STEM CELL LABORATORY (STCL)

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DOCUMENT TITLE:

Review of Control Rate Freezing Graphs JA1

DOCUMENT NOTES:

Document Information

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Control Information

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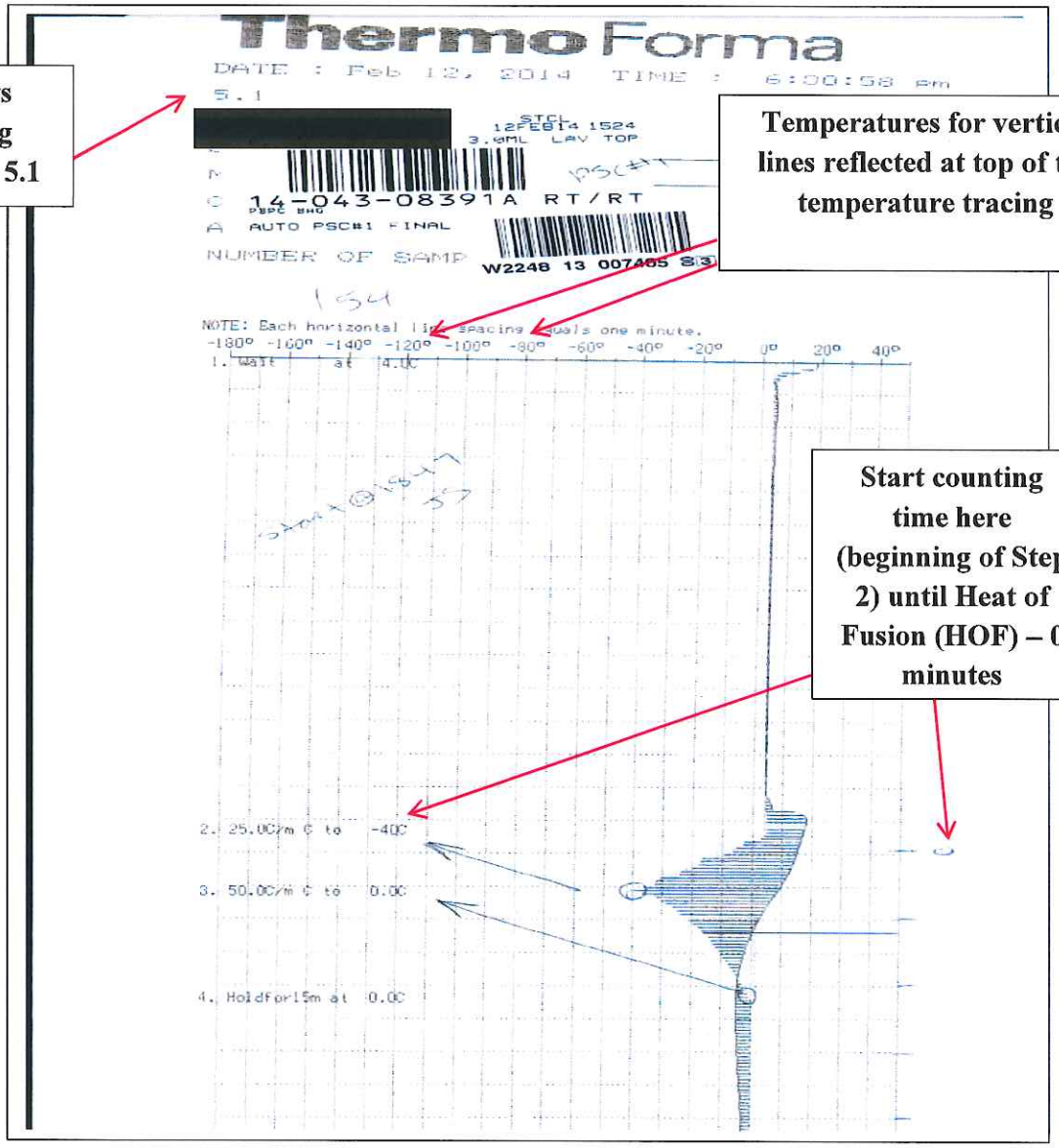
Previous Number: None	**Change Number:** STCL-CCR-133

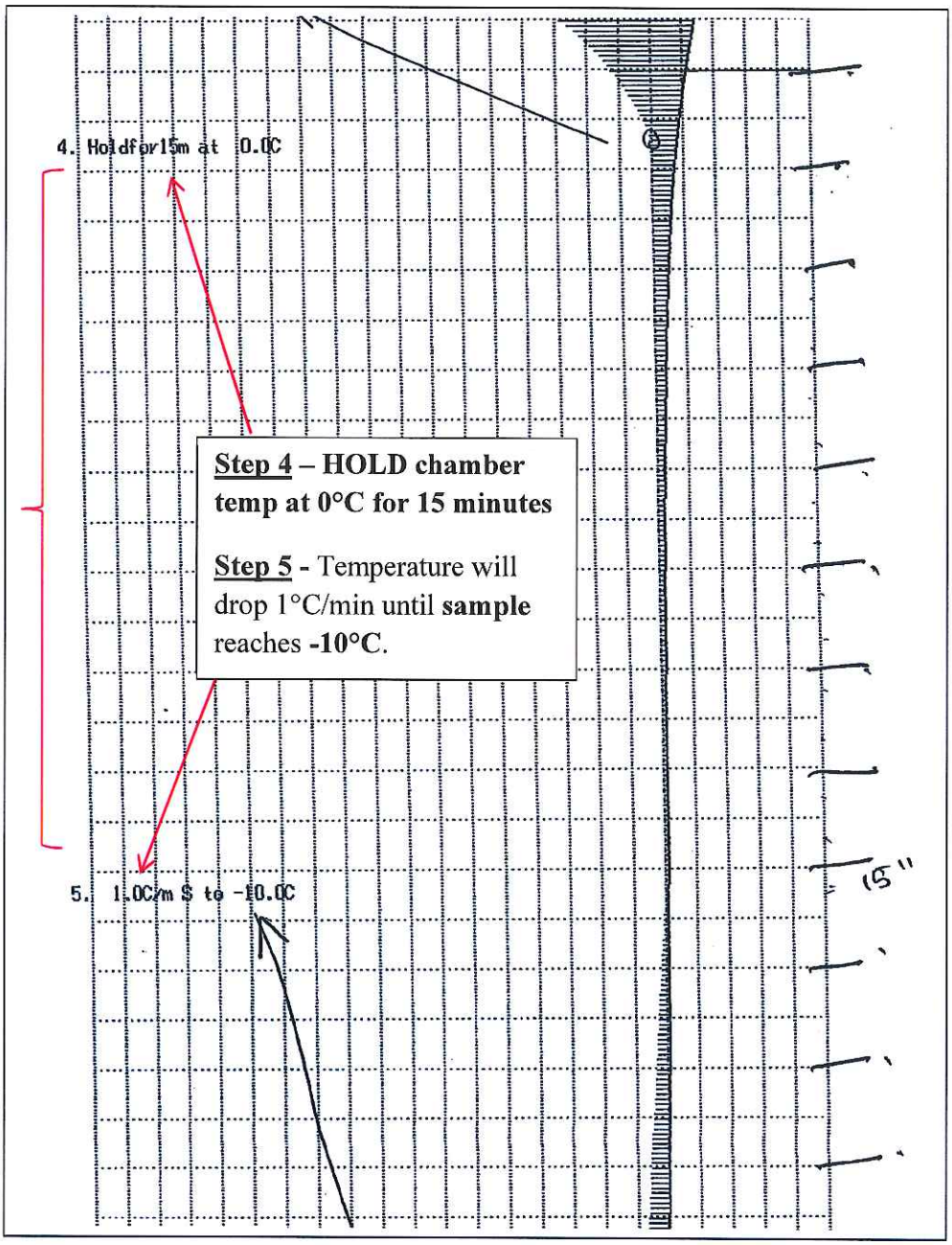


Step 1 – When selecting the RUN button the FIRST time, the chamber of the CRF will maintain a temperature of ~ 4° until RUN has been pressed a SECOND time. This pre-cools the chamber to be cooled before bags are placed in the CRF to start the freezing run.

Step 2 - Once RUN has been pressed the SECOND time, the temperature will drop 25°C/min until the **chamber** reaches **-40°C**.

Step 3 – Temperature will drop 50°C/min until the **chamber** reaches **0°C**.

Step 4 – **HOLD Chamber** at **0°C** for **15 minutes**.



Step 4 of freezing program

Step 4 – HOLD chamber temp at 0°C for 15 minutes

Step 5 - Temperature will drop 1°C/min until **sample** reaches **-10°C**.

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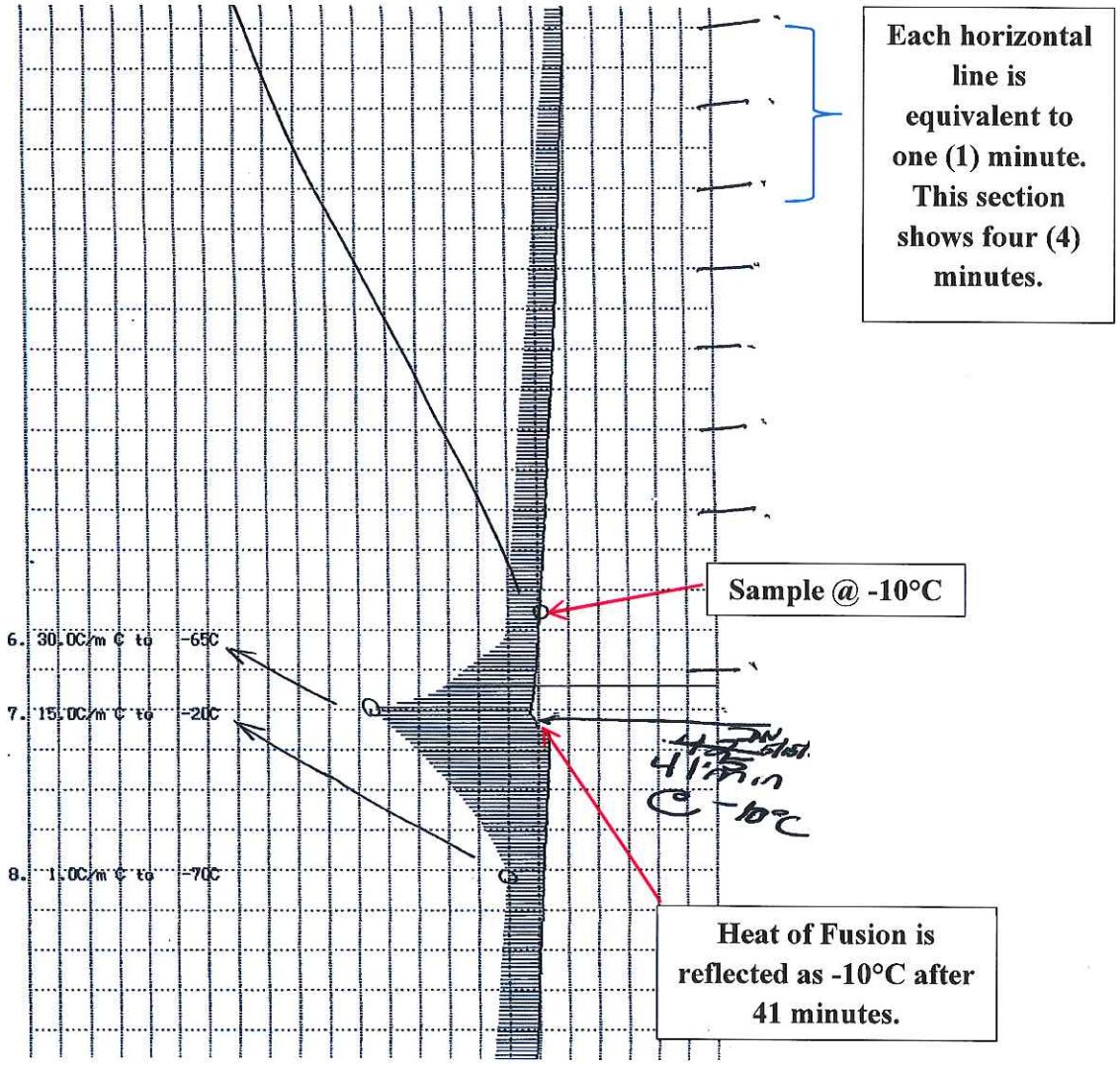
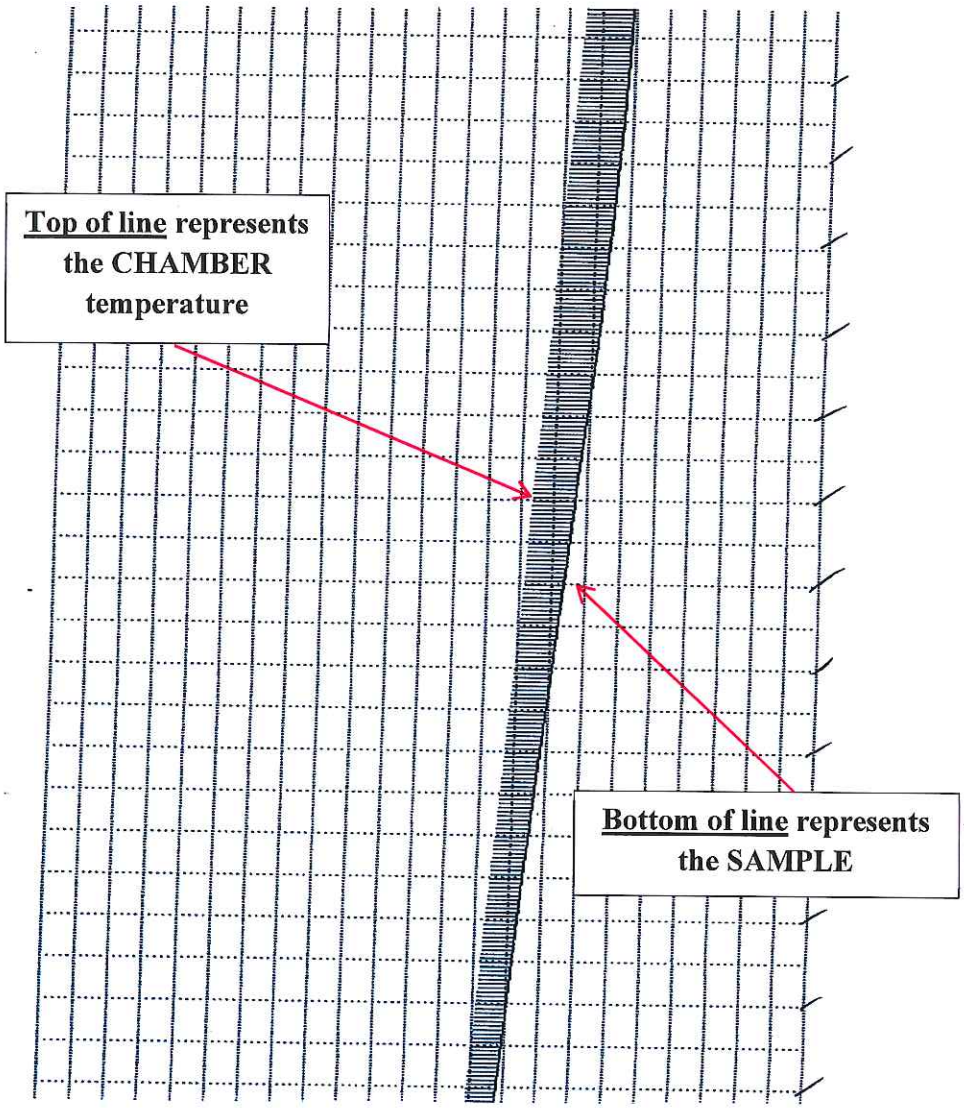


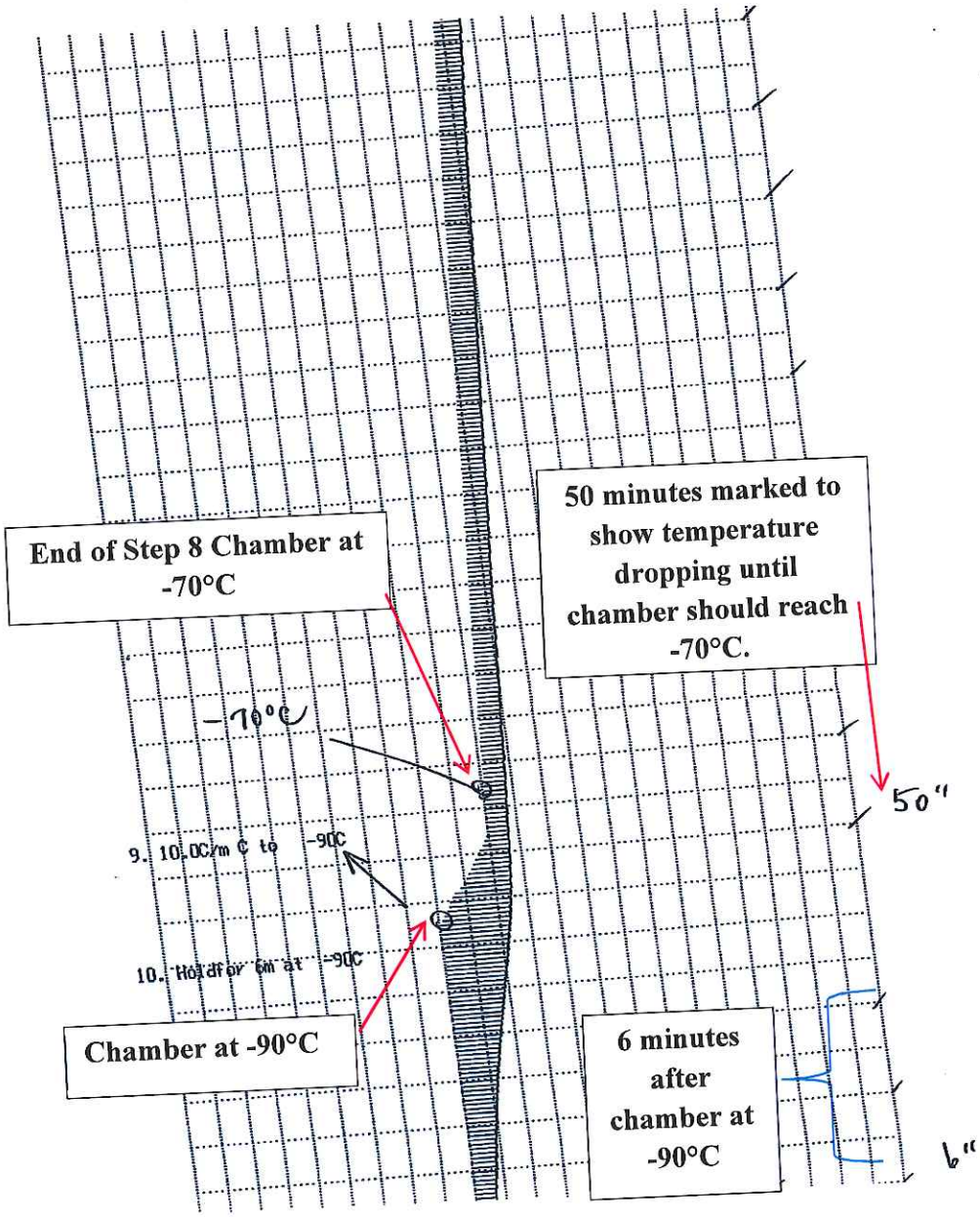
Step 6 – Temperature will drop 30°C/min until **chamber** reaches **-65°C**

Step 7 – Temperature will drop 15°C/min until **chamber** reaches **-20°C**.

Step 8 – Temperature will drop 1°C/min until **chamber** reaches **-70°C** (this step takes approximately 50 minutes given the temperature drop of 1°C/min.

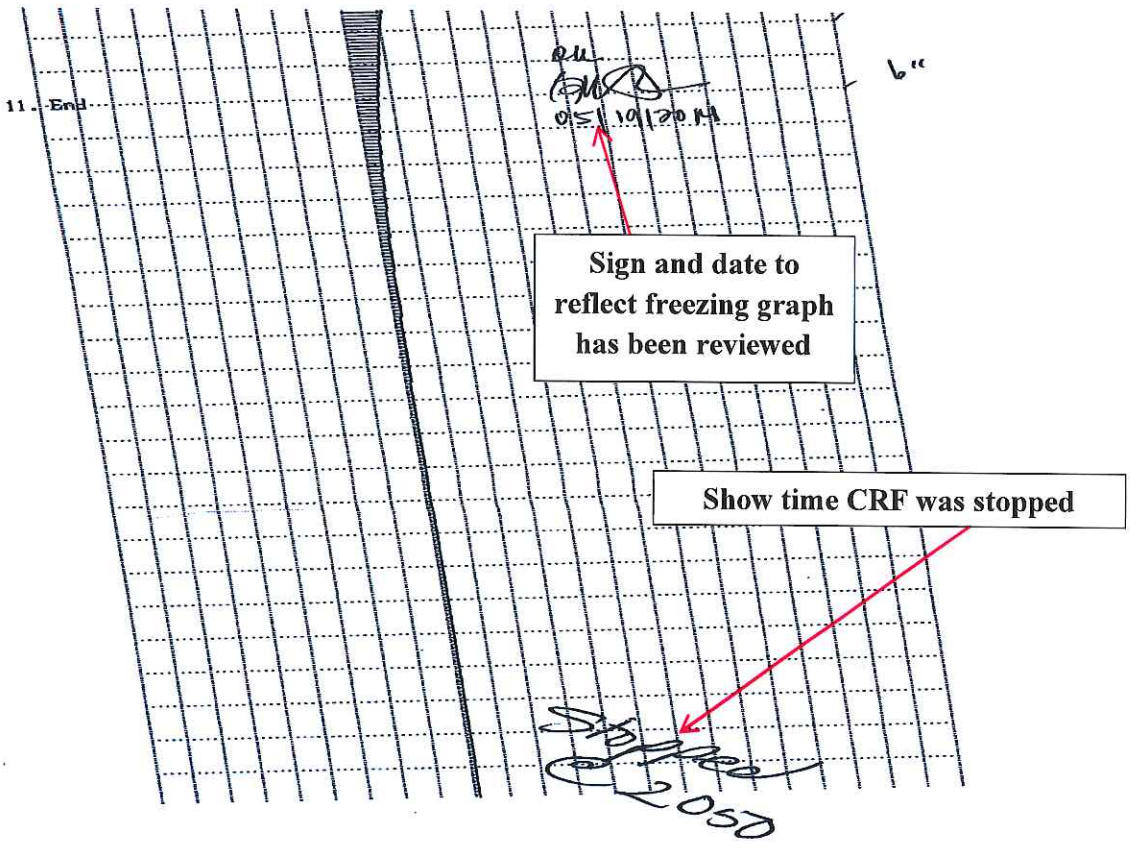


Step 8 – Continuation of step 8 (each horizontal line represents 1 minute (this screen shot spans a total of approximately 26 minutes).



Step 9 – Temperature will drop 10°C/min until **chamber** reaches **-90°C**.

Step 10 – HOLD **Chamber** for 6 minutes at **-90°C**



END - Holds **chamber** at **-90°C** until the CRF is stopped. Chamber stays at **-90°C** until BACK is pressed. Do **NOT** press BACK until you are ready to remove cryopreserved products from the Control Rate Freezer for storage in designated LN2 freezer.

TROUBLESHOOTING:

- If no Heat of Fusion (HOF) is reflected on the freezing graph, a segment from one bag from each recipient whose product was included in that freezing run must be tested for viability. If thawed viability is <85%, consult with the attending physician in case there they want to collect additional cells from the donor/recipient. (**NOTE**: Sometimes when there is a low TNC or the temperature probe is not placed properly between two bags, this can result in HOF not being displayed properly on the graph).
- File the reviewed freezing graphs indefinitely in the designated file cabinet in the laboratory and/or in Record Retention department once on-site storage space has been exhausted.

Signature Manifest

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Title: Review of Control Rate Freezing Graphs JA1

All dates and times are in Eastern Time.

STCL-EQUIP-005 JA1 Review of Control Rate Freezing Graphs

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Document Release

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