

Environmental Defense Institute

News on Environmental Health and Safety Issues

December 2010

Volume 21 Number 8

Settlements Being Readied for Some Downwinders

Thomas Clouse reports in the *Spokesman-Review* 4/29/09; “For the first time in the protracted Hanford downwinders lawsuit, the lead lawyer for government contractors said Tuesday his companies are ready to offer cash settlements to a few of the thousands of people who believe their illnesses were caused by radiation releases.

U.S. District Judge William F. Nielsen hosted more than a dozen attorneys in Spokane for a status conference on the 18-year-old downwinders lawsuit, which has cost taxpayers more than \$57 million to defend. “This case has been caught on dead center for too long,” Nielsen said. “Let’s come up with something so we can proceed.”

Little money has gone to the more than 2,000 “downwinders,” who say they’ve suffered cancer and other illnesses as a result of living downwind of releases of radioactive iodine-131 from the Hanford Nuclear Reservation near the Tri-Cities. The releases occurred during the production of plutonium for atomic bombs during World War II and nuclear bombs in the early years of the Cold War.

Residents of Eastern Washington, Oregon and North Idaho didn’t know about the releases of the radiation until U.S. Department of Energy reports were declassified in 1986. The disclosure triggered several studies and prompted thousands of people who lived near Hanford in the mid-1940s and 1950s to join the suit, which was filed in 1990 and 1991.

Kevin Van Wart, of Chicago, represents Hanford contractors E.I. DuPont De Nemours & Co. and General Electric Co. He said his clients are willing to pay to settle some claims of people exposed to the most radiation. Van Wart noted that Nielsen’s previous ruling – later backed by the 9th U.S. Circuit Court of Appeals – that any exposure to 40 rads or less requires speculation about whether it caused the plaintiffs’ illnesses. The vast majority of those exposed to Hanford radiation claim they were exposed to less than 40 rads. “We think any exposure to less than 40 rads should be dismissed. If people have a 5 percent chance that exposure caused their condition, we will go to court every time,” Van Wart said. “We do believe that some claims are more meritorious than others and should be settled. We will make individual offers. We will see if the plaintiffs find them appealing.”

Louise Roselle, the lead attorney for the downwinders, welcomed Van Wart’s statement about settlement offers. “Over the last 20 years, the DOE has hidden behind Mr.

Van Wart ... and the defendants. As long as they are being paid for all their expenses, why would they settle?” Roselle asked.

The attorneys on both sides argued for hours about how to place the plaintiffs into smaller, more manageable groups. They also argued about how to estimate the doses of radiation received by people who lived downwind of the production facility near the Columbia River.

Van Wart blamed the length of the case on the downwinders’ attorneys refusal to settle on dose estimates. “Eighteen years into litigation, they don’t want to commit to what their doses are,” he said. “If this court ordered them to provide the best estimate of the doses your clients received, they would comply.”

Roselle said that demand felt like “getting set up like pigs heading to slaughter. We can’t bet talking settlement on one hand” and court challenges to the methods used to determine the exposure to radiation on the other, she said. She said three attorneys have come up with three models to determine doses. Two methods are close to the model used by Van Wart. But another method, proposed by plaintiff attorney Tom Foulds, found much higher dose values, and several of the plaintiffs’ attorneys argued that they should be able to review those processes.

Nielsen set a court date later this spring to hear arguments Foulds’ method. He also implored the attorneys to work together to start putting similar cases into categories that can be handled at a single time. “We are trying to work toward a sensible way to resolve all these cases,” Nielsen said. “It’s good for you, your clients and the public to see this thing through.”

More Hanford Downwinder Claims Going to Trial

More former workers eligible for money

The *Spokesman Review* and the *Tri-City Herald* report 1/21/10; “The federal Labor Department is notifying all former workers at the Hanford nuclear reservation that they may be eligible for money if they developed cancer from radiation exposure.

The federal government has agreed to expand automatic compensation of \$150,000 and medical coverage to any Hanford worker who developed a qualifying cancer and

who worked for at least 250 days from Oct. 1, 1943 through June 30, 1972. Survivors may also file for compensation.

The action was recommended in October by a federal advisory board. Previously, only workers assigned to specific Hanford areas were eligible for compensation.

More Hanford downwinders could be going to trial to have their claims heard in a 19-year-old case. Almost 2,000 plaintiffs have pending claims, many of them asserting that past emissions of radioactive material from the Hanford nuclear reservation were carried downwind and caused cancer or other thyroid disease. Some people also believe they developed other cancers from eating contaminated fish.

On Wednesday, Judge William Fremming Nielsen of Eastern Washington District Federal Court in Spokane said that he would select 30 of the claims for hypothyroidism, or underactive thyroids, to proceed to trial as soon as October. In addition, about 32 claims filed for thyroid cancer will be considered for settlement with the help of a mediator.

Nearly a year ago Nielsen indicated that trying cases in individual trials would be too time consuming and costly. Just 10 claims have been resolved through litigation since the case was filed in 1991 and some jury decisions since have been reversed by the 9th U.S. Circuit Court of Appeals.

But Wednesday, Nielsen said that the two sides appeared to be far apart in their settlement talks, with plaintiffs and the defense disagreeing on how much radiation downwinders had been exposed to, according to attorneys at the hearing.

The defense, representing early Hanford contractors, had asked that the judge begin to randomly select cases to go to trial to break a logjam that the defense believes includes many weak claims, according to the defense's court filings. Although attorneys are representing early Hanford contractors, the U.S. government indemnified them and is responsible for costs and any judgments against the contractors.

The plaintiffs believe most of its claims are solid, contrary to the defense's portrayal, said plaintiff attorney Richard Eymann of Spokane. The case includes 636 claims for hypothyroidism that plaintiffs believe was caused by Hanford releases of radioactive iodine, which concentrates in the thyroid.

The defense and plaintiffs disagree on the method for estimating how much radiation was received. The defense relies on the Hanford Environmental Dose Reconstruction, or HEDR, prepared for DOE at Pacific Northwest National Laboratory, and concludes just five of the 636 plaintiffs with hypothyroidism claims received at least 40 rads. There is no reliable evidence of risk for hypothyroidism below 40 rads, the defense maintains.

However, some plaintiff attorneys believe the HEDR study significantly underestimates exposure and have developed a radiation estimation system that takes into account the terrain and winds to produce higher estimates.

Plaintiffs also disagree that an amount at which radiation causes no harm can be set. The thyroid cancer cases that the judge wants mediated all are for clients for which the plaintiffs and the defense have similar estimates of radiation exposure, said Kevin Van Wart, defense attorney.

The defense has made a settlement offer of \$25,000 to plaintiffs with hypothyroidism and HEDR radiation estimates of 40 rads or more. Some downwinders have accepted the offer, Van Wart said. However, none of the plaintiffs with thyroid cancer has accepted an offer of \$150,000 made to those who had HEDR radiation estimates of at least 10 rads. Of the claims that have gone to trial so far, a jury awarded a combined \$545,000 to two thyroid cancer patients.

Judge Denies Sick Woman's Motion for Speedy Trial

Karen Dorn Steele, Senior Correspondent reports in the *Spokesman Review*, 3/17/10; "A judge today denied a sick woman's motion for an expedited trial in the long-running Hanford "downwinders" lawsuits. U.S. District Court Judge William F. Nielsen said he sympathized with plaintiff Deborah Clark, who has late-stage thyroid cancer, but felt it wasn't appropriate to take her case out of sequence.

But Nielsen approved attorney Richard Eymann's motion to take a "preservation deposition" of Clark's 87-year-old mother, Betty Hiatt, over defense objections. Hiatt is expected to provide additional information about Clark's milk diet as a baby and young child.

Hanford dispersed radioactive iodine-131 into the air throughout portions of eastern Oregon and Washington during World War II and the Cold War. The iodine, discharged from a reactor making plutonium for atomic bombs, raised thyroid cancer risks for 16,000 infants and small children who drank milk from cows eating contaminated grass, a government study concluded years later.

Revelations of the emissions triggered lawsuits against the private contractors who operated Hanford, and Clark is one of about 1,600 plaintiffs. Eymann filed a motion asking for an expedited jury trial within the next five months to resolve Clark's case before she dies.

While turning down that motion, the judge on Wednesday agreed that Clark's case should be included among 52 thyroid cancer plaintiffs being selected for

mediation this year. The rest of those cases will be chosen by computer at random from sick people represented by three plaintiffs' attorneys.

In addition, 30 plaintiffs with auto-immune diseases and hypothyroidism have been randomly selected for a new trial next spring before Nielsen.

Analysis of Hanford Nuclear Reservation Historical Radioactive Releases

By: Allen B. Benson, PhD. ¹

Editors Note: ² The below documentation is based on excerpts of Dr. Benson's larger analysis (as a technical consultant) prepared for Hanford Downwinder attorney Tom Foulds during the early part of the litigation proceedings against the U.S. Department of Energy (DOE) and its Hanford contractors. Dr. Benson's evidence was accumulated to further substantiate his thesis that there is strong documentation supporting the notion that Hanford Downwinders could have creditably been seriously dosed through a direct wind-inhalation pathway from radioactive iodine absorbed on small particles flushed through the stacks of various Hanford operations. This lawsuit – originally filed in 1990-1991 – is ongoing as of this 11/10 posting. For more details on Hanford emissions see: <http://environmental-defense-institute.org/>

Hanford's 1945-54 "Hot Particle" Problem; Its Activity, Its Constituency & Evidence Supporting a Direct Human Pathway for Radioactive Iodine

The direct pathway for humans and animals to radioactive contamination is generally recognized, however it is normally considered to be via the direct inhalation of gaseous radioactive iodine... An animal example occurred in 1979. In a 1983 Pacific Northwest Laboratory study, it found that during one time-period, during the Three-Mile-Island accident, "the most probable pathway was air inhalation" for cows who had iodine-131 in their milk while essentially "not on pasture."

The following evidence supports the notion that Hanford Downwinders could have received very substantial doses of iodine radioactivity from the direct air inhalation of radioactive particles from Hanford that have absorbed radioactive iodine while being drawn through

Hanford's radiochemical processing plants. ³

Exhibit 1.

"Recent surveys by the Health Instrument Section have disclosed the presence of many small radioactive spots on ground surfaces in the Hanford T and B plant areas. Investigation has shown that representative examples of the spots when mechanically separated invariably end in a single radioactive particle. Some of these particles have an analyzed by the H.I. Methods group in 222-U building and their results show a total beta activity ranging from 0.5 uc to 1 uc." ⁴ So if a person was exposed to this radiation, they could have received over a million times the current standards. ⁵

Exhibit 2.

"A 1947 report (Mickelson, 1947) provides data on the activity of eight particles which were collected on ground surfaces near the T and B plant. The activity ranges from 0.06 to 1.2 micro-curies of total beta activity. The average activity per particle is 0.77 micro-curies of total beta activity and 0.61 nano-curies of total alpha activity. The analysis presented in (Mickelson) did not determine the half-life of the particles. About 50% of the beta activity was determined to be from cerium and 77% of the alpha activity was determined to be from plutonium." ^{6 7}

Exhibit 3.

"The work of the Technical and H.I. Departments

³ "Pathways of Iodine-131 to Milk Following the Three Mile Island Incident," by D.A. Baker, R.G. Schreckhise and J.K. Soldat, published by Pacific Northwest Laboratory, Richland, WA, June 1983, p.1.

⁴ "Preliminary Report on Existing Active Particle Hazard – 200 Area." By M.I. Mickelson, HW-7865, October 22, 1947, 3 pages. (Plutonium included in this analysis)

⁵ EN; The radioactive unit "uc" means micro-curies or 10⁻⁶ curies. Since radioactive iodine is extremely biologically toxic, current federal exposure ingested standards are in pico-curies or 10⁻¹² (a trillionth of a curie); or a million times less than a micro-curie. For ambient air radioactive exposure, the standards are in micro-curies (a thousandth of a curie).

⁶ "Airborne Particle Releases at Hanford in 1947/48," by Bernd Franke, Institute for Energy and Environmental Research, 8520 Greenwood Avenue, Takoma Park, MD, 20912, March 1986. P.1.

⁷ EN; Inhalation of alpha emitting nuclides poses significant biological risk. Less than one microcurie of plutonium (the size of a grain of pollen) will cause lung cancer and death if inhaled or ingested. "Plutonium (Pu) is an alpha emitter, and no quantity inhaled has been found to be too small to induce lung cancer in animals." [Bertell,p.24] DOE-funded experiments with beagle dogs demonstrate that inhalation of less than one microcurie of Pu-239 oxide result in an incidence of lung cancer approaching 100%; cited in Parks; Inhaled Plutonium Oxide in Dogs, Pacific Northwest Laboratory Annual Report for 1985 to the DOE Office of Energy Research, Part 1, Biological Sciences, J. F. Parks, February 1986, cited in Natural Resources Defense Council, Thomas Cochran et.al. Testimony 2/26/87.

¹ Dr. Benson authored "Hanford Radioactive Fallout, Hanford's Radioactive Iodine-131 Releases (1944-1956), Are there observable health effects?" High Impact Press, 1989, ISBN 0-935435-04-02.

² Chuck Brosious, Environmental Defense Institute edited this article based on Dr. Benson's documentation sent to EDI in 2010. Reference footnotes below preceded with "EN" refers to editors notes.

subsequently made it clear that although the large particles on which attention was focused in the earlier studies were eliminated by the fan changes, numerous smaller particles were still being emitted. This was essentially known from the measurements by F.P. Seymour in February 1945. The then assumed droplet contamination was assumed to be dispersed and diluted in the same manner as the iodine, which was then the critical contaminant. Calculations of the possible concentration of fission products at the ground (approximately 10E-10 *uc*/liter) did not attract attention as a significant hazard. Sporadic measurements of the deposition on vegetation have been made with no more than traces located.”

“Specifically, the large active particles (>0.1 μ) came from the corroded ductwork. At the present time there are numerous small particles, some of which are magnetic and therefore probably from the same source, together with ultra fine particles or droplets directly from the process vessels. Such droplets may also initially contaminate dust particles pulled through the ventilation system.”⁸

Exhibit 4.

“The H.I. Group from each Separations Area at Hanford Works has discovered on the ground and roofs of buildings surrounding the off-gas stacks, a multitude of small, but extremely contaminated particles. These particles are usually less than 0.5 μ m in diameter and contain as much as 3 *uc* of beta activity.”

“The health hazard from such a source is apparent; it was therefore necessary to determine the origin and radioactive components of these particles.”

“A size study of 111 particles, picked a random for Technical Division collection filters was made by carefully measuring them with a blood cell and microscope.”

“Individual particles were small, ranging in diameter from 0.02 μ m to 1.5 μ m.”

“The type and age of the contamination present was also determined. Typical radio-analyses indicate a cerium content of 20% - 50%, a Y [yttrium] content of 17% - 28%, a Sr [strontium] content of 3% - 10%, and small percentages of other fission products. By determining the isotopic ratio of Sr-89 and Sr-90, a spread in age of approximately 200 days was observed.”

“The reported Iodine percentage (from 2.9 to 8.9% in Table III of the referenced document) is probably low by 6 to 15% since high losses are experienced in running the analysis as outlined in Chapter III. An entirely closed system such as a calm meter bomb should have been used but none was available.”

“The radio activity of individual particles, as determined by direct count and by assaying solutions of

dissolved particles, varied widely. A range of 2.5 X 10-8 *uc* to 3.2 *uc* per particle of beta activity and from, 5 d/m to 3800 d/m [disintegrations per minute] per particle of alpha activity was found. The possibility of even hotter specks exists.” (The alpha radioactivity here ranges from 0.0023 – 1.7 nCi.)

“A study of Table III indicates a selective sorption and hold up and/or a selective vaporization occurs before the specks are ejected. The components and the percentages found are considerably different than a normal fission product mixture.”⁹

Exhibit 5

“A recent study of the long-lived fission activities in the [Hanford] 200 Area effluent gas indicated that about 60 – 80% of the fission products found on typical air filter samples had a half-life of 30 – 60 days; 30 – 40% of 275 – 300 days; and about 1 -2% of very long half-life.”^{10 11}

Exhibits 6-7-8

“As a beginning analyses of the potential consequences of Hanford’s policy to release these radioactive particles downwind, the following table gives the average radioactive particles inhaled by a standard man in the noted locations for two three month periods: January – February-March 1951 and April – May – June 1954. (7)(8)(9)

“The below table is an example of what the release of mixed fission products, including plutonium, from Hanford from 1945-54 could approximately mean: if one assumes 28 μ g of plutonium in the human lung produces lung cancer (Gofman Ref. 58), and the above table of radioactive particles in the air in Lewiston, ID, are similar to the average emitted radioactive mixed fission particles from Hanford in 1947 e.g., containing 0.61 nCi of alphas, 77% plutonium) , **then roughly one person in eleven living in Lewiston, ID in April, May, and June of 1954 should get lung cancer from the above radioactive particles inhaled.**”

⁹ “Radio-Active Particle Contamination,” by R.C. Thorburn, Health Instrument Division, Hanford Works, General Electric Company, HW-10261, June 11, 1948, pp. 3, 4,6,7,8.

¹⁰ “Radioactive Contamination in the Environs of the Hanford Works for the Period April – May – June, 1948,” by W. Singlevich, Health Instrument Division, Hanford Works, General Electric Company, HW-11333, DEL, October 15, 1948, p.14.

¹¹ EN; In Dr. Benson’s more extensive documentation (Exhibit 44-61) (Reference 45); “Terminal Status Report – Redox Contamination,” by C. R. Anderson, Process Unit Head, Metal Recovery Sub-Section, HW-32467, July 13, 1954, page 4; that states, “Radiation levels between June 28 and 29 at 5,000 mrad/hour..” The current EPA federal standard for emissions of radionuclides to the ambient air from DOE facilities shall not exceed 10 mrem/YEAR (10 CFR 61.92). In this context, “rads” (old units) = “rems” (current units of radiation exposure).

⁸ “Review of the Stack Discharge Active Particle Contamination Problem,” by H.M. Parker, Health Instrument, General Electric Company, Hanford Works, HW-9259, March 22, 1948, p. 5.

Radioactive Particles Inhaled^{12 13 14}

Location	Jan. – Feb. - Mar. 1951	Apr. – May – Jun. 1954
Richland, WA	43	149
Kennewick, WA	-	230
Benton City, WA	6	94
Walla Walla, WA	36	200
Lewiston, ID	43	340 ¹⁵
Boise, ID	23	230
Spokane, WA	29	113
Great Falls, MT	25	112
Klamath Falls, OR	9	230

Exhibit 9

“The rain sample collected at Riverland on February 23, 1948 indicated 1.25 X 10⁻² uc per liter of beta activity in a volume of 49 ml. This sample was filtered and the entire activity was confined to the filter. The half-life of this sample is greater than the expected 8 days for radio-iodine. This problem is under consideration with the problem of residual longer half-live material found in some air filters and vegetation samples.”

“To date, based on somewhat sketchy surveys, the indication is that the activity from long half-life elements in vegetation collected on the Wah’ike [sic] Plateau, Richland, and outlying areas and near the vicinity of the 100 Areas is less than 0.02 uc per kg, the limit of sensitivity of this type analysis. Further work is in progress on this problem.”¹⁶

Exhibit 10

“All instances of significant airborne contamination originating in the [Hanford] 200 Areas have been associated with the emissions of radioactive contaminants

¹² Handbook of Radioactive Nuclides, Editor Yen Wang, published by the Chemical Rubber Co., 1969, p. 898.

¹³ “Radioactive Contamination in the Environs of the Hanford Works for the Period January, February, March 1951, by H.J. Paas and W. Singlevich, Development Division Health Instrument Division, Hanford Works, General Electric Company, HW-21214, June 1, 1951, p. 46.

¹⁴ “Radioactive Contamination in the Environs of the Hanford Works for the Period April, May, June 1954, by H.J. Paas and G.E. Pilcher, Hanford Atomic Products Operation, HW-33396 DEL, November 24, 1954, pp. 47 & 49. (Table VI pg. 47 shows large releases coming out of 200-W and vicinity e.g. Redox and SX Tank Farm.)

¹⁵ EN; Benson’s more detailed documentation; Exhibit 75; HW-7865, Reference 59.

¹⁶ “Radioactive Contamination in the Environs of the Hanford Works and Vicinity for the Period, January, February, March – 1948,” by W. Singlevich, Health Instrument Division, Hanford Works, General Electric Company, Richland, WA, HW-10242, DEL, June 10, 1948, p. 11, 15-6.

from the effluent stacks. The contaminants have been defined as particle matter, Iodine, Ruthenium, and Plutonium.”

“ I. Particle Matter

“A. Problem; The occurrence of contamination in the form of discrete active particles on the ground in the separations plants was detected in late September, 1947. At the time of detection, it was thought that the phenomenon might have existed for several months. By mid-October it had been established that the carrier particles were corrosion products from black iron in the stack fan ductwork. Particles were emitted at a rate of approximately 10E7 to 10E8 particles per month/each of two plants and observed deposition was 1 to 10% of the emission. Highest observed surface concentration was 50 psf (particles per square foot) in isolated areas with activity ranging from 0.1 to 3 uc and effective half-life of about 300 days. Principle contaminants were defined as cerium, yttrium, strontium, ruthenium, and cesium in that order. (Note the alpha emitters vanished.)¹⁷

“B. Corrective Action; Soon after discovery of the condition and during the period when the defective equipment was being replaced, personnel were provided with individual respirators which were monitored after each work day. During one period 12,000 respirator surveys by Geiger counter methods revealed two contaminated masks. Numerous smaller particles continued to be emitted.”¹⁸

Exhibit 11

“In 1955, the Chief General Electric Health Physicist at Hanford for most of its early years. Dr. H.M. Parker, admitted that “direct activation of dust particles drawn through the reactor” occurs and also outlined radioactive emissions problems to be expected from radiochemical processing plants. “The operation may be schematically broken into four steps, not all of which will be used in a specific plant.”

“Step 1. Dissolution of Reactor Fuel Elements; This step leads to periodic release of the rare gas components of the fission mixture, with Xe-133 [Xenon-133] as the governing member, and of some volatile fission produced, predominantly radio-iodine’s. The controlling hazard is a

¹⁷ EN; “Radioisotope Toxicity: Significance of Chronic Administration,” by M. P. Finkel, et al.; Experiments on female mice injections of Sr-90, Y-90; states, “Three levels were used: 1.0 uc/g, which had been shown to produce a very large number of osteogenic [sic] sarcomas in this strain, 0.5 uc/g and 0.25 uc/g.” “When a single injection is given, 1.0 uc/g produced many tumors in a short time, 0.5 uc/g gave comparable results in a somewhat larger time, and 0.25 uc/g resulted in only a few more tumors than occurred in the control population, but these neoplasms [sic] appear earlier.” Pg. 466.

¹⁸ “History of Airborne Contamination and Control – 200 Areas,” by R.E. Roberts of Waste Planning and Scheduling of Production Operation, General Electric, Hanford Atomic Products Operation, Richland, WA, HW-55569 RD, April 1, 1958, p. 1.2.

function of the fuel element cooling time. Under normal operation conditions, I-133 [Iodine-133] is the significant contaminant.

“Step 2. Removal of a Specific Isotope; Either for their commercial value or because they create an in-process nuisance, one or more specific isotopes may be removed separately. Particularly if such isotopes have volatile compound forms it may be difficult to retain all the material in the system, and the release of highly active spray, evaporating to particles, is probable.

“Step 3. General Chemical Separation; Regardless of the details of the chemical separations processes utilized, it has so far proved impossible to maintain all the process materials in the system. Characteristically, fine mists or sprays of mixed fission products are released. Upon evaporation of the liquid content they form small radioactive particles of high intrinsic activity. Some of these escape through filters to the ventilation stacks.

“Step 4. Purification Stages; After removal of the bulk of the fission products, the product material, for example, plutonium, has to be purified. The vented air will contain particles rich in this product.”

Atmospheric Pollution Around Separations Plants

“The iodine problem can be wholly solved by increased cooling time. This is economically unattractive. Residual hazard arises from the small fraction normally escaping, and occasionally from mal-functioning of the absorption equipment.

“The primary particles escaping from the process have mass median diameter on the order of 0.3 to 0.5 micrometers [sic]. The emission of 10x8 to 10x2 [100,000,000 to 100] particles per day with activity on the order of 10-3 uc per particle is to be expected. Secondary particles develop in venting systems beyond the filters by attachment to inert substances, which flake off and escape. Such particles have diameters up to several hundred microns or conceivable up to several centimeters with activities up to hundreds of micro-curies. These present distinctive hazards.”¹⁹

Further on in this article the “Inhalation of Small Particles” as being one of the “principal exposure forms” is admitted.²⁰

Editors Note: It is unclear if the above information was ever submitted to the court in the Hanford Downwinder litigation.

¹⁹ “Radiation Exposure from Environmental Hazards,” by H.M. Parker, Hanford Atomic Products Operation, General Electric Company, Richland, WA, in Part IV; Radiation Protection: The Manhattan District and Beyond, Article IV-17, Vol. XIII, P/279, USA, presented in 1955, pg. 494-5.

²⁰ EN; “Radiation Exposure to People in the Environs of a Major Atomic Energy Plant,” J. W. Healy, et al., No. 114822; “In 1957, early problems with the release of iodine-131 from the [reactor fuel] dissolving step have led to the development of special removal devices so that the rate of emission has averaged **one curie per day** or less [approximately 365 curies of iodine-131 per year]. Estimated dose from drinking water (1957) 9 mrad/yr.” Current EPA drinking water standards are 4 mrem/yr.

According to the Spokesman-Review, the U.S. Justice Department has spent well over \$57 million in taxpayer money during this 19-year-old lawsuit defending Department of Energy and its Hanford contractors. Presumably, the federal government does not want the Hanford case to become a precedent for similar downwinder cases at other DOE production sites around the country.

According to Karen Dorn Steele, who has tracked the Hanford Downwinder issue for the better part of two decades independently and as a senior staff journalist for the Spokesman Review, Downwinder attorney Richard Eymann’s (the bellwether trial for the hypothyroid plaintiffs) will likely be held in the fall of 1011 rather than the spring as discovery has taken longer than expected. Two plaintiffs with thyroid cancer that the jury agreed had legitimate claims in the first downwinders’ bellwether trial have received awards. They are; Gloria Wise, awarded \$317,251, and Steve Stanton, \$227,508 (their cases withstood DOE defense appeals to the Ninth U.S. Circuit Court of Appeals). Some 52 other thyroid cancer plaintiffs have been selected for mediation this year. And that mediation is ongoing. In addition, 30 other plaintiffs with autoimmune disease will go to trial in Spokane next spring (2011) before U.S. District Court Judge Frem Nielsen.

Ms. Steele tried to verify whether Allen Benson’s analysis had or had not ever been introduced into evidence in the first trial, but wasn’t able to get a response from downwinder attorneys. However, she believes it highly doubtful that the jury ever heard this analysis because Benson - as interesting as his work is - would be highly unlikely to pass the federal court’s stringent Daubert requirements for expert witnesses (i.e. he doesn’t work in the field and isn’t a “recognized expert” in the peer-reviewed literature. If this is the case, it is tragically ironic, because (as the above analysis shows) all of Dr. Benson’s documentation is citing DOE and its contractor’s own data. How can the court justify excluding the defendants own documented data? Moreover, Dr. Benson wrote the first comprehensive book (“Hanford Radioactive Fallout”) exposing these releases.

That leaves the remainder of the more than 2,000 ‘downwinders’ who say they’ve suffered cancer and other illnesses as a result of living downwind of releases of radioactive iodine-131 from the Hanford Nuclear Reservation near the Tri-Cities, WA without of any compensation. The releases occurred during the production of plutonium for atomic bombs during World War II and nuclear bombs in the early years of the cold war. Residents of Eastern Washington, Oregon and North Idaho didn’t know about the releases of the radiation until U.S. Department of Energy reports were declassified in 1986. The disclosure triggered several studies and prompted the thousands of people who lived near Hanford in the mid-1940s and 1950s to join the suit which was filed in 1990 and 1991.²¹

For updates on the Downwinders suit posted by their lawyers see: <http://downwinders.com>

²¹ See Karen Dorn Steele’s articles at; www.SpokesmanReview.com

**SAFE ENERGY COMMUNITY TO DOE
RADWASTE COMMISSION:
STOP MAKING IT, STORE IT SAFER**

Two safe-energy advocates representing the consensus recommendations of over 160 grassroots and national organizations presented to a DOE commission today a series of recommendations about what to do with the U.S.'s growing radioactive waste problem.

"The only real solution to the radioactive waste problem is to stop making it in the first place," said **Kevin Kamps**, radioactive waste specialist at Beyond Nuclear, a Takoma Park, MD-based nuclear industry watchdog group. "For the 63,000 metric tons of commercial high-level radioactive waste that already exists in this country, an interim first step to address safety and security risks is **hardened on-site storage** wherever feasible," he added.

Hardened onsite storage – or **HOSS** – employs use of improved versions of the existing dry-cask storage technology, coupled with hardened, scattered, and sheltered placements of the dry casks at existing reactor sites.

"**Reprocessing** the fuel is certainly not an answer," added **Susan Corbett**, Chair of both Sierra Club of South Carolina, and the Nuclear Issues Activist Team of the National Sierra Club. "We oppose reprocessing of irradiated fuel because it creates a larger volume of waste, does not really reduce radioactivity, and would add to the already incalculable radioactive burden of our state," she continued.

"For too long, South Carolina has been the nation's dumping ground for nuclear waste. The people of South Carolina are not interested in supporting new missions that create more long lived radioactive wastes that will remain in our state forever. We no longer trust DOE promises for exit strategies or solutions to waste disposition. "The two presented their recommendations at the fourth full Commission meeting of the DOE's **Blue Ribbon Commission on America's Nuclear Future (the BRC)**, held in Washington, D.C. The Commission was charged by President Obama with making recommendations on the nation's radioactive waste policies. The draft report from the BRC is due in summer, 2011.

Referring to a paper developed over a 6-month process by dozens of groups and co-signed by over 160 nationally, Kamps and Corbett articulated four key radioactive waste recommendations to the BRC:

- * No reprocessing of radioactive waste ;
- * Isolation of radioactive waste from the biosphere for as long as it remains a hazard ;
- * Hardened storage and improved monitoring of the waste where it is currently stored ;
- * Stop making radioactive waste .

"The BRC will have failed in fulfilling its charter mandate to 'conduct a comprehensive review of policies for managing the back-end of the nuclear fuel cycle,' if it fails to conduct as thorough an investigation into these four principles as it has investigating options that lead to the continued production of more radioactive wastes," notes Paula Gotsch of GRAMMES: Grandmothers, Mothers and More for Energy Safety.

The document's recommendations stand in stark contrast to most industry promulgated comments heard by the BRC to date, which mostly advocate processes and technologies – like reprocessing -- which continue generating even more wastes, and aim to keep the nuclear industry operational.

"After six decades of failing to do so, we do not share the nuclear industry's or Obama Administration's optimism that either will now come up with magical techno-fix solutions to the radioactive problems that will be environmentally responsible and acceptable," says Mary Olson of the Nuclear Information and Resource Service. "When it comes to radioactive waste management, currently the nation is left only with lesser-of-evil temporary storage choices, which we provided today."

"The BRC needs to realize that there may actually BE NO 'future for nuclear power in America', because 'stop making it' is the first principle of waste management," Dave Kraft, director of Chicago-based Nuclear Energy Information Service pointed out. "Both industry and government have refused to consider investigating this option, despite credible data to the contrary," Kraft notes.

"While we all are very grateful that President Obama canceled the flawed and controversial Yucca Mt. project, we remain skeptical that the DOE's BRC will give a fair and equal hearing and analysis to the 'stop making it' option" said, Judy Treichel of the Nevada Nuclear Waste Task Force of Las Vegas. "We are here today to assert that option."

Numerous group representatives came from around the nation to attend the BRC meeting in support of the recommendations and make individual statements of their own.

After the de-funding and cancelation of the failed Yucca Mountain exploration site in 2010, President Obama simultaneously ordered DOE Secretary Dr. Stephen Chu to commission a fact-finding body to make recommendations on what the U.S. should do with its growing radioactive waste problem. In January, 2010, Dr. Chu announced formation of the Blue Ribbon Commission on America's Nuclear Future, and named Lee Hamilton and Brent Scowcroft as co-chairs of the 15 person Commission. A complete copy of the 20-page "Response to Key Questions of the BRC" and cover letter can be viewed at: <http://www.nirs.org/radwaste/>