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## Weekly update on DTL #1+ #3 ; week 52 + 01

All DTL-1 PMQ/Empty drift tubes have been rough machined on 12/30/02, 1.5-weeks ahead of schedule. All water channel e-beam welds have been completed and leak checked. The DTL-1 drift tube repairs are complete - ahead of 1/14/03 Milestone. 2 final vacuum leak checks and an evaluation of the surfaces by Jim Stovall's physics team needs be done to accept DTs for RF performance.

DTL-1 diverters were machined late last month; however, the 1/7/03 milestone was not met because a new design was implemented to improve the quality of vacuum leak checking and salvage high-value stem parts. Final machining will not be completed until the braze process joint is qualified. Braze trials were done and joints have proven to be He leak tight. Final qualification awaits sectioning and micrograph inspection. Present estimate show a one week delay. This is not a critical path item, but is carefully watched. All DTL-3 post-coupler tips have been welded to the stems on 1/3/03, completing the 1/27/03 milestone more than 3 weeks ahead of schedule.

Milestone description	Due Date	Number total	Number or % complete	Delta last week
DTL 3 DT's repair	Feb 28 <sup>th</sup> '03	29	0	0
DTL 3 DT's rebuilt	Feb 28 <sup>th</sup> '03	4	4	+1
DTL 3 DT's new built	Feb 28 <sup>th</sup> '03	0	0	0
DTL 3 other parts	Feb 28 <sup>th</sup> '03	100 %	88%	initial report
All DTL 3 parts shipped	Feb 28 <sup>th</sup> '03	100 %	25% / IPS marker DTLINK51	initial report
DTL 3 installation	April 16 <sup>st</sup> '03	100 %	? /IPS marker DTL045	0
DTL 1 DT's repair	April 1 <sup>st</sup> '03	7	7	0
DTL 1 DT's rebuilt	April 1 <sup>st</sup> '03	48	0	0
DTL 1 DT's new built	April 1 <sup>st</sup> '03	4	0	
DTL 1 other parts	April 1 <sup>st</sup> '03	100 %	77%	initial report
All DTL 1 parts shipped	April 1 <sup>st</sup> '03	100 %	23%/ IPS marker DTL055	initial report
DTL 1 installation	May 21 <sup>th</sup> '03	100 %	? / IPS marker DTLINK31	?

DTL-3 drift tube repair qualifications were successfully completed last week. We started the real DTL-3 drift tube repairs on 1/7/03. There is a logic error in the schedule we submitted which show DTL-3 repair start date of 1/8/03 and finish date of 1/21/03, but with the milestone at Jan 13. We need to resolve this error. Even if finish date is 1/31/03, all the subsequent activities (machining, vacuum check, cleaning) support the 2/28/03 delivery.

At Oak Ridge initial vacuum leak testing of DTL-3 in RATS is complete. All drift tube feedthroughs are blanked off. No detectable leaks. After 15 days of pumping, a vacuum

pressure of  $3.3 \times 10^{-7}$  torr was achieved. In parallel DTL-3 preparation for transport to the tunnel is in progress. Installation in the tunnel is planned for Thursday, 1-9-03.

This week we decided to add a second page to the directors report. It shows two tables with a list of major milestones as presented in the recovery plan, that was submitted to DOE last week. The milestones will be updated as we go along.

Table 16 of the recovery plan. Tank 3 milestones

<b>MS</b>	<b>Activity</b>	<b>Complete</b>	<b>Actual</b>
1	Repaired drift tubes, repair welds complete	13-Jan-03	3-Jan-03
2	Post-couplers, tips welded to stems	27-Jan-03	
3	Waveguide-iris transition, finish machining complete	27-Jan-03	
4	Top hat finish machining complete	31-Jan-03	
5	EMD drift tube repair complete	5-Feb-03	
6	Post-couplers, finish machining complete	18-Feb-03	
7	Drift tubes, field, vacuum, flow & pressure tests complete	21-Feb-03	
8	All DTL components delivered to ORNL	28-Feb-03	

Table 17 of the recovery plan. Tank 1 milestones

<b>MS</b>	<b>Activity</b>	<b>Complete</b>	<b>Actual</b>
1	Rebuilt drift tubes, 1st 10 diverters machined	7-Jan-03	6-Jan-03
2	Repaired drift tubes, finish machining complete	14-Jan-03	
3	Post-coupler tips welded to stems	3-Feb-03	
4	Waveguide-iris transition assembly braze complete	7-Feb-03	
5	Top hat finish machining complete	7-Feb-03	
6	Rebuilt drift tubes, all stems welded	11-Feb-03	
7	Repaired drift tubes, final unit delivered to ORNL	17-Feb-03	
8	Low-energy end-wall tuning-ring weld complete	5-Mar-03	
9	All DTL components delivered to ORNL	1-Apr-03	