1.2.2 Container Performance

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Accomplishments

- Designed, built, and implemented 3013 container opening device at SRS.
- Completed design and fabrication of food can gas sampling system (FCGSS).
- 75% completion of cold testing FCGSS system.
- USQ and AB issues assoc. w/FCGSS installation and operation 90% complete.
- Completed design of 3013 container puncture device.
- Conceptual design of overall system footprint.
- Secured space to build and cold test 3013 system.
- Completed examination of one of the Tom Allen Capsules.

Issues

- A capability to safely open and sample 3013 pressurized containers is required.
- Definitive data on gases that are generated in production 3013 containers is needed to demonstrate the safe long term storage of the 3013 containers.
- Interaction of the stored material with the container at the higher storage temperature of the 9975/container storage system is not understood.
- Oxygen/Hydrogen mixtures are still an open issue. We need to demonstrate ANY can puncture device can withstand a deflagration or possibly a detonation.

Approach or Activities

- A can punch will be deployed to relieve pressure and determine the headspace gas composition in any of the proposed 3013 container configurations.
  - Cold Test complete December 2003
  - Hot Test complete March 2004
- NDE techniques will be evaluated and improvements developed or suggested as required.
- The necessary metallographic capabilities and sampling protocols are being developed.
- The headspace gas of 3013 containers will be sampled and pressures determined.
  - May 2004

Resources

- Staff - levels are okay for current surveillance effort.

- Remaining equipment needed
  - somewhat facility driven
  - basics approximately 200K
- Facilities
  - Availability