

Atomic Deception: Oh, What a Tangled Web!

Hanford Education Action League, *Perspective*, Summer/Fall 1992, Nos. 10-11

“Oh, what a tangled web we weave, when first we practice to deceive.”

- Sir Walter Scott

Introduction

HEAL's exhaustive research into the production of nuclear weapons has tried to untangle the web of deception which Hanford has woven since the dawn of the atomic age. Hanford's operations could not withstand public scrutiny. The government felt compelled to amass a nuclear arsenal and so, deception was adopted as an official policy. Using the Freedom of Information Act, HEAL has gained access to once-classified information on the governmental policies which allowed the secret releases of radiation into the air and the Columbia River of the Pacific Northwest.

Hanford managers did take many precautions to limit exposures to radioactive and toxic materials. They were not totally cavalier, as some suspect. An objective view must reckon with the fact that radiation protection was a major concern in the design of the reactor and chemical separation plants. But there were mistakes, there were accidents, and people took chances with the health of others. Instead of confronting these imperfections and working honestly to correct the situations, the government adopted an official-policy of cover-up. It feared the public's reaction to the truth and the loss of the ability to build atomic weapons.

Another important aspect to reflect upon is that the public's awareness about Hanford did not start with the release of the historical documents in 1986. There were rumors about Hanford's radiation dangers as early as August 1945. Rumors continued through the fifties and sixties. Local and national news accounts in the media reported several accidents. At least some Washington State and Public Health Service officials were told certain aspects of Hanford's pollution.

One thing is clear: instead of dealing openly and honestly with Hanford's problems, government and contractor officials knowingly conspired to deceive workers and those living downwind and downstream. Hanford's sordid story did not have to unfold the way it has. It is up to us to make sure that similar things do not happen at Hanford or anywhere else again.

One more introductory note: the Department of Energy and its contractors are still making it difficult for citizens to have access to historical documents about Hanford. While we have learned a great deal since 1986, there is still much that remains concealed. Because of this, it is quite possible some of the following article might eventually change once all of Hanford's secrets are revealed.

Whether it is financial information on how our tax dollars are being spent on Hanford cleanup or important details of the 1949 Green Run, the government is still working actively to keep its own citizens in the dark.

Did Hanford Officials Know the Radiation Releases Were Dangerous?

During the past eight years, many scientists and Hanford officials have said that the reason the large radiation releases from Hanford were allowed was due to an incomplete knowledge among early Hanford scientists of the dangers from radiation. HEAL's independent historical research has discovered that while their knowledge was indeed incomplete, they did establish certain guidelines for the amount of radiation which they believed they could release to the environment without causing harm in workers or in the surrounding population.

Hanford officials knowingly exposed workers and the public to levels of radiation exposure which they considered dangerous. For example, the atmospheric releases of radioactive iodine (I-131), the guidelines were routinely ignored from the beginning of plutonium separation in December 1944 into the early fifties.¹ As for the radiation Hanford dumped into the Columbia River, the standards were violated during the late fifties and early sixties.²

The reasons for operating Hanford's bomb factories in this manner are not entirely clear. The answers may eventually be found in those historical documents which Hanford is still keeping under lock and key. But what can be said *now* about *why*?

It is fairly certain that during World War II, the desire to end the hostilities as quickly as possible provided the main driving force in Hanford's push to separate enough plutonium for America's first atomic weapons. According to Walter O. Simon, Hanford's first operations manager, "the pressure was tremendous."³ But after August 1945 the reasons are murky at best. The highest releases during 1945 occurred after the Japanese surrender. Why did Hanford officials secretly expose people to an apparently unnecessary danger? While there is currently no publicly available answer, HEAL remains committed to finding the answer.

That answer will likely be a complex one. It is not as if Hanford officials did not take any precautions - they did. Within the plutonium facilities, they constructed the ventilation systems to suck the contaminated air away from those areas occupied by workers. Another precaution was the high emissions stacks on the separations plants. Simon recalled, "We did worry about gas emissions when the uranium from the reactor was dissolved to separate the plutonium. We monitored them very carefully, and ... if there was a good velocity of wind to

¹ The Human Toll, HEAL *Perspective* #3, Fall 1990, p. 3-4.

² "Hanford should have banned fishing in Columbia River," HEAL *Action Memo* #34, August 14, 1992, p. 1.

³ *Hanford and the Bomb: An Oral History of World War II*, S. L. Sanger, p. 125.

distribute them, we might have taken some chances.”⁴ They monitored the wind and generally would not release radiation if the conditions did not dilute the plume enough. Wakefield Wright, a chemical operations supervisor, has stated: “before you could dissolve in those days you had to worry about wind conditions. ... They didn't want the wind to be in the direction of the Tri-Cities, even though they were 30-35 miles away. We had a big meteorological tower outside the West Area and we worked closely with them. If we started dissolving and the wind got bad, we would have to quit, so we were at the vagaries of the wind.”⁵

If Hanford officials and scientists had taken these precautions, then why did they allow releases which violated their own guidelines? From the available documents, it appears that even with all their precautions, they discovered they could not obtain enough plutonium while operating the facilities safely. For reasons that changed after Japan surrendered, they felt they had to build more bombs. They continued to operate the plants in ways they knew were dangerous and decided that the public could not be told the truth. They adopted deception as government policy.

How Did Hanford Cover It Up?

A 1955 address by Hanford's chief health official, H. M. (Herb) Parker, to a United Nations meeting on the peaceful uses of the atom held in Geneva, Switzerland, provides an excellent example of how Hanford deceived the world. Surprisingly, Parker referred to some of Hanford's largest releases: the Green Run and the January 1954 ruthenium release. However, he dramatically scaled down the amounts released and gave no specific information. With the knowledge gleaned from the documents released since 1986, it is clear from his cryptic descriptions that Parker referred to events whose full details remained secret for decades.

Parker mentioned “a single emission of 100 curies of I-131 in a few hours” during an inversion.⁶ He could only have meant the Green Run. Parker knew that Hanford documents showed that the actual amount released was nearly 80 times more than his version. He also chose not to mention the experimental nature nor the many problems with the test.

Parker also talked about a release of 100 curies of radioactive particles. His conference paper includes a map of the release plume, showing that the radioactive material was carried off-site. The historical documents show that Parker was referring to the January 1954 release of ruthenium which traveled farther than Spokane (125 miles downwind). Moreover, Parker knew that the actual release amount was 360 curies.

⁴ *ibid.*, p. 12

⁵ *ibid.*, p. 154-155.

⁶ “Radiation Exposure from Environmental Hazards,” H. M. Parker, *UN Conference Proceedings*, Vol. XIII, p. 308.

Parker told his international audience about permissible radiation releases and levels of contamination on vegetation.⁷ What he did not mention was that Hanford had exceeded the permissible release amounts for the first six months of 1955.⁸ Contamination readings on vegetation surpassed the permissible limits as far away as Ritzville (75 miles downwind) during early 1955.⁹

Closer to home and outside the scientific community, Hanford had to be more careful about what information was released to the public and how. Hanford utilized its special powers and position to weave a tangled web of deception and so shield itself from scrutiny and public accountability. Hanford's web has five main threads: security, public relations, medical, legal, and scientific.

Security: The Culture of Secrecy Was Nearly a Total Preoccupation with Hanford Workers and Their Families.

During World War II, Hanford “was such a hush-hush operation that even the amount of ice cream consumed by the workers was classified.”¹⁰ At the start of the Manhattan Project, the military adopted a security system known as compartmentalization. Individuals would only be told what was necessary to perform their tasks. Hanford officials walked a fine line in telling their workers to be careful while trying not to disclose any atomic secrets. Parker, then the Chief Supervisor of the Health Instruments division, wrote that security could be maintained “if hazard information is phrased in such a manner that the maximum information on the nature of the hazard is combined with the minimum information on the nature of the materials used and the processes involved.”¹¹

The compartmentalization did not stop with the end of the World War II. It continued as Hanford and the rest of the nuclear weapons complex was transferred to civilian control. An indication of how controlled information was comes from a January 1950 article in the *Seattle Times*: “Only seven men at Hanford know the complete story.”¹² One worker interviewed by the *Times* commented that, “as far as I'm concerned, security is tighter now than it was during the war.”

⁷ *ibid* p. 306-307.

⁸ The average for the first half of 1955 was 5.1 curies per day, HW-55569 RD, pg. 6.

⁹ HW-38566, p. 22 and 24, and HW-36506, p. 21-22.

¹⁰ *Hanford: The Big Secret*, Ted Van Arsdol, Richland: Columbia Basin News, 1958, p. 31.

¹¹ HW-7-588, “Classified Information Required by Operators and Others Exposed to Radiation Hazards,” H. M. Parker, August 31, 1944, p. 1.

¹² “Security and Safety Paramount at Hanford,” John Bigelow, *Seattle Times*, January 25, 1950.

The culture of secrecy was nearly a total preoccupation with Hanford workers and their families. The Federal Bureau of Investigation (FBI) maintained an ominous presence in the workplace and the neighborhoods of Hanford workers. One worker commented that, "We know there are a lot of FBI men working in the areas. There have been cases of men talking or telling their wives more than they should. We all know when a guy starts getting careless. And it isn't very long until he isn't around any more."¹³ To share concerns about Hanford's operations meant dismissal and ostracism.

A widow of a Hanford worker recalled that she was tailed in the Tri-Cities by Hanford security agents as she took steps to file a death benefit claim with Washington State.¹⁴ Her husband's death might have been related to his radiation exposure while working in one of Hanford's reactors.

Public Relations: The "Suppress Officer"

What does public relations have to do with secrecy and deception? Everything! Milt Cydell, Hanford's public relations officer during and after World War II, was commonly referred to as the "suppress officer."¹⁵

When the first atomic bomb was dropped on Hiroshima and the workers at Hanford learned about the nature of their work, the rumor mill went into high gear. Harry Petcher, a food service worker at Hanford during World War II recalled, "When the bombs were dropped my recollection was, 'God, is that what we were doing here? Did we get poisoned?'"¹⁶ Hanford officials worked quickly to reassure the workers that building atomic bombs was safe. The public relations effort they launched also provides an example of the difference between documents prepared for worker/public consumption and internal reports.

Depending on their audience and message, Hanford officials changed their tune. Writing two weeks after the atomic bombings and the revelations of Hanford's secret product, Parker and another key health official, Dr. Simeon Cantril, wrote a memo to the workers. Apparently the news of Hanford's secret war role included some speculation or rumors about "the personal safety of (workers) and families."¹⁷ Parker and Cantril stated that they did not want "any misinformation or loose statements by the misinformed to mar either our record or the morale we have built up through confidence in the safety of our operations." In answer to concerns about Hanford's affect on the public living

¹³ *ibid.*

¹⁴ "Officials tried to alter doctor's opinion on death," Karen Dom Steele, *Spokesman-Review*, September 9, 1990, p. A14.

¹⁵ *Hanford: The Big Secret*, Van Arsdol, p. 62-63.

¹⁶ *Hanford and the Bomb*, Sanger, p. 80.

¹⁷ HW-7-2136, "The Status of Health and Protection at Hanford Engineer Works," August 24, 1945, p. 1. See also the Diary of Colonel Franklin T. Matthias, August 24, 1945, p. 104.

near Hanford, Parker and Cantril calmed the workers by stating: “The amounts (of radioactive iodine in Richland) are entirely innocuous.”¹⁸

Less than three years later, the same Parker, writing an internal memo, would refer to the “entirely innocuous” levels of iodine as being high enough to have caused “concern in 1945”¹⁹ A year later, Hanford's manager also made reference to the “entirely innocuous” levels of iodine: “In 1945, iodine-131 contamination on vegetation was 45 to 70 times accepted permissible maximum at Richland and Kennewick.”²⁰

Nor were Hanford concerns about public relations limited solely to the atmospheric releases. In a 1954 Herb Parker report and a transmittal document about projected increases in the contamination levels of the Columbia River, it is evident that Hanford was very concerned about adverse publicity. Because of the AEC's (Atomic Energy Commission) desire for more plutonium, Hanford dramatically increased the power levels in the reactors throughout the late fifties. The power increase was expected to (and did) increase the radiation levels in the Columbia between 5 and 10 fold. Commenting on this projection, Parker warned “it may be necessary to close public fishing between Priest Rapids and McNary Dam. The public relations impact would be severe.”²¹

When Hanford's AEC manager, David Shaw, sent Parker's report back to AEC headquarters, he tried to assuage his superiors who might have had their own adverse reaction to the Parker report. Shaw wrote, “The public relations problems have been with us always. We expect to handle them adequately in the future, as we have in the past.”²²

In his report, Parker also discussed a survey conducted by the U. S. Public Health Service (PHS) of the Columbia River between 1951-1953, While it was not a totally independent assessment of Hanford's effects on the river, the PHS did stir up some waves. Again quoting from Parker's 1954 report: “A continual threat to the (public relations) situation is that adverse interpretations can be given by distinguished technical individuals, such as expert sanitary engineers, whose appreciation of the radiological hazards is perhaps limited to rather recent exposure to these complex problems.”²³

¹⁸ HW-7-2136, p. 5.

¹⁹ HW-9506, “Benton County Portion of Area B: Unsuitability for Public Use,” H. M. Parker, April 13, 1948, p. 8.

²⁰ HAN-254081/2, volume 2, “Manager's Data Book, 1949,” May 28, 1949, p. 1.

²¹ HW-32809, “Columbia River Situation - A Semi-Technical Review,” H. M. Parker, August 19, 1954.

²² Memo from David F. Shaw, Manager of Hanford Operations to E. J. Bloch, AEC Director of Production, “Transmittal of Information on Columbia River Situation,” September 17, 1954.

²³ HW-32809.

Perhaps one reason that these independent experts reacted adversely to what Hanford was dumping into the Columbia River is that Hanford failed in its attempts to properly indoctrinate them. On June 9, 1950, Hanford manager, David Shaw, sent a Teletype message to AEC Headquarters regarding the first meeting between the AEC and the PHS to begin planning for the health service's study of the Columbia River. Shaw wrote that "to assure satisfactory conference result it is strongly recommended that delegates visiting Hanford Works for the first time attend indoctrination discussions." The indoctrination must have worn off by the time the PHS wrote its report because Parker found that "the first draft of this report contained several statements that would have been highly detrimental to public relations."²⁴ Apparently the AEC and General Electric forced the Public Health Service to tone down parts of the PHS report before allowing it to be released.

Medical: "It's a Very Sad Story, and I Probably Wasn't the Only One."

On June 9, 1952, Ernest Johnson died in his Richland home after becoming ill at work. He was a maintenance foreman at one of the plutonium production reactors at Hanford. He had not been feeling well that day and had seen his doctor in the afternoon. As the funeral home prepared Johnson's body, several suspicious marks were discovered on his skin. Knowing that he had worked at Hanford, the funeral home called the General Electric medical department. Because the injury could have been connected to Johnson's work, GE decided that an autopsy should be done but not by its own pathologist. Dr. Frederic Davis, the pathologist for Walla Walla, was called to perform the autopsy. Davis was assisted by three Hanford physicians, one of whom was Dr. Phillip Fuqua, Assistant Director of Medical Services for G.E. The cause of death was listed as a ruptured aorta near the heart. Johnson had had a history of high blood pressure. The autopsy report could not explain the marks on his skin.

Johnson's widow, Marie, was suspicious about how he had died. Some of Johnson's co-workers told Marie that her husband had been heavily exposed to radiation in the months leading up to his death (his official Hanford records do not indicate this high exposure). When Marie Johnson took her husband's body back to Chicago for burial, she had a second autopsy done. This time the autopsy surgeon considered the burn marks to be the result of radiation exposure and concluded that the radiation burns had contributed to Johnson's death. Marie Johnson began the process of filing a claim, contending that her husband's death was caused by his on-the-job radiation exposure.

The AEC refused to consider the possibility and organized a team of its medical and legal experts to travel to Chicago in an attempt to get Dr. Thomas Carter, who performed the second autopsy, to alter his opinion and not find

²⁴ *ibid.* Parker's written comments on this first draft were destroyed by the Hanford in 1968 (HW-32122).

radiation as a cause of Johnson's death.²⁵ Dr. Fuqua even threatened to take legal action against Carter if he did not change his opinion.²⁶ The AEC failed in all of its attempts to change Carter's mind and he remained steadfast that the burn marks were indicative of a serious radiation exposure that contributed to the death of a Hanford worker.

Having failed to alter Carter's opinion, the AEC felt compelled to discredit the second autopsy report. In order to do this, so as to assure that the compensation claim would be denied, the AEC arranged to have an "unbiased" review done of both autopsy reports.²⁷ This would serve as a third and decisive opinion. However, this reviewer was anything but unbiased. The AEC had selected Dr. Simeon Cantril, Director of the Tumor Institute at Swedish Hospital (Seattle), to offer the third opinion. Not only had Cantril been a consultant to the Hanford Medical Division since 1943, but he was asked by Fuqua to review the first autopsy report as it was being prepared. The State of Washington accepted the findings of this review and denied Marie Johnson's claim.

When she was interviewed by Karen Dorn Steele in 1990, Marie Johnson recalled that "it bothered me for a long time. He was a good person, and to treat his family that way was wrong. It's a very sad story, and I probably wasn't the only one."²⁸

And so, Hanford's plausible deniability remained officially intact. The collusion allowed Fuqua's boss, Dr. W. D. Norwood, to claim to a Seattle newspaper 18 months after Ernest Johnson's death that, "we have never, to our knowledge, had any sickness due to radiation..."²⁹

Much of the medical deception which Hanford has practiced relates to radiation exposure standards. Throughout the years, even to the present, the nuclear industry has tried to soothe people's fears of radiation by comparing a certain exposure to the accepted standard. Such comparisons usually leave the impression that if a certain exposure is only part of the standard then it must be O.K. Issue #8 of *Perspective* detailed the background of how national and international exposure guidelines are set.

In establishing radiation exposure standards as Hanford began operations, health director Parker wrote: "it was necessary to avoid excessive conservatism

²⁵ Teletype from AEC-Richland to AEC Headquarters, November 17, 1952.

²⁶ Letter from P. A. Fuqua to Thomas A. Carter, December 5, 1952.

²⁷ Letter from Don C. Jurgensen, District Supervisor, Dept. of Labor and Industries, to R. J. McLean, Supervisor of Claims, Dept. of Labor and Industries, October 28, 1952.

²⁸ "Officials tried to alter doctor's opinion on death," *Spokesman-Review*, September 9, 1990, p. A14.

²⁹ This was taken from a Seattle newspaper article, January 3, 1954, which was a report on a report by Norwood, Fuqua, and Sachs in *Journal of the American Medical Association (JAMA)*, January 1954.

with resultant hold-up of the work and increase of worker anxiety.”³⁰ When presented with actual occupational hazards, apparently many workers did not respond with the expected calm attitude. At least twice during May 1945, the toxic and radioactive plumes coming out of the processing stacks were blown to the ground near the plants by unexpected weather conditions. The ventilation systems sucked the pollution into the working areas of the buildings and caused “consternation (among the employees) out of proportion to the existing hazard.”³¹

Radiation exposure standards are always controversial. At least once in Hanford history, Hanford pushed to have the National Committee on Radiation Protection (NCRP) to apply a different, less stringent standard that would allow Hanford to continue operating the plutonium production reactors. The NCRP wanted the Hanford reactor effluent to be classed as being of “unknown composition.” Because radioactive contamination in the Columbia was already above this limit, Parker opposed this interpretation saying, “this would create an intolerable situation. Considerable educational effort is required to suppress the application of the irrelevant ... limit. Fortunately, our forces are directly represented on the NCRP subcommittee responsible for Handbook 52, and can represent authoritatively that such application was not intended.”³²

After Parker's report was sent back to AEC headquarters, it was reviewed by the director and deputy director of the AEC Division of Biology and Medicine. Their comments suggest that Parker should not have been so confident in being able to persuade the NCRP that a less restrictive standard should apply to the radiation Hanford was dumping into the Columbia. Dr. Dunham, the deputy director, wrote: “Depending upon the ability of Dr. Parker to sell to the National Committee on Radiation Protection his position in regard to the maximum permissible rate at which P-32 (radioactive phosphorus) may be ingested, it appears that concentrations of P-32 in the fish of the Columbia River may be even nearer the level at which some limiting action (e.g., a ban on fishing) is required than (Parker's) report indicates.”³³

Dr. Dunham's superior, Dr. John Bugher, wrote to the AEC General Manager and said, “if one uses the standards which are presently approved and accepted by the National Committee on Radiation Protection, the situation is even more serious than stated by Dr. Parker. With the coming to full power of the new reactors, I anticipate that these problems will become more acute, especially

³⁰ HAN-73214 BK7 DEL, “Du Pont Hanford History, Medical Department, 1945-1946,” H. M. Parker, September 7, 1945, p. 18.

³¹ HAN-73214 BK7 DEL, compiled by H. M. Parker, September 3, 1945, p. 49.

³² HW-32809.

³³ Memo from C. L. Dunham, MD, Deputy Director, Division of Biology and Medicine to Frank K. Pittman, Deputy Director of Production, “Information on the Columbia River Situation,” October 26, 1954.

with reference to the river temperature and the survival of the Columbia River salmon.”³⁴

Unfortunately, the public does not yet have access to the documents which would show exactly how this dispute was resolved. What can be said is that Hanford added two more reactors in 1955 and dramatically increased the operating levels of all eight reactors until the shutdowns began in late 1964. This resulted in a huge increase in the amount of radiation being carried downstream from Hanford. Although no ban on fishing was ever imposed, the radiation levels in Columbia River fish surpassed the point that Parker had considered a fishing ban during the years 1957, 1958, 1960, 1961, 1963, and 1964.

Legal: From the Very Beginning, Hanford was Aware that People Would File Legal Claims when They Found Out What Hanford Produced

Finding examples of Hanford's deception along the legal thread of the web has been the most difficult. Very few of the available documents refer to this powerful aspect. What HEAL has found is probably not that much different than the concern most hazardous operations would have about people filing lawsuits against them. The historical record does show that from the very beginning, Hanford was aware that people would file legal claims when they found out what Hanford produced.

A 1945 official history of Hanford operations during World War II described the purpose for the detection of radioactivity as being “necessary for the protection of all personnel in the manufacturing areas as well as all inhabitants within a radius of some fifty miles. Monitoring stations have been located at appropriate locations within the required area to provide records of such stray radiations and which records can be produced as evidence in any possible future legal actions against the Government.”³⁵ In February 1945, Colonel Franklin Matthias, Hanford's wartime commander, wrote in his diary that he “inspected the meteorological setup between the 200 areas and recordings that are being taken to permit us to be prepared in case of claimed serious exposure in certain areas.”³⁶

As Hanford officials prepared for the revelation of Hanford's secret purpose once the bombs were dropped on Japan, Colonel Matthias had a conversation with Mr. Sutton of du Pont. Matthias made the following entry in his diary for July 6, 1945: “I also asked him to set up some procedure that would

³⁴ Memo from John C. Bugher, MD, Director, Division of Biology and Medicine to K. D. Nichols, AEC General Manager, “Columbia River Contamination,” November 17, 1954.

³⁵ OUT-1462 DEL, “History of Operations: HEW: 1/44 - 3/20/45,” p. 4.

³⁶ Diary of Colonel Matthias, February 28, 1945, p. 39.

assure us of getting first information on any question or criticism that might lead to a legal claim.”³⁷

Matthias' near paranoia that people would sue Hanford for alleged damages from radiation went so far as to require a shepherd to sign a waiver before being allowed to herd his sheep to pasture near Hanford. In June 1945, Mr. Maxwell, foreman for Coffin Wool Company of Yakima, called Matthias to complain that he could not get a permit “to drive his sheep up the Cold Creek range south Hanford's fence line but within the leased area. . . . It was the only way they had access to their summer range.” Matthias also had Mr. Maxwell, the foreman, come into the M.I. (military intelligence) office and sign a definite waiver of any responsibility for the sheep or the herders who will take the sheep through the area.³⁸

Hanford not only asked people to sign legal waivers but also asked state and federal government workers to sign secrecy oaths. HEAL has uncovered eight documents in which other government officials agreed to not reveal anything about Hanford studies on the effect of Hanford operations on fish life in the Columbia River. Part of the agreement reads as follows: “If asked by any person, I may state that measures are being taken at Hanford Engineer Works to protect fish life in the Columbia River from any harmful effects which might result from plant operations.” The eight statements we obtained were signed in June 1946 by state and federal fish and wildlife officials and each signed pledge was witnessed by two Hanford officials.

Even if people had decided to file a claim against Hanford, it is doubtful that such attempts would have been successful. Unfortunately for workers who felt they suffered a work-related injury, a regular section in accident reports reveals how confident Hanford felt in its ability to defend itself against occupational claims. The section was called “Claims Against the Government,” and stated: “Since the individual is an employee of the General Electric Company, working under Contract AT(45-1)-1350, it is doubtful that a claim against the U.S. Government could be sustained. Any injury would be compensable under the Washington State Workmen's Compensation Act, therefore, the employee could not proceed against the General Electric Company.”³⁹

Science: “Lack of Standardization, the Unexplained Reasons for Findings, the Unsatisfactory Replies to Questions”

The hazards at Hanford were not a complete secret for those in the scientific community. At various times in Hanford's history, the government set up consultative groups. One such advisory board was formed in 1948 and was called the Columbia River Advisory Group (CRAG). It was made up of representatives from Oregon and Washington states and the U. S. Public Health

³⁷ *ibid.*, July 6, 1945, p. 90.

³⁸ *ibid.*, June 22, 1945, p. 86-87.

³⁹ “Investigative Report,” IR 65-44, parts 1 & 2, October 28, 1965, p. 12.

Service. The CRAG members had tours and briefings at Hanford. As a former member of CRAG recalled, the group served as a mouthpiece for the AEC and a meeting would be called every time that Hanford officials felt the need to issue a press release to assure the public that everything was fine with the Columbia River.⁴⁰ At least one Hanford manager, David Shaw, saw CRAG's purpose as being only public relations.⁴¹ The previous manager of Hanford counseled AEC headquarters that "attendance at meetings on Columbia River problems should be held to an absolute minimum because of the many divergent interests involved."⁴²

Members of AEC advisory committees frequently came from private business or universities. This meant that a wide range of people throughout the country were aware of the dangers of Hanford operations. In 1948, the AEC established the Stack Gas Problem Working Group which included men representing three commercial firms and professors from Harvard, Johns Hopkins, and the University of Illinois.⁴³ W. P. Yant, who was director of research for the Mine Safety Appliances Company of Pittsburgh criticized the poor AEC science. He cited the "lack of standardization, the unexplained reasons for findings, the unsatisfactory replies to questions," among others.⁴⁴

The AEC consulting with outside, "independent" experts does present an apparent problem: if there was really anything dangerous about Hanford, wouldn't these outside scientists have alerted the public? Most of the people on these advisory committees were from companies that either had or wanted AEC contracts. The scientists knew that as long as they kept supporting the party line that the radiation being released posed no harm, they could keep their position and professional reputation. When certain scientists violated this by asking too many questions or coming to different conclusions, the complex would launch a campaign to discredit them - the isolated individual versus the established order. The experiences of former AEC experts are already well documented. For those who wish to read about Dr. John Gofman, Dr. Thomas Mancuso, and others, *Killing Our Own* and *Nuclear Witnesses* are good resources.

There is another reason why the AEC's use of advisory committees did not result in the public being more aware of what was being released from Hanford. With at least one of these groups, it is uncertain whether they were told everything, even within their area of concern. The CRAG members all had high-level security clearances but when the contamination levels in the Columbia River

⁴⁰ Telephone conversation with former CRAG member Emil Jensen, November 7, 1989.

⁴¹ Teletype from David F. Shaw to AEC Headquarters, June 9, 1950.

⁴² Teletype from F. M. Schlemmer to AEC Headquarters, March 3, 1950.

⁴³ "A Progress Report on the Activities of the Stack Gas Problem Working Group," October 19, 1949, p. 1.

⁴⁴ *ibid*, p. 5.

were reaching, their peak, the AEC provided CRAG with only unclassified information.

Another case of scientific deception is evidenced in a series of environmental monitoring reports. These contain information on the radiation and other pollution which Hanford operations release into the environment. From 1946 to 1957, quarterly monitoring reports were written, compiled as secret documents. By 1957, over 200 copies of the reports were being distributed each quarter throughout the country to companies such as Boeing, other AEC nuclear weapons production sites, and special military programs. But the access to the reports was strictly limited to those people who had the proper security clearances. They caused much concern when they were declassified and released as part of the first 19,000 pages of Hanford historical documents in February 1986.

In 1958, the quarterly reports were converted into annual ones and were issued as unclassified documents. Along with these changes, the detailed information of previous years became only general, non-specific information about Hanford's environmental impact. After several years, some of the details were again reported in appendices but were not widely distributed. These appendices were basically two reports: one included specific information on contamination outside the Hanford boundaries and the other, classified "Official Use Only," contained details on pollution problems on the site itself. The classification was dropped after 1971, the same year that the last of the 8 old reactors was closed. The three reports were combined into the now-familiar single report about 10 years ago.

Another way in which Hanford practiced scientific deception was changing the places where samples were collected. Even when the monitoring reports were classified as "secret," Hanford was careful to not report the worst news. During the fifties, as more plutonium producing reactors were added along the Columbia River, the radioactive concentration of the river water increased several-fold. Until 1954, the quarterly reports included three readings near the old Hanford town site: one along the north bank, one in the middle of the river, and one along the south bank. The reading along the south bank was usually 2 or 3 times higher than the north bank. This was due to a channeling effect of the Columbia in which the radioactive effluent from the reactors would mostly stay confined to the south and west bank of the Columbia until below Richland, where the Yakima River empties into the Columbia.

Starting in 1955, the quarterly reports only mention one Hanford reading and it is obvious from the increasing trend of contamination that the lowest reading, the north bank, was being used.

Another method Hanford has used over the years to obfuscate reality concerns changing the various assumptions used in calculating, radiation exposure estimates. Two of the many variables used relate to food consumption: how much of a particular food was eaten and where that food came from. In the

fifties, much of the concern focused on the radioactivity in whitefish in the Columbia. Compared with other species, the whitefish concentrated more of phosphorous-32, a key component of the reactor effluent which Hanford dumped directly into the Columbia. By changing the estimates of how much whitefish people consumed and where those fish were caught, Hanford could control the radiation estimates for people reported in the documents (please note that this would not change what real people actually were exposed to, just the perception).

HEAL has reviewed the annual monitoring, reports from 1959-1966, the time period when the radioactivity level of the Columbia River was at its highest. From 1959-1964, Hanford reported doses to the bone from phosphorous-32 for an "average" individual, and from 1963 to 1966 for a "maximum" individual. What is intriguing is that while the "average" individual did eat much less fish per year than the "maximum" (10-25 pounds was considered average, 90 pounds for the maximum), the "average" person caught her/his fish in water that was more heavily contaminated. Hanford placed the fishing hole for the "average" person at Ringold, the closest approach to the reactors allowed. The "maximum" individual caught her/his fish at Burbank, Washington, which is further downstream and after the Hanford's radiation is diluted by the Yakima and Snake Rivers.

The Deception Continues

Most of this article has focused on the deception during Hanford's first 20 years. Because the radiation releases were highest in those years, HEAL has collected more information about this period. But the policy of deception has continued up until the present time. The 1975 Environmental Impact Statement on Hanford Waste Management has become legendary for the significant information it left out about the stockpile of radioactive and hazardous wastes (ERDA-1538). In 1987, Hanford prepared another environmental impact statement on the cleanup of those wastes. This time Hanford neglected to mention the potential explosion hazard in tank 101-SY and suppressed a key document which detailed another tank explosion danger (DOE/EIS-0113). When PUREX shut down in December 1988 because of safety problems, it required the extensive efforts of HEAL through the Freedom of Information Act to reveal that many DOE and Westinghouse officials had tried to dismiss strict safety rules so that they could keep PUREX operating.

As long as Hanford persists in spinning its tangled web of deception, HEAL and the citizens of the Northwest must maintain our vigilance.