	\$11,416
321	2.4.3.3.7	Coil electrical/cooling connections - SM2	3/26/03	4/2/03	\$0	\$0	\$0	\$0	\$0	\$2,639	\$2,639
322	2.4.3.3.8	Inspection of Coil before Turnon - SM2	4/3/03	4/3/03	\$0	\$0	\$0	\$0	\$0	\$0	\$0
338	2.4.3.4	DNR Costs	10/2/00	3/27/03	\$0	\$0	\$0	\$274,919	\$474,672	\$246,099	\$995,690
339	2.4.3.4.1	Hoist charges - SM1	3/2/01	3/25/02	\$0	\$0	\$0	\$199,571	\$165,827	\$0	\$365,397
340	2.4.3.4.2	Hoist charges - SM2	3/26/02	3/21/03	\$0	\$0	\$0	\$0	\$188,485	\$172,542	\$361,027
12285	2.4.3.4.3	Additional DNR Labor Costs	3/2/01	3/21/03	\$0	\$0	\$0	\$7,900	\$13,559	\$6,416	\$27,875
12274	2.4.3.4.4	Electricity Costs	10/2/00	3/27/03	\$0	\$0	\$0	\$67,449	\$106,801	\$67,141	\$241,391
12275	2.4.3.4.4.1	Electricity Costs - FY01	10/2/00	9/28/01	\$0	\$0	\$0	\$67,449	\$0	\$0	\$67,449
12276	2.4.3.4.4.2	Electricity Costs - FY02	10/1/01	9/30/02	\$0	\$0	\$0	\$0	\$106,801	\$0	\$106,801
12277	2.4.3.4.4.3	Electricity Costs - FY03	10/1/02	3/27/03	\$0	\$0	\$0	\$0	\$0	\$67,141	\$67,141
342	2.4.4	Alignment and Survey - Soudan	10/2/00	3/30/01	\$0	\$0	\$0	\$55,575	\$0	\$0	\$55,575
344	2.4.4.2	Purchases & Set-up	10/2/00	3/30/01	\$0	\$0	\$0	\$49,174	\$0	\$0	\$49,174
345	2.4.4.2.1	Purch Total Station Device	10/2/00	10/2/00	\$0	\$0	\$0	\$32,334	\$0	\$0	\$32,334
346	2.4.4.2.2	Total Station Set-up	3/26/01	3/30/01	\$0	\$0	\$0	\$16,840	\$0	\$0	\$16,840
12305	2.4.4.3	Alignment and Survey - FNAL	3/2/01	3/30/01	\$0	\$0	\$0	\$6,401	\$0	\$0	\$6,401
12304	2.4.4.3.1	FNAL Survey Travel	3/2/01	3/30/01	\$0	\$0	\$0	\$6,401	\$0	\$0	\$6,401
12269	2.4.5	Mine Crew Management	10/2/00	4/3/03	\$0	\$0	\$0	\$313,246	\$314,395	\$159,961	\$787,602