

Y-12 and the Knitting Nook

The Apollo Lunar Material Sample Return Containers (moon boxes) manufactured at Y-12 during 1969 – 1972 had several unique aspects to them. They were machined from solid aluminum blocks, which took several weeks to accomplish. They used Teflon as the first use of that material at Y-12.

Last week we took one of the moon boxes to the 70th Anniversary Birthday Party for Oak Ridge and displayed it in Jackson Square. As is always the case when a moon box travels, it was a hit with the crowd.

We sent it to a National Aeronautics and Space Administration conference a few years ago when the trip to Mars was being planned, and it was a huge hit there also. Earlier this year the moon box was taken to a conference being held in Texas. The person taking it packed it in a duffle bag and hand carried it through. Getting it through airport security was not much of a problem; they enjoyed seeing it as well.

While a lot has been written about Y-12's role in support of NASA building the Blood in Gemini (BIG) and Apollo space programs, and we have excellent displays of each at the Y-12 History Center in the New Hope Center, there is even more to the moon box story.

Since the birthday display, I have been approached by four people who mentioned the connection between the moon box and an Oak Ridge store known as *The Knitting Nook*. Each knew about the connection, but each one had a slightly different twist to the history. I have found this to be one of the most amazing things about tracking down historical facts...all too often the "facts" are seen differently by different observers.

First, Sharon Crane mentioned it and I had to admit that I did not know about that connection. She then brought me an article published in the *Mountain Democrat*, billed as "California's oldest newspaper – established in 1851." The article, *Family knits an interest in space*, by Dawn Hodson, tells the story as told by the granddaughter of one of the women who knitted the Teflon pads used to cradle the rocks collected on the moon during the Apollo 16 and 17 missions.

The items, officially designated by NASA as "Teflon Protective Lunar Sample Pads," were a product produced at a small shop in Oak Ridge known as *The Knitting Nook*. The product came to be requested because the rocks from the moon were arriving chipped and were not protected from being jostled around.

Krista Deal's grandmother, Lorene Shook, was one of three women who did the knitting of Teflon into 1 ½ inch by 6 ½ inch pads provided at a cost of \$7 each. These pads were inserted into the bags that held the rocks from the moon and thus provided protection during the return trip to Earth.

Teflon was chosen because it added fire protection. The ladies knitted approximately 40 pads.

In the *Mountain Democrat* article, Krista Deal continues to remember her family's involvement in the space program through living in Oak Ridge. Her grandfather, Floyd Shook, also worked on the moon boxes.

Krista also tells that one of her life's highlights was at age 17, when she went to Florida and witnessed the launch of Apollo 17. The reason this was so special was that it was the last Apollo flight, and her grandmother's knitted Teflon pads were on board.

The next encounter I had with someone who had been involved in the moon box was a bus driver for the Introduction Knoxville class. On the bus ride to Oak Ridge, I told the class that Y-12 had manufactured the moon boxes used in the Apollo space program for NASA. He spoke up and said, "I helped make the collector handles that went with the moon box." Small world, huh? Lots of folks recall fondly their work on the moon boxes. Of course his remark led to the discussion about hitting a golf ball on the moon!

In an April 19, 1972 issue of the *Nuclear Division News*, which is available online at http://www.y12.doe.gov/about/history/historical_media.php, there is mention of the knitted pads. The publication also stated, "Other Oak Ridge-developed items that were taken on the flight included two moon boxes, six sample collection bags, seven 20-bag dispensers, an organic sampler, environmental sample container and core sample vacuum container."

Other editions of the past newsletters are on the Y-12 History Center website, and feedback I am getting indicates that many people are enjoying looking at them. I had one lady tell me, "You owe me a laptop computer because when I showed my Dad, who is in an assisted living center, how to access those old Y-12 Bulletins, he enjoyed that so much that he won't give me my computer back!"

Thanks to Sharon Crane for seeking out this information and sharing it.