



Joe Priest,

This is where our Radiation Shielding journey began:

In early 2019, BWXT – Mt. Vernon replaced a thirteen year-old 9 MeV Linatron unit with a new 6/9 MeV Linatron unit. We replaced the accelerator (head), power modulator, the power cables, cooling unit, etc.

When the new unit was commissioned, we performed a site-survey and discovered our dose rate, on the \* exterior surface of our 7-foot thick (solid) concrete "Target Wall", was verified at **20 mr/hr**. This reading was taken with our Linatron positioned over 20 feet away (source-to-survey meter).

At this point I started looking for shielding options OTHER THAN LEAD. Due to space restrictions, we do not have enough clearance to pour additional concrete or modify the original foundation.

So, the search began for an alternative/composite shielding.

I only found two companies that could provide a shielding material that would effectively shield radiation at these **extreme** levels. During the next few weeks, discussions were held with these two companies and BWXT began research by X-raying the shielding materials (batches) from these two different companies.

The results of both companies were great, **however there was no comparison in the two companies and how they could support BWXT.**

Artemis Shielding approached our dose rate reduction project like it was their own issue and they were determined to achieve success. You sent a Radiological Physicist and a Materials Scientist to my facility, accommodating my schedule, with a couple different batches of shielding. After looking through all the data and cost, BWXT ultimately decided to go with your XYZ product. The XYZ product saved us hundreds of thousands of dollars over the competing products and the results showed minimal differences.

At this point we had Artemis complete all of the engineering responsibilities and all of the design requirements to meet our needs. The shielding wall is now complete and is absolutely awesome. The Artemis Shielding staff thoroughly impressed the entire BWXT team.

Today, due to the shielding wall Artemis designed and installed, our dose rate is < 2mr/hr at the \* exterior surface of our "Target Wall", and this was verified by a Board Certified Radiological Physicist/a Certified Indiana X-Ray Machine Inspector. BWXT was hoping to just get to < 2 mr/hr at 10 feet. We did not think there was any way possible that Artemis could pull off less than 2 mr/hr with no restrictions on our operating capabilities. I am here to guarantee you, they did and they saved us an astonishing amount of money!

Over the past year, Artemis Shielding has gone above and beyond to solve BWXT's radiation dose (rate) issues, after the installation of our new 9MeV Linatron unit. For this, I am extremely pleased and grateful. Every step of the way in this journey, Artemis Shielding have done an excellent job making this difficult project their own and they came through in more ways than any company could ask for. The staff at Artemis Shielding is top-notch and extremely knowledgeable.

Buddy and Joe, I cannot thank you enough for your professionalism and patience during this project. I am giving you my highest recommendations and I invite you to share my compelling reasons and/or letter, with others that have radiation shielding needs.

Thank you,

Ryan Allen

BWXT Radiation Safety Officer.

ASNT RT Level III #183262.

NAVSEA RT Level III Examiner.

BWXT, Nuclear Operations Group

Mt. Vernon, IN.