



## From The Control Room

by Maynard Plahuta, BRMA President

It is with great sadness we note the passing of our great friend and B Reactor advocate Norm Miller. Norm was a tremendous council for BRMA. Norm always asked great questions and provided valuable advice on a variety of topics and interests. His expertise in conducting B Reactor tours was among the best. Our condolences go out to Norm's wife Shirley and his family.

BRMA was pleased to host Cindy Kelly (President-Atomic Heritage Foundation) on September 11 -13, during which a number of planned activities were accomplished. A major item was filming the vignettes for the 100-B Area and Graphite Models. Hank Kosmata, Gene Woodruff, and Del Ballard were the screen stars. They all did a tremendous job. I'm confident the edited finished product going with the models will be a wonderful addition to B Reactor tours. Thanks, guys, for your helpful contribution.

Another activity completed by Cindy and her film crew were the oral interviews, mostly with 1940's "settlers" telling their experiences and living conditions while living through the "termination winds" and construction days of those times. Most, but not all, of the interviewees were either the wife or children of Hanford workers. They told very interesting stories that now are captured for posterity. There were a total of 10 interviewees, including exciting tales from a 98-year-old woman and a 97-year-old early male Hanford worker. We thank the WSU Tri-Cities for volunteering use of its PBS TV Studio to film the interviews. Also, thanks are due to Gene Weisskopf for transporting some interviewees to WSU Tri-Cities, and to Missy Keeney-Baker for designing beautiful "Thank You" cards sent to the interviewees.

An upcoming event in cooperation with the National Science Foundation LIGO Facility is a visit to LIGO and B Reactor by Enrico Fermi's granddaughter, Olivia Fermi, on October 9-10.

Olivia will visit LIGO on Tuesday morning followed in the afternoon by a tour of B Reactor. That evening she will have a public workshop at the Hanford High School Auditorium at 7 p.m. All BRMA members are encouraged to attend. The following day (Oct. 10), Olivia will be meeting with students at Delta High School as part of her endeavor to encourage students interested in science, math, and engineering. At 4 p.m. on the 10th CREHST is hosting a reception at its facility for BRMA members and CREHST docents to meet and chat with Olivia. This is limited to 40 people via registration--refer to the e-mail sent by Patricia Brown if you have not registered and would like to determine if a spot may still be available. People attending the reception are urged to attend the public event at Hanford High the previous night.

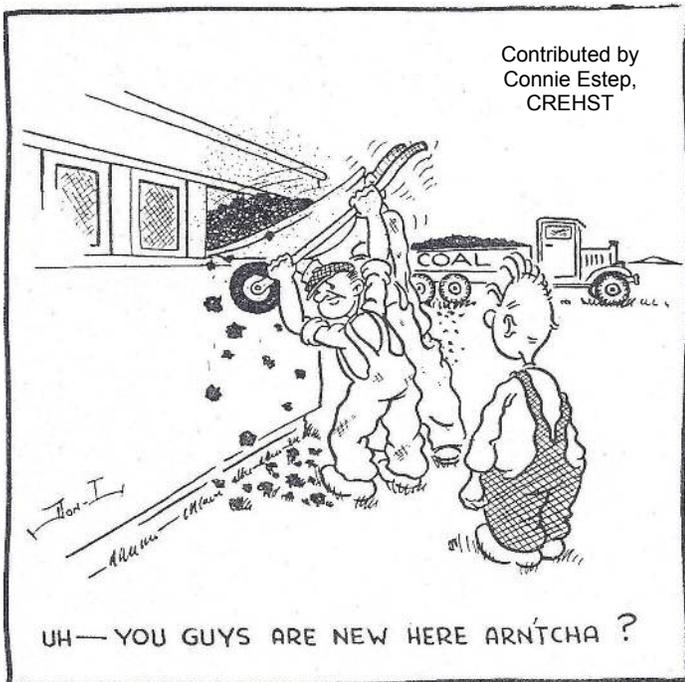
Lastly, I have a few comments on the Manhattan National Historic Park legislation. As perhaps most of you are aware, Rep. Doc Hastings' efforts to have the House pass legislation under the "suspension of rules" failed. It received 55% approval but under the "suspension of rules" a two-thirds majority is required. Under this process there is limited debate, which appears to be one of the reasons a two-thirds majority was not achieved. The National Parks Conservation Association (NCPA) did an analysis of the vote and determined there were 63 votes from Congress persons who normally vote in favor of National Parks legislation. It appears, because of the very limited debate time, many of these Congress persons were not fully informed of facts, rationale, etc. Rep. Hastings still plans to bring the matter forward for House action this session of Congress. With a greater time for debate and discussion it will likely pass where only a majority vote is required. Some of the concerns of those who did not vote in favor of the bill under the "suspension of rules" process would perhaps be alleviated with more

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[www.b-reactor.org](http://www.b-reactor.org)

The B Reactor Museum Assn. meets on the 2<sup>nd</sup> Monday of each month at 7 p.m. in the CREHST Museum Auditorium, 95 Lee Blvd., Richland.

**Dupus Boomer—by Dick Donnell**



**Did You Know?  
Interesting Facts About B Reactor**

The reactor atmosphere circulated through the pile at a rate of about 2,500 cu. ft./min. by means of turbo-blowers. About half of this volume flowed through the channels formed by the chamfered edges of the graphite blocks of the pile, and the remainder flowed through spaces around the side, top and base thermal shields. The continued circulation of the gas atmosphere in the reactor served to maintain a uniform gas composition, thereby helping to eliminate hot spots that might develop should masses of gas at low thermal conductivity blanket certain energy absorbing portions of the structure.

In order to avoid bringing the gas in and out through the biological shield, a large duct entered the reactor through the pile foundation. The gas was distributed along the charging face of the reactor by means of a horizontal manifold, opening into a 4-inch-wide plenum chamber between the front thermal and biological shield. The gas leaving the reactor passed through a silica gel tower where excess moisture was removed, then through a filter to remove impurities like graphite dust, metal particles, and silica gel.

*Source: HW-51856 Reactor Physics Primer*

**Membership Report  
By Burt Pierard, Membership Chair**

Our final 2012 Membership count was 85, 4 less than 2011. As of October 1st, the early 2013 renewal period is now OPEN (any dues we now receive are credited to 2013). To send in your Renewal, the Form is on this page to Clip or Print.

**From the Control Room (cont'd)**

*(Continued from page 1)*

discussion and factual data presented. BRMA members, particularly those out of state, are encouraged to contact their Senators and Congress persons and request their support of legislation to establish the Manhattan Project National Historic Park



**2013 Renewal and New Member Application**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_ Zip: \_\_\_\_\_

Phone: (h): (\_\_\_\_) \_\_\_\_\_ (w): (\_\_\_\_) \_\_\_\_\_ MSIN address: \_\_\_\_\_  
(current Hanford employees)

E-mail: \_\_\_\_\_

- Individual (\$20) or  Senior (age 65+) or Student (\$10) and  New or  Renewal
- Organization (\$25 up to 100 members; please add \$10 for each additional 100 members)

For Organization Membership, Official Representative: \_\_\_\_\_

Additional tax deductible contribution: \$ \_\_\_\_\_  
(Tax ID # 94-3142387)

Total Enclosed: \$ \_\_\_\_\_  
(Please make check out to BRMA)

Thank you; please mail this application with payment to:

**B Reactor Museum Association  
PO Box 1531  
Richland, WA 99352**

## GRAPHITE BLOCK DISPLAY UPDATE

by Gene Woodruff, BRMA Graphite Committee Chair

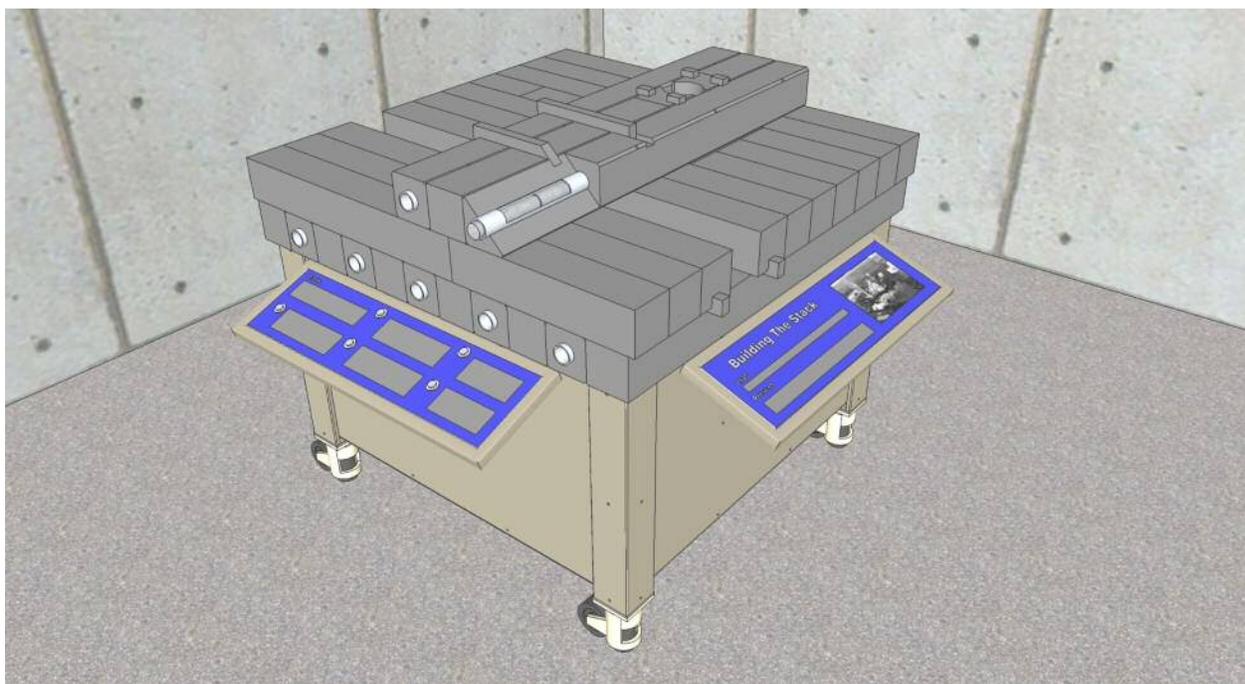
The “B,D,F” type graphite blocks we recovered from the pile of assorted blocks behind B Reactor (see the Spring 2012 BRMA *Moderator*) are now in our possession. They are in a warehouse in the 1100 Area where a block-by-block survey was conducted to assure that no radiological contamination was present.

Planning for fabrication of the block display has also progressed through contractual arrangements with Lockheed Martin, thanks to Cindy Kelly of Atomic Heritage Foundation. The display (see picture) has three layers of the 70-year-old graphite. The lower tube layer has tube blocks containing tubes alternating with filler blocks. The middle filler layer

contains an open channel for a simulated control rod. The top layer has two tube blocks with the intervening filler block containing an opening for a vertical safety rod. One of the tube blocks is cut away to illustrate a fuel element inside the tube.

Side-rail panels will have text, graphics, and audio to explain the function and history of the graphite moderator. Buttons will connect to LED lights to highlight specific features on the blocks.

Credit for the Display design and illustration goes to Lynn Ver Steeg of Lockheed Martin.



# B Reactor Visitors Provide Feedback Following Tour

*Editor's Note: Jackie Whedbee is an acquaintance of BRMA's own Missy Keeney Baker. This past July, Jackie and her friend and business partner, Larry Mattingly, toured B Reactor. Larry grew up in the Tri-Cities and is familiar with B Reactor's history. After touring the facility, they gave Missy their reaction.*

Recently I went with Larry Mattingly to Richland where he had some business to conduct. While we were there we took the B Reactor Tour at the Hanford Nuclear facility.

When we arrived, there was a short movie of the history of Hanford, filled with photos, animations, charts and first hand accounts by past employees. This was followed by a short talk by our soon-to-be tour guide. Then we piled on a tour bus where the tour guide talked about the things we were going see and described points of interest along the way.



Larry and Jackie in the control room

The tour was great.

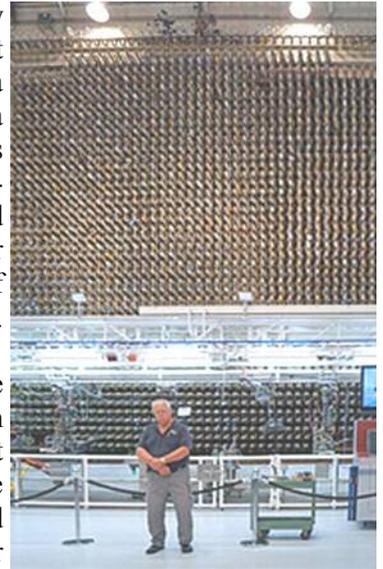
The Guides and Docents were knowledgeable, and their explanations were in terms easy to understand. We were divided into two groups; one went on the walking tour while the other sat through another informative multi-media presentation. Then we switched with the opposite group. After the formal tour and lectures we were free to wander about and take all the pictures we wanted to.

I swear if the people who prepared and executed this tour were commissioned to design school curriculum, everyone would graduate with high grades. The number one reason I went on the tour was because of Larry, to see some of the things he talks about from the days he worked at Hanford, and I left with at least a reasonable

understanding of how a nuclear reactor works. They kept you interested by two docents and guides. You never sat for too long for the wiggly and never walked for too long for the impaired. There was adequate time at the end to pursue things that interested you the most.

While they gently reminded everybody that this was previously a working facility not just a museum - the rule was "Look but don't touch" - they encouraged everybody to get their photo taken in the seat of the control center.

The rear face discharge areas still have some clean-up work and so are not open yet. And of course ladders and overhead gratings were not for tourists. Otherwise it was all there and open to see.



Larry stops for a photo with the reactor front face in the background

I would highly recommend that anybody having the opportunity to go to Richland make an attempt to go on this tour, Whether you are interested in the history of Washington State, nuclear power, or just how to design a fabulous tour or curriculum! You won't be disappointed.



Paul Vinther describes typical activities in the fuel storage basin and reactor rear face areas

# B Reactor Tours

by Bob Horgos, BRMA Tour Coordinator

The 2012 B Reactor Tour Season came to close on Thursday, September 27, with a tour by a Washington State University "Early History" Class. That tour was a regular B Reactor tour of 2.5 hours duration and it was preceded by two Hanford Public Tours earlier in the day, each of 75 minutes. There will be no additional scheduled tours until April 1, 2013.

Complete statistics for the entire 2012 Tour Schedule have not yet been tabulated. Data is only available for the first five months of the Tour season, to the end of August 2012. At the end of August there had been 202 combined tours of the B Reactor that accommodated 8916 visitors. They consisted of 660 visitors who were minors, 2,100 Hanford Public Tour Visitors, and 6,135 B Reactor tour visitors. Of the 202 tours, seven were for middle school students, four tours were for high school students, and 10 were for college students. All visitors were requested to fill out a Survey Form to rate their satisfaction with the conduct of the tours. The great majority (91.3 percent) of the visitors gave an overall satisfaction rating of Good and Excellent.

During the off season, Washington Closure Hanford Company will be removing all radiation and radioactive contamination from the fuel storage pool area at the rear face of B Reactor in an attempt to release that area as a public tour pathway for the 2013 Tour Season. Washington Closure Hanford is the prime contractor for environmental restoration of the Hanford Site, which includes cleaning up waste sites, decontaminating and decommissioning former plutonium reactors, and disposing of contaminated waste.

If past practices are an example, the Department of Energy should make announcements in early March for the schedule of tours during the 2013 Tour Season. At that time they also will announce the number of reserved seats and the specific dates for all tours during the 2013 Tour Season. The two separate tours - Hanford Site Public Tours and B Reactor Tours - are regularly scheduled throughout the tour season. B Reactor tours generally are scheduled for every Tuesday, Wednesday, and Thursday plus two Mondays and two Saturdays during the six-month season. Hanford Site Public Tours are only scheduled on Tuesday, Wednesday and Thursday. The two

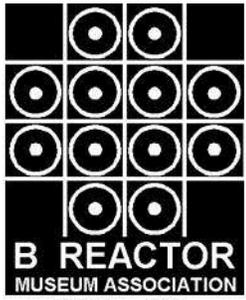
tours are not scheduled at the same time. On the scheduled days only a B Reactor Tour or a Hanford Site Public Tour is scheduled. There is no charge for either tour.

Details for the schedules and specific requirements for B Reactor Tours will be posted on the DOE Hanford Web Site at: <http://manhattanprojectreactor.hanford.gov>. This Web site gives complete information of the 4.5 hour B Reactor tours. For those lacking Internet capability, information also can be obtained by visiting B Reactor Tour Headquarters at 2000 Logston Blvd., Richland 99354, or by telephone at (509) 376-1647. Special Group Tours can be arranged by calling Russ Fabre, Project Support Manager at (509) 373-2774. B Reactor Tour Headquarters is open Monday through Thursday from 8a.m. to 4 p.m.

B Reactor Tours do not require the mandatory reservations that are required for the Hanford Site Public Tours. The B Reactor Tours will accept "walk-in" visitors who show up at the Logston Blvd. Office on the day of any scheduled B Reactor Tour on a seats-available basis. Scheduled B Reactor Tour dates can be found on the DOE Hanford Web Site. Participants on the B Reactor Tours may carry cameras, and photographs may be taken at all locations within the B Reactor.

Details for the Hanford Site Public Tours can be found at [www5.hanford.gov/public tours/](http://www5.hanford.gov/public tours/).





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