Hanford: A RETROSPECTIVE

by Deanne Jackman-Bruner

A group of people has just walked three hundred and fifty miles along the Columbia River as a protest against the continued production of plutonium for nuclear weapons at the Hanford, Washington Nuclear Reservation. They gather with others at their destination, the Federal Building in Richland, Washington, adajacent to Hanford. They walk around the building chanting for world peace. Inside are offices for the U.S. Department of Energy and Hanford's main contractor, Rockwell Corporation. Workers are also inside whose livelihoods are from the nuclear weapons and nuclear power industry. The protesters carry signs: "Make Jobs Not Bombs" and "No More Nuclear Weapons." In response someone inside the building puts up a sign reading "I Love Bombs."

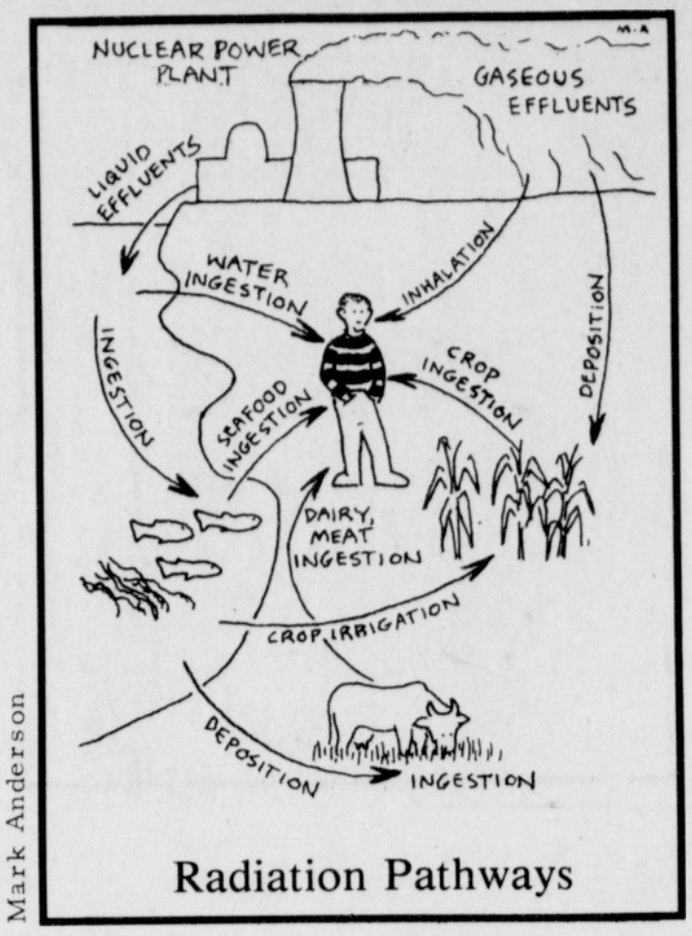
Hanford has recently been a focus of attention with its selection as a possible site for the deposit of the nation's spent commercial nuclear waste. The Department of Energy has chosen the site because of the basalt rock formation underlying the federally owned Hanford Reservation. Granite, basalt, and salt caverns, they say, are geologically superior for storing radioactive waste.

Another consideration in the selection of Hanford is the "I Love the Bomb" attitude that dominates the Tri-City (Richland, Kenewick, Pasco) area. A recent poll show sixty-eight percent of these residents favor (and have set up a lobby for) the waste site. The same poll shows a majority of persons living in Washington State do not want the repository there.

Why would residents of the Tri-City community support having the nation's radioactive waste at Hanford? There are as many answers to the question as there are Tri-City residents, but a look at their history may give some insight.

The atomic age began forty years ago on August 6, 1945 when Colonel Paul Tibbets dropped the first atomic bomb on Hiroshima, Japan. Three days later a second bomb destroyed Nagasaki. Up to that time the bomb and its production had been top secret. One of the main ingredients in the production of atomic weapons, plutonium, was manufactured at Hanford as part of the Manhatten Project which was begun by President Franklin D. Roosevelt in 1942 for producing a secret weapon based on atomic energy. Amid great secrecy plutonium was manufactured at Hanford and sent to Los Alamos, New Mexico where Robert Oppenheimer, who was director of the project, used it for the bomb.

The Tri-City area was chosen because of its isolation, surrounding wastelands, rail connections, sparse population, and accessibility to power from Grand Coulee Dam. The federal government condemned one hundred ninety-three thousand, eight hundred and thirty-three acres of land and work started March 22, 1943 on what was soon called the Hanford Atomic Works. The population of the area erupted with the project. Six thousand, seventy-eight people lived in Tri-Cities in 1940. By 1944 there were fifty-one thousand employed in the project and sixty thousand residents. After World War II the Hanford plant was unoccupied except for guards and fire prevention crews. In 1947 the Atomic Energy Commission along with The General Electric Company took over from the Army and plutonium production at Hanford became a peacetime operation. By 1951 Hanford had sixteen thousand employees and was the second largest industrial employer in Washington, Boeing being first. Manufacturing plutonium is still going on at Hanford at a rate of one thousand, three hundred pounds a year. The DOE however stresses its dual purpose capacity to produce eight hundred and sixty megawatts of electricity while producing plutonium.



Mark Anderson

Radiation Pathways

The area has grown out of the World War II effort to produce an atomic bomb before the Germans or Japanese. World renowned scientists lived down the street from workers who did not know what their labors would produce but were proud of their part in the war effort.

The pride remains today and is evident in the area. The local bowling alley is named "Atomic Lanes." At Columbia High School in Richland the sports teams are called "The Bombers" and have mushroom cloud emblems. In 1970 the student body president suggested changing the name to something less destructive. Ninety-eight percent of the students voted to keep the name "The Bombers."

With pride in the nuclear product and the promise of jobs the Tri-City area welcomes the prospect of the nuclear waste dump. This in spite of Hanford's record of leaks, spills and contamination. In one leak one hundred and forty gallons per minute of radiotoxic water had been draining into a sand trench for four to ten years. In response one Hanford spokesperson said the radioactive water "may be going into the ground, but we are not sure." Another said, "No uncontrollable radioactive water reaches the Columbia River." In addition, thirty-one million gallons of "low-level" waste has been poured directly into the soil. That included at least four hundred and twenty pounds of plutonium. The government admitted the figure could actually be higher, this because there is plutonium unaccounted for.

The PUREX (Plutonium-URanium EXtraction) processing plant has had forty percent more radioactive leaks and emission since its restarting in November 1983 than were expected. The DOE has recently said it would not report all leaks, only those large enough to warrant alerting area residents. Similar action was taken during open air atomic tests in Nevada and still continues with underground testing.

In 1969 the Oregon Department of Health found the Columbia River to be one of the most radioactive bodies of surface water in the world. Some critics feel that the Hanford Reservation and specifically PUREX are responsible as the plant was in operation from 1956-1972. During the plant closure the river's radioactive level decreased greatly.

Other programs are currently going on at Hanford. It is the repository for the nation's low-level radioactive waste. Everything from latex gloves worn by hospital X-ray technicians to decommissioned nuclear submarine reactors find a resting place at Hanford.

Some programs being developed continue to produce jobs in the area and concern anti-nuclear critics. One such project is the DOE's seven hundred and fifty million dollar Laser Isotope Separation facility. This plant will be able to extract weapons-grade plutonium 239 from commercial reactor fuel by using laser beams to separate isotopes. Critics say this will cause a change in federal law prohibiting the reprocessing of commercially spent fuel for nuclear weapons materials.

Another is Hanford's Fast Flux Test Facility, an experimental breeder reactor. The PUREX plant is being modified to accept spent fuel from this breeder reactor. Finally we come again to the Basalt Waste Isolation Project which has brought Hanford to the attention of people living in the Columbia River region. Will Hanford be the repository for seventy-seven thousand tons of spent commercial waste each year? If it is chosen, and that decision will not be made until 1995, will some of that spent fuel eventually be taken out of storage for use in PUREX reprocessing for nuclear weapons? Will the stored radioactive waste seep into the Columbia River through shifting water tables in twenty years as some scientists from the U.S. Geological Survey estimate? Or will it be stable thirteen thousand years, well beyond the one thousand year limit the Environmental Protection Agency has set? Where will the nation's radioactive military waste be stored? These questions are yet to be answered.

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