

## A River Runs Through It

Sixty-odd years ago, at a sandy desert site west of three tiny towns in southeastern Washington state (White Bluffs, Hanford, and Richland), basically in the middle of nowhere, the United States War Department established a then-secret facility to produce material that would ultimately help end World War II. The towns of White Bluffs and Hanford were swallowed up by the defense site, although Hanford lives on in the name given the site. The town of Richland became the bedroom community for the thousands of workers who streamed into the state to staff the defense facility, which locally became known as “the Area.”

The site had two distinguishing geographical features that made it almost perfect for the task ahead: It was in a remote area where secrets and rumors could more easily be contained, and there was a river running through it. And quite a river it was—the mighty Columbia, the Holy Grail of the Lewis and Clark expedition at the turn of the 19th century.

All along a section of that river, nuclear reactors for plutonium production sprang up. The first, B reactor, went into service in 1944. The last, the N reactor, was finally shut down in the late 1980s. In the years in between, the reactors produced plutonium, first for the war effort and later for the arms race during the Cold War that followed.

And in the process of producing that plutonium from irradiated uranium fuel, the operators of the Hanford Site intentionally (yes, *intentionally*) dumped more than 440 billion (billion!) gallons of contaminated liquids onto the soil at the site. (There were some unintentional leaks as well, releasing even more

contamination into the ground.) To no one's surprise, that contamination eventually made its way down to the groundwater under the site and then began to threaten the Columbia River.

Now we fast forward to today and to the efforts being made to clean up that mess. Two articles in this issue look at some of those efforts. I must admit that when I first read Michele Gerber's “Battling Groundwater Contamination at Hanford” (see page 17), I was stunned at the lengthy laundry list of toxic chemicals that have been dumped onto the soil at Hanford. Granted, at first “there was a war on,” and later we had national security to think of. But surely someone realized at the time that you just can't continue to throw nasty stuff on the ground and not expect to get some nasty results.

Of course, I am judging the past by the standards of today, and that's never a fair thing to do. Many industries, not just the defense industry, were used to discarding their leftovers in unlined trenches or directly into rivers and streams. It's only today, as our population grows and our resources shrink, that we realize the incredible damage such activity causes.

There is good news, however, or we wouldn't be having this discussion. Once the business of ever-growing arms production was curtailed with the collapse of the old Soviet empire, we could turn our attention to what needs to be done to clean up our messes. Gerber's article details what's being done to remediate the contaminated groundwater at Hanford.

The second article, “Reducing the Risk of Hanford's Legacy” (see page 29), looks at work being done to re-



*My, What a  
Mess We've  
Made!*

move contaminated material from some of those early liquid waste sites.

It's not done yet, and won't be for quite a long time. But progress is being made, and little by little, the contamination levels in the groundwater are coming down. And as the groundwater cleans up, the water in the river running through the Hanford site becomes cleaner and purer. At a time when every drop of water is becoming more precious, that can only be seen as good news.—*Nancy J. Zacha, Editor*