

Happy Easter

THE MODERATOR

B R E A C T O R M U S E U M A S S O C I A T I O N



April-June

Vol. 32, Issue 2

Spring 2024

From The Control Room

by BRMA President Dave Marsh

Hello fellow BRMA members, while many of you have been baring up with the cold, wet, windy, late winter in the Tri-Cities I have been enjoying the sunny climates of Arizona. My wife and I traveled (again) to Arizona for two months to get away from the cold weather at home. A secondary goal by traveling south is to complete a long awaited visit to Los Alamos NM and meet fellow Manhattan Project National Historical Park (MAPR) supporters and proponents. As of the writing of this project, DOE Los Alamos has not announced the dates for the "Behind The Fence" tour, which provides access to many of the historical sites at Los Alamos. Even though there are only 100 spots available for this tour I am hopeful that we will be able to participate this year. As you may remember, we tried to participate last year, but due to the snow and road conditions, we were unable to get to Los Alamos while we were in Arizona. Hopefully we will be successful this spring.

This submittal is my second while in the role of BRMA President. It has been an honor to serve these past few months and many thanks to Robert and the BRMA board for their guidance and support as I get my feet wet in this new role.

You may or may not be aware that BRMA participates in three local organizations that are aimed at supporting the national park. Those organizations are the Energy Communities Alliance, (ECA), Visit Tri Cities Board of Directors, and the Tri-City National Park Committee. BRMA has a voice in these three organizations because of its long-standing support for the Park. I have learned a great deal about BRMA, the national park, and the excellent team of elected officials and community organizations in the Tri Cities that are critical to the continued support and promotion of MAPR.

With regards to my personal role as president that may

be of concern to our members and readers, BRMA is very proud to announce the completion and release of the "B Reactor, Virtual Tour" and the "T Plant Virtual Tour" videos. These two projects were the result of many players working together both financially and technically. As previously stated in past moderators, BRMA provided funding for the videographer to take the initial 360 degree photos for the projects. The videos would not have been possible without the technical support provided by the National Park Service (Becky Burghart, Matt Klein, Martin Wildmouth and Jonathan Creel), and BRMA (Robert Franklin, Don Sorenson, Marty Zizzi, Gerry Griffin, and myself), and the Department of Energy Manhattan Project National Historical Park Program Manager (Colleen French). Without this significant support, the video would not have been completed in a timely manner and with such great quality. BRMA's hat goes off to all for their energy, support and encouragement to complete these

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The B Reactor Museum Assn. meets on the 2nd Monday of each month at 7 PM,
in a Conference Room at the Richland Public Library, 955 Northgate Dr., Richland.
Membership Meetings this quarter will be Apr. 8, May 13, and June 10.

Membership Report

By Bob Carosino, Membership Chair

Dupus Boomer — by Dick Donnell

Contributed by Connie Estep

NEW MEMBERS

During Jan-March we welcomed 4 new members: Greg True, Steven Faulk, Steve Arneson, and Robert Carl Anderson. Robert Carl Anderson joined as a LIFE member (\$250), in memory of his father, Carl Wallace Anderson. Carl was a mechanical engineer for DuPont at Hanford during the Manhattan Project. Thanks to each new member!

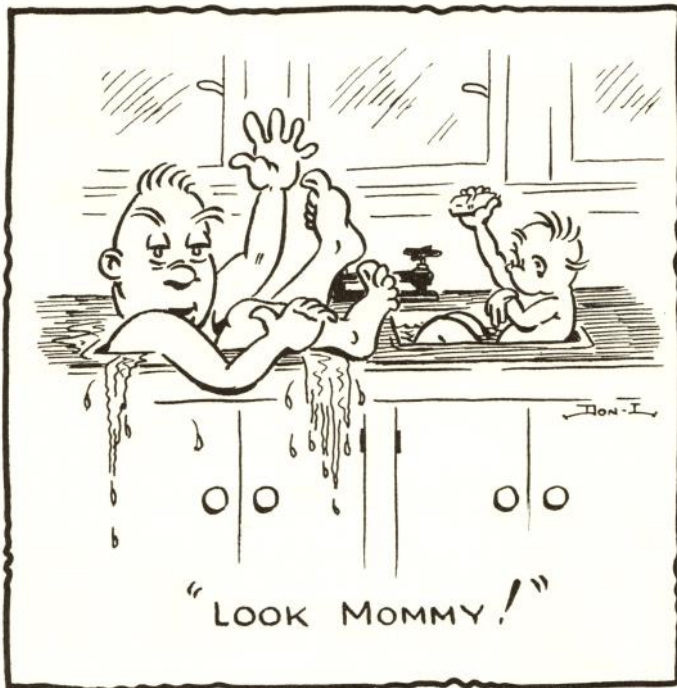
CHARITABLE CONTRIBUTIONS

This is a Public Acknowledgement of the generous cash contributions made to BRMA by several members. Donors included: Steven Faulk, Charles and Connie Davis, C. Mark Smith, Del Ballard, and Maynard Plahuta.


2024 BRMA MEMBERSHIP DUES ARE NOW DUE

If you have not yet submitted your dues for 2024, the information to do so is provided below. Consider converting to LIFE membership and avoid future renewals. To date in membership year 2024, 50 BRMA members have submitted their 2024 membership dues. This number includes 26 individual LIFE members, and 3 Organization members: Atomic Heritage Foundation, The REACH, and Xenophile Books.

To send in your renewal, the Form is below to: Hard Copy-- Clip and send in; E-Copy--Print, Clip and Send In.



Ed. Note: The original Pre-Fabs did not have bathtubs (just shower stalls) and Connie says "Spring Cleaning is for every 'BODY'"



2024 Renewal and New Member Application

Name: _____ Date: _____
 Address: _____ City: _____ State: _____ Zip: _____
 Phone: (h): (____) _____ (cell): (____) _____
 E-mail: _____ (Please print legibly)

Renewal New
 Individual (\$20) or Senior (age 60+ - \$10) or Student (\$10) or Life Member (one time — \$250)
(Individual Members Only)

Society/Group (\$25) Name of Voting Representative: _____

Additional tax deductible contribution: \$ _____
Note: both Dues and Cash Contributions are Tax Deductable. (Tax ID # 94-3142387)
No goods or services were provided in exchange for your contribution
If your total enclosed contribution is \$50 or less, print a copy of this application for your records. Over \$50 will be separately received.

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

From The NPS— Ranger Updates

by Becky Burghart, MPHA Hanford Site Manager

Spring is here! The sun has come back, the days are warmer, the trees are full of buds, and we are planning for summer ranger programs. Starting in April, we have Ride with a Ranger on April 13. On May 4, we will lead our Hike Through Time program up Candy Mountain. In June and July, Kalina will lead walking tours around a Richland neighborhood sharing what life was like in secret city for the average worker—a blue collar tour. She will also lead several Not-so-Secret City programs in Richland again this summer. In partnership with the REACH Museum, we will also host Junior Ranger Park Explorers programs during the summer. For a full list of our summer programs, visit: <https://www.nps.gov/mapr/planyourvisit/hanford-programs.htm>.

Our recent big accomplishment, as many of you may know, was publishing the B Reactor and T Plant virtual tours in February. These tours would not have been possible without BRMA's financial support and amazing collaboration on the tour scripts. Dave and Robert were integral in development of the content, image selection, and review of the audio description narrations. This has been a long journey that started in 2018 when virtual tours were identified as an important tool to provide access to park facilities through a park visitor access planning process. Check out the virtual tours on the park website: <https://www.nps.gov/mapr/learn/photosmultimedia/virtualtours.htm>.

We also developed panoramic tours as part of this project to provide similar information as the virtual tour but in a format that can be accessed without using a mouse. The virtual tours require the use of a mouse (or finger if viewing tour on a cell phone or other mobile device) to navigate. If one is not able to use a mouse or finger to navigate the virtual tours, then the panoramic tours are a nice alternative. In the process of developing the panoramic tours, we learned that they were much easier to develop than the virtual tours and provide another unique way to share many of the park facilities. We may (down the road) develop “behind the scenes” panoramic tours of locations in the B Reactor that are not open to the public such as the top of the reactor. Visit the panoramic tours on this webpage: <https://www.nps.gov/mapr/learn/photosmultimedia/panoramic-tours.htm>.

We have a lot of programs and projects on tap for this summer. We are looking forward to the warmer days and getting out into the community with our summer programs.

Becky

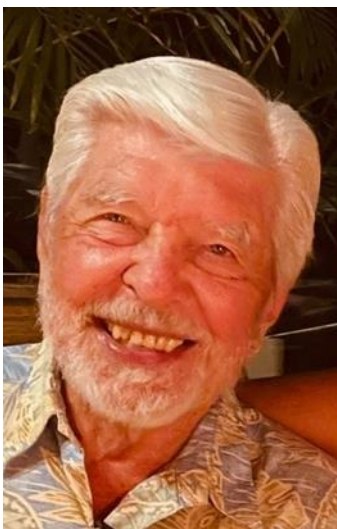
A Tribute To H. R. “Hank” Kosmata

May 28, 1930 - January 11, 2024

Editors Note: This history of Mr. Hank Kosmata was personally provided by Hank based on a request by the BRMA Board of Directors to have him record “His Story”. It is presented here in Honor of Hank and the contributions he made to the B Reactor Museum Association.

Hank was born on May 28, 1930 in Ord, Nebraska. His family, including his younger brother Alan, moved from Nebraska to Idaho in 1945. A top scholar and athlete, Hank graduated valedictorian from Caldwell High School and received a scholarship to play football at the University of Utah. A proud member of the 1951 Skyline Championship team, Hank enthusiastically cheered on the Utes for the rest of his life. After graduating with honors from Utah with a B.S. in Chemical Engineering, Hank spent two years in the Air Force and then moved to Richland in January of 1954 to take a position as an Engineering Assistant for General Electric (transitioning to Douglas United Nuclear) where he worked until 1972 .

Hank, with a chemical engineering degree, joined GE at Hanford in January of 1954. He very quickly began to take a series of physics courses designed and taught by GE primarily to chemical and mechanical engineers to prepare them to work as nuclear engineers. In early 1955 he joined a multi-disciplined group named Reactor Design Analysis. This group had done the conceptual design for the twin K reactors and now they were providing construction engineering assistance to those projects. His management soon came to him and gave him a dream assignment. They told him they believed GE would soon be asked for additional plutonium production, and they asked him to develop a conceptual design for the next reactor. He spent the rest of 1955 and most of 1956 on that assignment and on August 31, 1956, he documented the design in HW-45089. Within a year GE was asked by the Department of Energy to propose reactor capacity for additional production and



GE selected this design and it was named the N reactor

The N design was similar to other Hanford reactors in that it used graphite moderation and water cooled process tubes containing metallic uranium. At that time all the Hanford reactors used aluminum as the process tube and fuel cladding material. While aluminum is very neutron friendly its physical characteristics limits the temperatures of the cooling water to sub-boiling levels. For this reason, all the Hanford reactors including the K reactors used a cooling system where the river water went into the reactors, picked up the enormous heat energy from the fuel elements and then wasted and returned all of that energy directly into the river.

Hank was able to take advantage of the work Admiral Rickover had done to develop zirconium for use in the navy nuclear program. While zirconium was much more costly than aluminum it was very neutron friendly and, most important, it had great strength at high temperatures. The original N reactor design had a reactor outlet coolant temperature of 580 degrees F. The recirculating cooling system transferred the heat to steam generators and then to turbine generators to produce 723 megawatts of electrical power from 2400 thermal megawatts of heat energy. The income from the electric power served to reduce the cost of the plutonium produced. President Kennedy was present on September 26, 1963, for the groundbreaking for the turbine generator portion of the plant which ultimately produced 65.9 B Kwhrs of electricity for Northwest public and private utilities.

Hank continued to work on the N reactor through

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Tribute To “Hank”

(continued from Page 4)

its final design and construction and early operation. Later as manager of the Reactor Design Analysis group he led the group as they developed an operation program to demonstrate that the N reactor could operate at a power level of 4800 thermal megawatts if needed.

Hank completed his MBA from the University of Washington in 1964. When the nuclear industry seemed to be heading in the wrong direction, he transitioned into a new career in 1972, working in the private sector applying his MBA as Chief Financial Officer for a startup company in Richland.

In 1973 Hank joined Washington Public Power Supply System to work on developing commercial nuclear power projects and as Manager of Planning & Analysis, his final project was directing and coordinating the development of agreements to establish the construction and power sales contracts supporting the formation of nuclear projects 4 and 5.

Hank retired in 1990 but remained very interested and passionate about contributing to the community of Richland. He served on the Utility Advisory Committee for 15 years from 2000 -2015, (serving as Chairman for 5 years, Vice Chair for 4). His work on the N reactor had given him a great appreciation for the scientists and engineers who developed and built the first Hanford reactors, and this led him to BRMA in 2000, becoming highly active in guiding tours through B and serving as president of BRMA in 2006, 7 and 8. As a tour guide he observed that in the limited time for the tours it was difficult for visitors with little or no technical background to begin to understand how the reactor worked or to appreciate the science that led to the construction and operation of these first reactors at Hanford. He decided it would be helpful if BRMA could develop a group of informational videos that would be available to

prospective visitors who could review them at their leisure before they came to B reactor. He obtained a grant from the City of Richland and produced these videos which he called “What to know before you go”. Hank, in conjunction with other BRMA members including Norm Miller produced 4 videos describing the history and operation of B Reactor for visitors to view prior to participating in a tour of B Reactor. The videos are titled: “Introduction to B Reactor Tour”; “History: Atom to B Reactor”; “Inside B Reactor”; and “B Reactor Virtual Model”. Hank additionally included an animated video produced by General Electric (GE) during the time GE managed the reactors at Hanford. These videos are now available on the BRMA website.

During his time on the Utility Advisory Committee he made many important contributions that resulted in large savings to utility customers. Two such contributions stand out. He single-handedly convinced the City Council to pay for the construction of the new city shops by 20 year bonds rather than all in one year. This resulted in a fairer sharing of the costs by customers in the future as well as just current ones. The second and much larger contribution was to lead the effort to convince the city to avoid participating in a “slice” method of purchasing power from Bonneville Power. Both Pasco and the Kennewick PUDs subscribed to this method at what became much higher costs, saving Richland residents nearly \$30 million dollars over the years since the “slice” method became available.

Hank continued to support BRMA for many years after serving as the association president as a historian and resource for work in which BRMA was involved.

Hank will be missed by many members of BRMA who had the pleasure of working with him over the years.

Hanford Women’s History At Our March Meeting

by Terri Andre, BRMA Reporter

Monday, March 11th, BRMA and the Richland Public Library sponsored a Women’s History event. The event drew a full house with 125 attending. The room was to capacity and some people had to be turned away. (See Picture 1)

Terri Andre and Megan Simpson told tales, showed photos, and along with Don Sorenson, put together a display of some of the tools used by “The Hanford Girl.”

(See Pictures 2 & 3)

The program celebrated many of the women who answered the call to participate in the 1943-45 war work in the hot, dry, and dusty conditions of southeastern Washington at the Hanford Engineer Works. Their contributions were largely unknown; their names (almost!) lost to history. Among the highlights were stories of Buena Maris – the “Supervisor of Women’s Activities” who had a great influence over the day to day lives of the women at the site. Among other things, she hired Housemothers, organized a library, formed girl scout troops, started a Red Cross chapter, and convinced Colonel Matthias of the need for asphalt sidewalks. The girl scout troops and the Red Cross continue to this day.

Many other women were featured including Housemothers, Housekeepers, Hairdressers (Beauty is her Badge of Courage!), Telephone Operators, Lab Technicians, Nurses, WACs, and more as well as Dr. Leona Marshall Libby.

We are thankful for the help of various people and agencies in making this program a success. BRMA member Jane Shumate came from Renton and shared information with the presenters about her mom’s role as a nurse at the site. Local resident Sandy Martin shared her mothers’ 1943 WAC

uniform. DOE, The Hanford Reading Room, and the Hanford History Project were great sources of photos and stories. Don Sorenson, Terri Andre, and Megan Simpson provided items for the display. Special thanks to the Richland Public Library for the use of their large gallery and their staff assistance.

Additional BRMA members Rick Bond, Mark Smith, and Charles Davis assisted with the logistics and smooth running of the evening.

Audience members filled out post-event surveys. The results of those surveys indicate a strong interest in additional BRMA programming of both technical topics and family-oriented history topics. 100% of the survey respondents indicated the program met their expectations and would recommend the program to others. 97% responded they learned something new. 84% indicated an interest in attending future programs.

In the upcoming quarter BRMA meetings will include our regular scheduled meetings plus an upcoming technically oriented talk tentatively scheduled for the May meeting. All meetings are held at the Richland Public Library at 7:00 pm.

April 8, 2024 Regularly scheduled BRMA membership meeting – all current and prospective members are encouraged to attend.

May 13, 2024 Special Presentation by Don Sorenson: **231-Z Role in Manhattan Project Production** BRMA members, guests, and the general public are encouraged to attend. Tentative – subject to change. Check the BRMA website and FaceBook page for confirmation of date, time, and topic for confirmation.

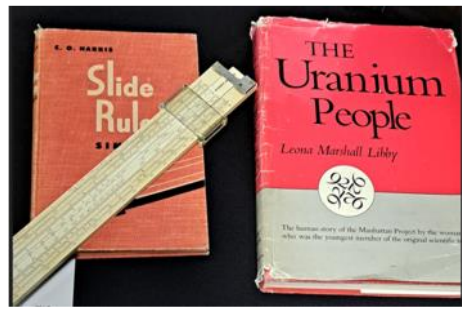
June 10, 2024 Regularly scheduled BRMA membership meeting – all current members and prospective members are encouraged to attend.



Picture 1



Picture 2



Picture 3

Tours Report

By Dave Marsh, BRMA Reporter

As anticipated the 2024 tour season is getting off to an early start this tour season. It was rumored that there might be a narrow window this spring to conduct a limited series of B Reactor Tours prior to the beginning of the roof replacement contract at the Reactor. Thanks to the Department of Energy Program Manager for the Manhattan Project National Historical Park (Colleen French), tours of B Reactor will be conducted up to the point of reconstruction activities beginning at the Reactor.

What this means:

B Reactor Tours will begin on Saturday, March 29 and run through Saturday, June 29 with the following schedule: Friday and Saturday, March 29 and 30th. There will be two tours each day to B Reactor.

Monday, April 1 through April 6, which is spring break there will be two tours per day to the B Reactor.

Beginning April 8, one tour per day on Monday and Tuesday and two per day on Wednesday through

Saturday to B Reactor.

Pre-Manhattan historical tours will be offered Fridays and Saturdays from May 3 through October 26 at 10 AM each day.

The visitor center will continue to be open Monday through Friday 9 AM to 4 PM until March 25. Beginning March 25 the visitor center will be open Monday through Saturday from 7:30 AM to 4:30 PM.

The tour schedule has been posted on the DOE website and also links from the BRMA association website and the national Park Service website.

There is no cost for the tour and each is about four hours in length, and you can sign up by searching for "B Reactor Tours", or by signing in at the following address: <https://manhattanprojectreactor.hanford.gov/>

As Docents for the tours, we look forward to seeing you at the Reactor this spring or on one of our Pre-Manhattan Historical Tours.

QUARTERLY FINANCIAL REPORT
Liza Eschbach, BRMA Treasurer

	1/1/2024 1/31/2024	2/1/2024 2/29/2024	3/1/2024 3/25/2024	
Category				
INFLOW				
2024 Donations	\$ 420.00	\$ 25.00	\$ 30.00	
2024 Dues	\$ 80.00	\$ 30.00	\$280.00	
Souvenir Sales	\$1,766.76	\$612.28	\$385.23	
Month Total Inflow	\$2,266.76	\$667.28	\$695.23	Quarter Total \$3,629.27
OUTFLOW				
BRMA Business Expenses	\$113.50	\$ 0.00	\$ 28.35	
Souvenir Supplies	\$320.14	\$65.00	\$3,707.50	
Month Total Outflow	\$433.64	\$65.00	\$3,735.85	Quarter Total \$4,234.49
NET				
Month Net	\$1,833.12	602.28	\$-3,040.62	Quarter Net \$ -605.22

From The Control Room
(continued from Page 1)

two new resources. If you haven't had the opportunity to view them, they can be found at the following address: <https://www.nps.gov/mapr/learn/photosmultimedia/hanford-b-reactor-virtual-tour.htm>.

Another highlight of the past quarter is the presentation provided by BRMA members, Terry Andre and Megan Simpson at our March public meeting. The presentation was titled "The Hanford Girl: Vibrant, Vivacious, and Vital". I don't want to steal Terry and Megan's story but BRMA is very grateful for their willingness to share this important historical perspective on the role of women in the early days of the Manhattan project. For more information, see the article provided by Terry and Megan in this copy of the moderator.

Another highlight of the past three months was the opportunity to provide a PowerPoint presentation to a retirement community gathering in Redmond, Washington on Valentine's Day. The event was arranged last fall through the visitor center, and it was a pleasure to have the opportunity to present B Reactor, BRMA, and Manhattan Project National retired military individuals and many had previously worked at Manhattan Project sites throughout the country. Based on the comments and

the questions after the presentation, the presentation was very well received. If you have an organization that wishes to have a presentation on BRMA, the Manhattan Project, or Hanford overview, please do not hesitate to contact BRMA and we can assist in arranging that presentation.

BRMA is in the process of developing a year long calendar for our Public Meetings. These meetings are held the 2nd Monday of each month at the Richland Library at 7 PM. As of the writing of this article, we will publish the upcoming quarters' schedule to our readers in order for them to adequately plan attendance at future meetings. The May meeting will be conducted at 6:30 PM at the Richland Library with an early start time to allow for some social gatherings and allow for the scheduled presentation. The May presentation will be provided by Don Sorenson and the Topic is "231-Z Pu Processing the Final Steps".

Many thanks to the BRMA Board of Directors and our membership for allowing me to serve as the association president. It is an honor to serve such an organization.

Until next time, Dave

From Our Gift Shop By Rick Bond, BRMA Products and Sales

Sales at the MAPR gift shop are always slow in the winter months due to the fact that the B Reactor tours are not running, however, the sales this year were actually pretty good considering. Although the buses out to the B Reactor are not running, visitors to the Tri-Cities as well as many local people still stop in at the Visitor's Center (located at 2000 Logston Boulevard). The wonderful staff at the Visitor's Center (particularly Anne and Julie) is very good about directing the visitors to our gift shop which is located about two blocks away from the Visitor's Center at 2240 Robertson Drive. Maybe the number of visitors has picked up a bit due to the popularity of the movie Oppenheimer, or maybe Steve and Brian have done a good job getting the word out about their eclectic book store, Xenophile Bibliopole & Armorer, Chronopolis (Xenophile Books for short). Whatever the reason, sales in December 2023 and January and February 2024 were better than expected: about \$600, \$400, and \$500, respectively.

Even though the tours are not running in the winter months, Steve Woolfolk and/or Brian Sheldon are usually at Xenophile Books Monday through Saturday from around 10 am until 4:30 pm. Xenophile Book store offers our gift shop products for sale as well as the thousands of books and various other unique items that they sell. We owe a great deal of thanks to Steve and Brian for supporting BRMA and MAPR. Please keep them in mind

and support them whenever and however you can. In addition to our Xenophile Books gift shop sales we continue to have great support from Gus at The Octopus' Garden which is located in Uptown Richland (1327 George Washington Way). Some of our products are also sold at the Tri-City Visitor's Center and The Reach Museum so please support these locations as well.

Since the B Reactor tours were supposed to be shut down for the 2024 and 2025 tour season, I had not been restocking our products so as not to build up too much inventory. Since the announcement in early March that the tours would resume this year for at least three more months, I have been scrambling to rebuild our inventory. As of this time we will stock the same products as we had in the past – no new items to report at this time.

I would like to give a shout out to Cindy Kelly, founder and President of the Atomic Heritage Foundation, for her permission to copy and sell some of her books and products in our gift shop. I also want to extend a big thanks to Jan Jones for all her hard work and support in helping me manage the gift shop. Please always remember that 100% of the profits from our gift shop go toward supporting our local unit (Hanford B Reactor) of MAPR. The gift shop proceeds are used to fund interpretative projects at the reactor and many other reactor related projects.



The Octopus' Garden

"We have fun stuff!"

Books, incense, toys, Gnomes, socks, candles, buttons,
bobble-heads, lunch boxes, t-shirts, games, cards
funky home décor, keychains, rubber chickens,
posters, and oh, so much more.

**1327 George Washington Way
Uptown Richland
509-946-0077**

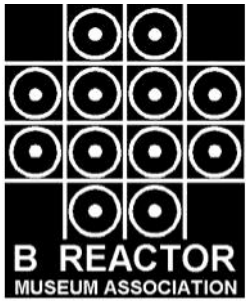
Xenophile Bibliopole & Armorer Chronopolis

So Much More Than A Used Book Store

Collectible Science Fiction, Movie Posters, Movie
Memorabilia, Retro Futuristic Toys, Games and Action
Figures. We also boast a Mini Museum dedicated to
Hanford and the Manhattan Project.

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509-375-7505**





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