



Fermilab

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Beams Division/Electron Cooling

August 13, 2003

MEMO TO: Distribution

FROM: Jerry Leibfritz
Deputy Project Manager

**SUBJECT: JULY MONTHLY REPORT
MI-31
FESS/Engineering Project No. 6-6-44**

Please find attached the July 2003 monthly report for this project.

Enclosure

Distribution:

- P. Philp/MS 118
- M. Witherell/MS 105
- K. Stanfield/ MS 105
- S. Holmes/MS 105
- E. Temple/ MS 200
- J. Brown/MS 200
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- D. Carlson/MS 211
- C. Trimby/MS 212
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- S. Nagaitsev/ MS 307
- J. Sims/MS 214
- T. Prosapio/MS 214
- J. Spalding/MS 341
- R. Stefanski/MS 122
- Project File 6-6-44
- Chrono File



REPORTING PERIOD: July 2003

I. PROGRESS

1.1 General Construction

- a. Activity – Primary work activities included completion of DWS water line construction and cast in place structural concrete wall construction. Specifically, the DWS line was completed, pressure tested and chlorinated, and the east wall was poured to elevation 752.
- b. Cumulative hours worked – approximately 6100 hours through 8/2/03.
- c. Subcontractor's schedule evaluation – As of 07/31/03 the Subcontractor is on schedule. Previous monthly reports indicated that the Subcontractor was approximately 2 weeks behind their schedule. On July 2, 2003 the MI-31 CMO requested the Subcontractor submit a corrective action plan that would get the construction back on schedule. On July 15, 2003 Whittaker replied with a proposed corrective action and draft revised construction schedule. The latest schedule accepted submission dated 8/7/03 presents the Subcontractors proposed corrective actions including moving MS 1k activities to MS 5 and the combination of many structural concrete wall pours. The combined pours are being accomplished by pouring the walls in 36 foot lifts instead of the originally proposed approximately 20 foot high pours. The corrective actions appear to have significantly improved the Subcontractors progress when compared to the previous construction schedule. The Subcontractor's second payment update occurred on July 1, 2003 including payment for milestones 1C, 1 D and 1E. Since information contained on the Subcontractors cost loaded schedule may be considered sensitive and or proprietary to the Subcontractor we are not including it herein. To review the Subcontractors cost loaded schedule please contact the Project Manager of Construction Manager. See attached earned value reports and section II of this report for an earned value analysis. The Whittakers Subcontract is approximately 33% complete as of 7/31/03.
- d. Engineering Change Proposals/ Requests – See latest ECP list on Website. Supplemental Agreement numbers 1, 2 and 3 have been incorporated into the Subcontract. At this time the total subcontract amount is \$2,581,306 and the completion date is 03/24/04.
- e. Upcoming issues –More Wall Construction and the Phase 3 (MS 5) shutdown related activities scheduled to begin in the second week of September.
- f. Photographs:





1.2 Project Support

- a. Efforts this month were spent on review of submittals, field supervision and construction administration related activities.

SCHEDULE INFORMATION AND MILESTONES:

MILESTONE	DEFINITION	BASELINE	PEP Dates	Latest Estimates
Start Project	Directive signed	30 May 02	30 May 02	26 Jun 02 (actual)
T2 Design Complete	Contract documents submitted for procurement	15 Jan 03	15 Aug 02	15 Nov 02 (actual)
Begin Construction	Notice To Proceed Issued – Switch work	27 Jun 03	21 Nov 02	17 Jan 03 (actual)
Construction Complete	Final acceptance of all work	9 Jun 04	9 Dec 03	24 Mar 04
Project Complete	Project closed	30 Nov 04	10 Dec 03	24 Apr 04

II. Overall Project Cost Summary and Earned Value Analysis:

		ORIGINAL BASELINE PROJECT COSTS (2001 dollars)	Latest Estimated Cost*
1.1	General Construction	\$ 3,047,000	\$ 3,130,948
1.1.1	Construction W / 18% OHP	\$ 2,323,000	\$ 2,708,973
1.1.2	Construction Contingency 22%	\$ 511,000	\$ 319,748 12%
1.1.3	Construction G & A	\$ 83,000	\$ 102,227
1.1.4	Escalation (4.6%) 4.6%	\$ 130,000	\$ 0
1.2	Project Support	\$ 763,000	\$ 679,031
1.2.1	Project Engineering	\$ 465,000	\$ 461,687
1.2.2	Project Support Contingency 21%	\$ 99,000	\$ 87,653 19%
1.2.3	Project Support G & A	\$ 166,000	\$ 129,691
1.2.4	Escalation (4.6%)	\$ 33,000	\$ 0
Total Project Cost		\$ 3,810,000	\$ 3,810,000

*NOTE THAT 1.1 AND 1.2 HAVE BEEN REDISTRIBUTED (2/21/03) TO REFLECT USE OF MUCH OF THE ESCALATION, ACTUAL FIXED PRICE CONSTRUCTION COSTS, AND A HIGHER CONTINGENCY. Includes Supplemental Agreements 1, 2 and 3.

TPC Earned Value Analysis as of July 31, 2003 (based on earned value reports for July 2003):

1. The Schedule Variance is \$-19,804 indicating that the project is on schedule.
2. The Cost Variance is \$-15,906 indicating that we are slightly under-spending, primarily due to the fact that the transformer and switch work did not cost as much as we had anticipated. See the detailed earned value reports for more information.



ATTACHMENTS

See MI-31 website

<http://www-ap.fnal.gov/ecool/internal.html>

for the following:

TSR Report for 7-03

Earned Value Reports - Cost Reports and Graphs up to 7-03

Engineering Change Proposal List

More Photographs

Task Summary Report by Expenditure Type ("TSR")

Period End: JUL-03

Report on tasks: 1

A0201 - MI31 Ecooling Bldg

1 - MI31 Ecooling Bldg
Service Type: PL-EXST PRGM
SUPP-AIP

	Curr Month Costs	Curr YTD Costs	Curr YTD Obligations	Inception to Date Obligations	Inception to Date Costs	Reqs. in Process	Open Commitments
<u>Personnel Costs</u>							
FRINGE BENEFITS	58.75	-2,108.25	-2,108.25	1,663.03	1,663.03	0.00	0.00
OPTO ALLOC-MONTHLY	13.93	-195.08	-195.08	567.82	567.82	0.00	0.00
OPTO ALLOC-WEEKLY	0.00	-321.36	-321.36	65.96	65.96	0.00	0.00
OVERTIME	0.00	104.09	104.09	104.09	104.09	0.00	0.00
TIME WORKED -MONTHLY	163.87	-2,295.25	-2,295.25	7,350.82	7,350.82	0.00	0.00
TIME WORKED -WEEKLY	0.00	-3,570.57	-3,570.57	15.93	15.93	0.00	0.00
VAC EARNED ALLOC-MONTHLY	18.03	-252.47	-252.47	1,005.32	1,005.32	0.00	0.00
VAC EARNED ALLOC-WEEKLY	0.00	-392.77	-392.77	88.94	88.94	0.00	0.00
Personnel Costs	254.58	-9,031.66	-9,031.66	10,861.91	10,861.91	0.00	0.00

Materials & Services

CONSTRUCTION ENGINEERING	24,069.00	156,839.00	156,839.00	191,463.00	191,463.00	0.00	0.00
EXEMPT - CIVIL CONSTRUCTION	361,749.00	760,890.00	2,581,306.00	2,581,306.00	760,890.00	54,150.00	1,820,416.00
MATERIAL PURCHASES	0.00	20,370.11	20,370.11	20,370.11	20,370.11	0.00	0.00
PHOTO/GRAPHIC SERVICES	11.00	45.00	45.00	45.00	45.00	0.00	0.00
STORES ISSUES	369.01	369.01	369.01	369.01	369.01	0.00	0.00
SUB-CONTRACT SERVICES	693.01	29,529.76	38,697.75	108,635.23	99,467.24	0.00	9,167.99
T&M CONSTRUCTION SVCS.	0.00	5,481.32	5,481.32	5,481.32	5,481.32	0.00	0.00
T&M ELECTRICAL SERVICES	0.00	12,966.11	12,966.11	12,966.11	12,966.11	0.00	0.00
T&M RIGGING SERVICES	0.00	0.00	11,458.60	11,458.60	0.00	0.00	11,458.60

1 - MI31 Ecooling Bldg
Service Type: PL-EXST PRGM
SUPP-AIP

	Curr Month Costs	Curr YTD Costs	Curr YTD Obligations	Inception to Date Obligations	Inception to Date Costs	Reqs. in Process	Open Commitments
Materials & Services	386,891.02	986,490.31	2,827,532.90	2,932,094.38	1,091,051.79	54,150.00	1,841,042.59
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<u>Indirect Cost</u>							
CSS ALLOCATION	4,499.87	27,344.40	27,344.40	37,230.94	37,230.94	0.00	0.00
G&A ALLOCATION	1.10	50,004.51	50,004.51	62,220.66	62,220.66	0.00	0.00
G&A ALLOCATION-CSS PORTION	2,882.35	17,515.19	17,515.19	17,515.19	17,515.19	0.00	0.00
G&A ALLOCATION-M&S PORTION	112.04	9,999.56	9,999.56	9,999.56	9,999.56	0.00	0.00
MSA ALLOCATION	58.41	31,279.42	31,279.42	36,838.54	36,838.54	0.00	0.00
Indirect Cost	7,553.77	136,143.08	136,143.08	163,804.89	163,804.89	0.00	0.00
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1 - MI31 Ecooling Bldg SUBTOTAL:	394,699.37	1,113,601.73	2,954,644.32	3,106,761.18	1,265,718.59	54,150.00	1,841,042.59
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DIST. TO ACCOUNTS REC'BL:	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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UNDISTRIBUTED BALANCE:	394,699.37	1,113,601.73	2,954,644.32	3,106,761.18	1,265,718.59	54,150.00	1,841,042.59
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<u>REPORT TOTALS</u>							
TOTAL PROJECT/TASK:	394,699.37	1,113,601.73	2,954,644.32	3,106,761.18	1,265,718.59	54,150.00	1,841,042.59
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TOTAL DIST. ACCTS REC'BL:	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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TOTAL UNDIST BALANCE:	394,699.37	1,113,601.73	2,954,644.32	3,106,761.18	1,265,718.59	54,150.00	1,841,042.59

BCWS
MI-31 Anticipated Spending Profile
WBS 1.1 and 1.2

Title Source Type	WBS 1.2 Project Support													WBS 1.1 Construction													Monthly Totals	Cumulative Totals										
	ED&I				A				Monthly Totals	Cumulative Totals	Subcontract	Subcontract	Subcontract	Subcontract	Switch conduit	Switch conduit	Transformer Purchase	Transformer Purchase	Cable Tray	Cable Tray	Cabling	Cabling	Chiller	Chiller	Shielding Steel	Fab			Shielding Steel	Fab	Shielding Steel	Inst	Shielding Steel	Inst				
	T2	T2	T2	T3	T3	T3	T3	T3			T3	T3	T3	T3	T3	T3	T3	T3	T3	T3	T3	T3	T3	T3	T3	T3			T3	T3	T3	T3	T3	T3	T3	T3		
Jul-02	\$25,000	\$4,250	\$10,000	\$3,000	\$300	\$51				\$1,000	\$300	\$42,601	\$42,601																				\$0	\$0				
Aug-02	\$20,000	\$3,400	\$10,000	\$3,000								\$37,700	\$80,301																				\$0	\$0				
Sep-02	\$24,587	\$4,180	\$11,800	\$3,540								\$45,407	\$125,708																				\$0	\$0				
Oct-02			\$10,000	\$3,000	\$300	\$51				\$3,000	\$900	\$1,000	\$300	\$16,551	\$144,259																			\$11,600	\$11,600			
Nov-02	\$20,500	\$3,485	\$10,000	\$3,000						\$3,000	\$900	\$1,000	\$300	\$42,165	\$186,444																			\$0	\$11,600			
Dec-02							\$2,000	\$600		\$3,000	\$900	\$1,000	\$300	\$7,800	\$194,244																			\$0	\$11,600			
Jan-03							\$2,000	\$600		\$3,000	\$900	\$1,000	\$300	\$7,800	\$202,044																			\$29,000	\$40,600			
Feb-03							\$2,000	\$600		\$3,000	\$900	\$1,000	\$300	\$7,800	\$209,844																				\$23,614	\$64,214		
Mar-03				\$200	\$34	\$12,000	\$3,720	\$11,000	\$3,410	\$1,000	\$300	\$31,664	\$241,508																					\$0	\$64,214			
Apr-03				\$12,000	\$3,720	\$12,000	\$3,720	\$900	\$200	\$32,540	\$274,048	\$92,204																							\$92,204	\$156,418		
May-03				\$12,000	\$3,720	\$12,000	\$3,720	\$900	\$200	\$32,540	\$306,588	\$407,958																							\$407,958	\$564,376		
Jun-03				\$12,000	\$3,720	\$12,000	\$3,720	\$900	\$200	\$32,540	\$339,128	\$262,393	\$85,000																						\$347,393	\$911,769		
Jul-03				\$12,000	\$3,720	\$12,000	\$3,720	\$900	\$200	\$32,540	\$371,668	\$91,057																							\$91,057	\$1,002,826		
Aug-03				\$12,000	\$3,720	\$12,000	\$3,720	\$900	\$200	\$32,540	\$404,208	\$175,725																							\$175,725	\$1,178,551		
Sep-03				\$12,000	\$3,720	\$12,000	\$3,720	\$900	\$200	\$32,540	\$436,748	\$145,209																								\$145,209	\$1,343,760	
Oct-03				\$12,000	\$3,720	\$12,000	\$3,720	\$900	\$200	\$32,540	\$469,288	\$122,402																								\$122,402	\$1,466,162	
Nov-03				\$10,000	\$3,100	\$12,000	\$3,720	\$900	\$200	\$29,620	\$499,208	\$90,753																								\$10,000	\$1,600	
Dec-03				\$8,000	\$2,480	\$11,000	\$3,410	\$900	\$200	\$25,990	\$525,198	\$314,230																								\$314,230	\$1,882,849	
Jan-04				\$8,000	\$2,480	\$11,000	\$3,410	\$900	\$200	\$25,990	\$551,188	\$450,038																								\$450,038	\$2,332,887	
Feb-04				\$8,000	\$2,480	\$11,000	\$3,410	\$900	\$200	\$25,990	\$577,178	\$157,047																									\$157,047	\$2,527,410
Mar-04				\$10,000	\$3,100	\$12,000	\$3,720	\$900	\$200	\$14,200	\$591,378	\$272,190																									\$272,190	\$2,811,200
TOTALS	\$90,087	\$15,316	\$51,800	\$15,540	\$800	\$136	\$136,000	\$42,103	\$165,000	\$51,000	\$18,800	\$4,800	\$14,200	\$2,581,306	\$85,000	\$20,000	\$0	\$25,000	\$4,000	\$20,357	\$3,257	\$14,810	\$2,370	\$10,000	\$1,600	\$10,000	\$1,600	\$10,000	\$1,600	\$17,500	\$2,800	\$283,790	\$2,811,200	\$3,402,576				

WBS 1.2 Escalation and Contingency

Total for WBS 1.2 =	\$679,031
Total Direct and G&A (above) =	\$591,378
Project Support Escalation =	\$0
Project Support Contingency =	\$87,653 19%

** NOTE BUDGETED COST OF WORK SCHEDULED IS BASED ON WHITTAKERS
LATEST T3 COST LOADED SCHEDULE.

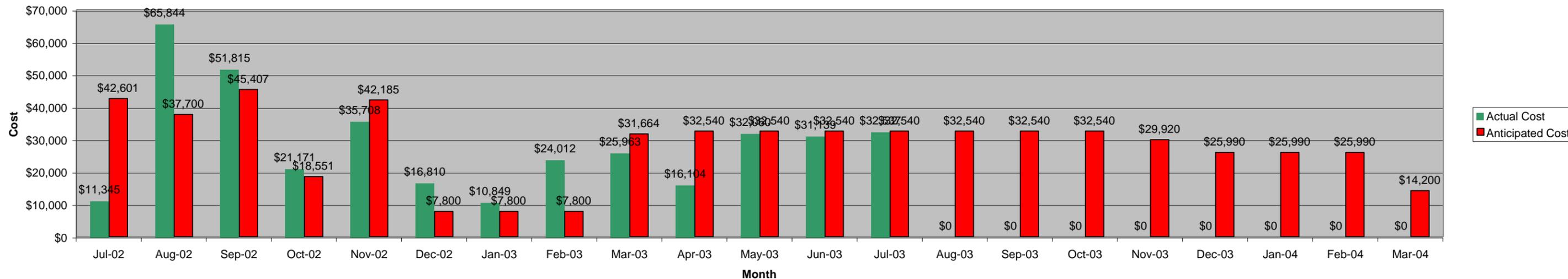
WBS 1.1 Escalation and Contingency

Total for WBS 1.1 =	\$3,130,948
Total Direct and G&A (above) =	\$2,811,200
Project Support Escalation =	\$0
Construction Contingency =	\$319,748 12%

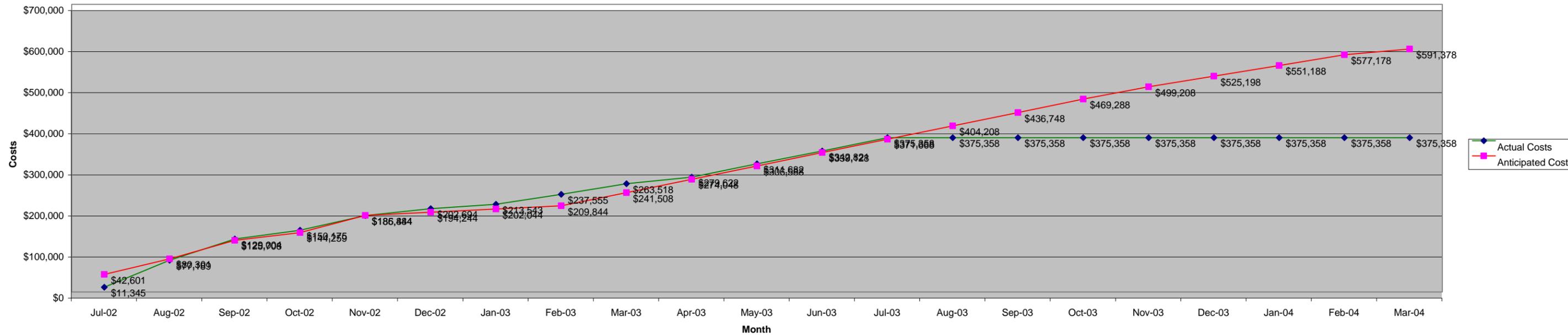
Total Indirect =	\$128,891
Total Direct =	\$462,487

Total Indirect =	\$102,227
Total Direct =	\$2,708,971

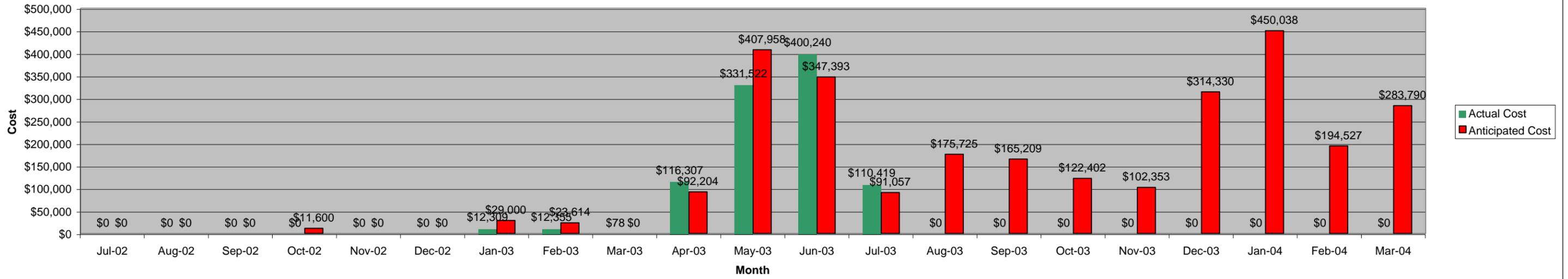
WBS 1.2 Monthly



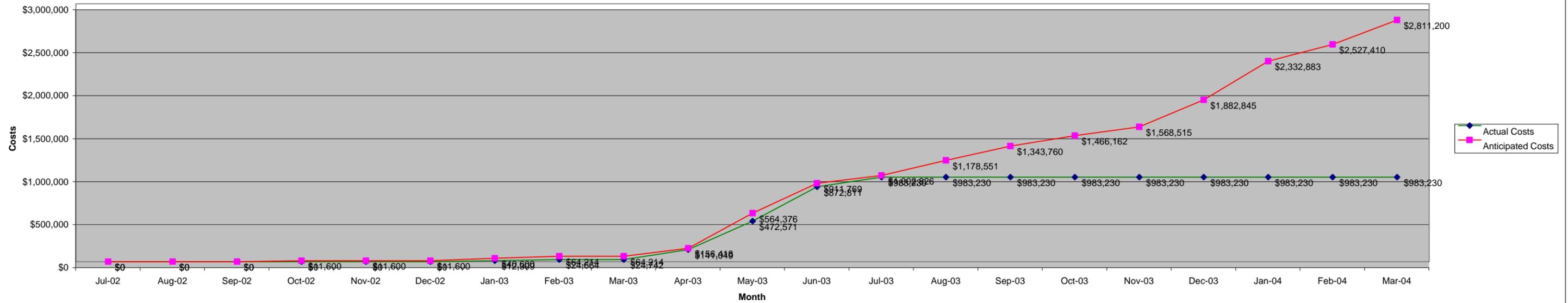
WBS 1.2 Cumulative



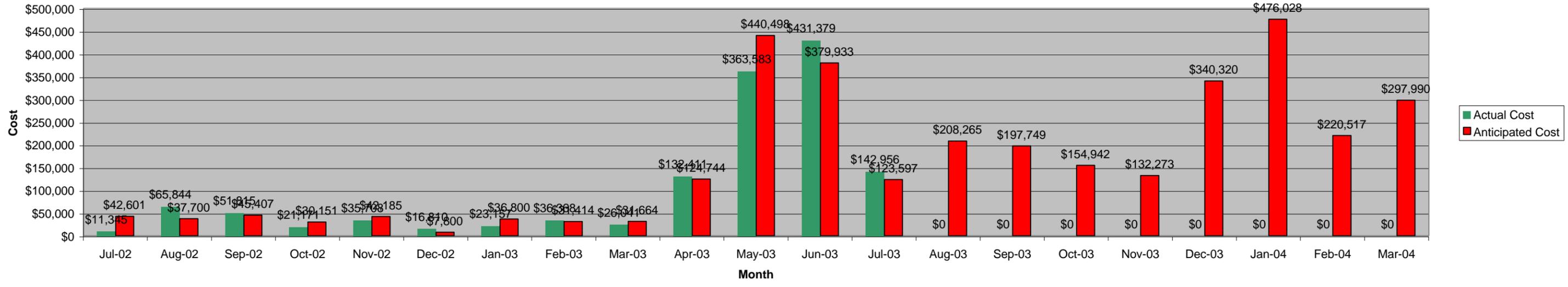
WBS 1.1 Monthly



WBS 1.1 Cumulative



TPC Monthly



TPC Cumulative

