Subject: **Cooling Plans**
Date: Mon, 06 Aug 2001 12:11:31 -0700
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Hi All,

I wanted to send out a short summary of what we talked about at the meeting, so that there is no confusion as to where we are and how to progress.

1. Glue testing (of "neat" resin samples):
-It appears that all samples have silane in them, which is the one unknown in the samples that showed leaky discharge (sounds like a medical condition...) so we need to make new samples with no silane.
-The current samples in C3F8 are in old liquid, which is hyper-irradiated. We will drain this vessel, clean it, and refill with new C3F8. However, we will use the samples that were NOT stored in the container over the weekend, so that they are "fresh." These samples may or may not have silane in them, and we must determine this. The "dirty" samples from the weekend will be stored until we decide what further actions to take.

2. Testing of luer locks:
-We need to find out whether the current samples are with glass filled or virgin PEEK.
-Tom will send a summary of the tests that have been completed on the luer locks so far. I will include these results in our results matrix (previous version attached below).

3. Test regimen in general:
-The proof test is now at 10 bar, and will be done for only a few minutes, as it is simply a test to guard against physical destruction of the fittings. The 4 bar test is the quantitative one.
-I have reprinted the new testing scheme below. We need to be extra sure that we follow these tests, and in order. If there are any questions, don't hesitate to ask me.
-For thermal cycling, we will use the enviromental chamber and do a large batch of fittings. The test will be programmed, and may take a few days for all 50 cycles.
-I will send out a blank testing sheet, which should be used to record the test results as they become available. This sheet will include the new testing sequence. This should happen later today.

4. Laser Welding:
-Directed light (local vendor) is having problems with fittings - they say the gap is too large. These are the same ones that were sent to EB industries in long island, though, so I need to find whether EB swaged the tubes to fit better, or whether directed light is just having problems. They are sending one sample for us to look at - if it's bad, we'll cancel the order and pay nothing.
-Gil will plan to visit EB in september. Maybe he can verify their

ability to handle and guard fragile tubes at that time (for actual sector production).
    -We need to meet with Fred to discuss laser welded luer lock fitting, and what may be done to make it smaller.

5. Other fittings:
    -We need to discuss indium fittings and what is being (or needs to be) done with them.
    -I will email eric vigeolas to get a status on the stave tube fittings (we have tube samples). When they arrive, we will have EB industries do some sample welds with them.

6. Other:
    -If I have missed anything, please let me know.

Thanks alot,
Neal

NEW TESTING REGIMEN (reprinted):
1.) He vacuum leak check (quanitative)
2.) 10 bar proof test (visual, assure that fitting doesn't mechanically explode, no more than 1 minute)
3.) 4 bar He pressurized leak check at 0 Celsius (quanitative)
4.) 1 bar He pressurized leak check at -35 Celsius (quanitative)
5.) He vacuum leak check (quanitative)
6.) Thermally cycle fitting assembly 50 times (20 to -35 C)
8.) Pressure cycle fitting assembly 50 times (1 to 4 bar)
9.) Repeat tests 1,3,4,5 (all quanitative, in that order)

I think it is important to include vac checks after each stage of testing, since
that is the easiest way to make sure that there has not been some sort of
"catastrophic" leak. I also agree that -50 C is too low, but it should be -35
C, since that temperature may be seen transiently during C3F8 injection.

Fitting Results.xls	**Name:** Fitting Results.xls **Type:** EXCEL File (application/msexcel) **Encoding:** base64 **Download Status:** Not downloaded with message