

Report on Inspection of Pail 211 (Ta #58) in F-308 Flask #20

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TRIUMF Work Permit: C2023-09-14-1

Workers Present: Adam Newsome, Danka Krsmanovic, Chad Fisher, Travis Cave, Peter Hall-Patch, Jason Fisher, Heidi Awad, William Huang, Aline Rodrigues

Location: Meson Hall Warm Cell

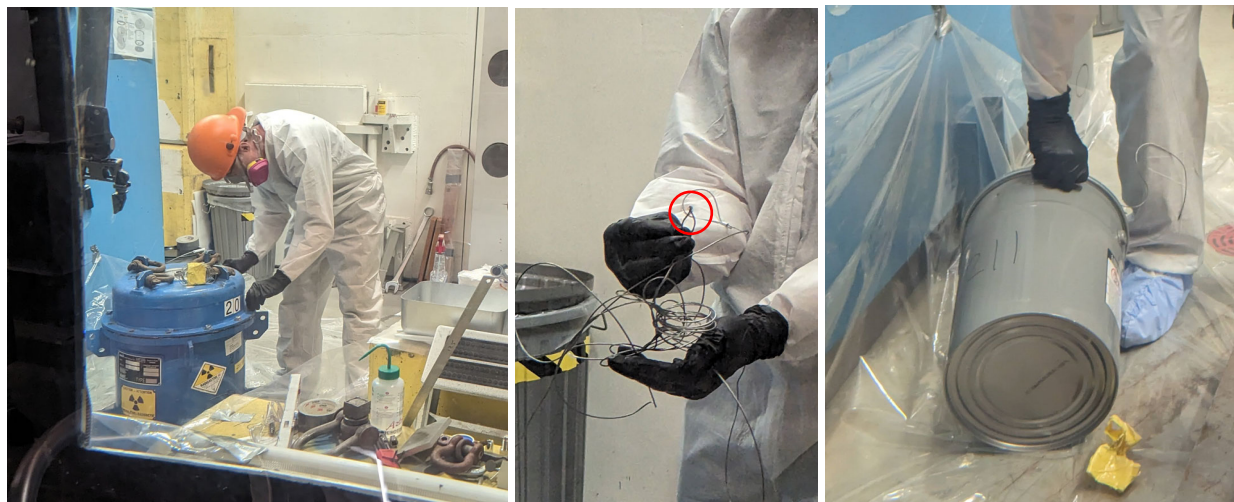
The following is a summary of TRIUMF's inspection of the pail/flask which CNL recently had issues with during the process of lowering into their hole and shipped back to TRIUMF for investigation. This was Pail 211 which contains target waste for Ta #58 target. The pail was shipped in F-308 Flask #20.

Inspection steps:

- First, the top cap of the F-308 was removed in order to check the lifting cable itself and swipe this area for contamination.
- Next, the entire flask lid was removed in order to remove the pail and check for visible damage.
- Next, the pail itself as well as the inside of the F-308 were swiped to check for contamination.

Observations:

- The lifting cable was significantly tangled and kinked – there were multiple instances of kinks and tangles observed (see image below with red circle).
- The pail itself appeared to be undamaged upon visual inspection; no punctures were present and the lid was secured. There were no obvious issues with it.
- The pail was contamination-free.
- The interior of the F-308 was contamination-free.



Conclusions:

- Because of the lack of contamination found on the pail itself as well as inside the F-308, it is unlikely that a breach of the pail occurred either during lowering into the tile hole or during shipping.
- It is suspected (but not confirmed for certain) that the issue CNL observed during lowering was due to the cable kinks/tangles – the kinking would have prevented the pail from being lowered as the cable would get caught in the small hole in the lid of the F-308.
- It is unclear whether the lifting cable's kinks were caused during original packing at TRIUMF, during shipping, during CNL's lowering into the tile hole, or during CNL's recovery and re-coiling. It is impossible to tell at which stage this occurred from visual inspection. At this time, CNL has not offered any description or photographs of what occurred at their facility which would aid in the investigation. Investigation is inconclusive.

Recommendations:

- The contents of the pail shall be re-packaged into a new pail due to both the concern associated with the distance this pail will have traveled in total during multiple shipping events, as well as the need for the lifting cable attached to the lid to be re-fabricated.
- TRIUMF will perform the pail re-packaging into another pail in the near future, and then place this pail into a different F-308 as the existing one's certification will have expired this time.
- TRIUMF will advise CNL on the new pail number, and it will most likely be shipped back to CNL in the next batch that is shipped.