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August 28, 1998

FOIA/PA REQUEST
Case No: 98-341
Date Rec'd: 9-2-98
Action Off: Brown
Related Case:

Freedom of Information Act Officer
Office of the Chief Information Officer
US Nuclear Regulatory Commission
Washington, DC 20555

Re: Freedom of Information Act Request

Dear Freedom of Information Act Officer:

We represen. the Board of Lake Township Trustees in Stark County, Ohio in association with the Industrial Excess Landfill Superfund Site located in Uniontown, Lake Township, Ohio (the "IEL Superfund Site). To investigate potential sources and the nature of radioactive contamination at the IEL Superfund Site on behalf of the local government of Lake Township, we request the following information:

1. All information in the possession of the US Nuclear Regulatory Commission and its predecessor entities (NRC) related to License No. 34-00508-06 issued to Goodyear Tire and Rubber Company, 142 Goodyear Boulevard, Akron, Ohio 44316 or its related or affiliated entities. By way of example and not limitation, this request includes copies of the license application form and license and any amendments, supplements, renewals, changes and modifications to the application or permit; any and all correspondence, or other communications between the NRC and Goodyear Tire and Rubber Company, its predecessors, successors, related entities and affiliates; any and all inspection, investigation, notices of violation or other reports, internal or external memoranda, data, correspondence or other documents generated by the NRC in association with the nuclear and radioactive containing or contaminated materials, source materials, byproducts, articles containing source materials or byproducts, high and low level radioactive waste, mixed radioactive and hazardous waste, any other sources of radioactivity, materials contaminated by radioactivity or other materials and substances regulated by the NRC, now or in the past, or co-regulated by the NRC and the Environmental Protection Agency (collectively referred to as "Radioactive Material") possessed, used, stored, generated, transported, managed, purchased, sold, treated, disposed or otherwise handled by the licensee; any and all reports or other documents filed with the NRC by the licensee for Radioactive Material; any

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or disposal or other handling of Radioactive Materials, by Firestone Tire and Rubber Company Akron II Plant, its predecessors, successors and related entities and affiliates. This information includes but is not limited to the types of documents discussed in #1.

8. Any and all information in the possession of the NRC related to the nature, possession, use, storage, purchase, sale, management, transportation, generation or disposal or other handling of Radioactive Materials by General Tire Company, its predecessors, successors and related entities and affiliates. This information includes but is not limited to the types of documents discussed in #1.

9. Any and all information in the possession of the NRC related to the nature, possession, use, storage, purchase, sale, management, transportation, generation or disposal or other handling of Radioactive Materials by B.F. Goodrich Company, its predecessors, successors and related entities and affiliates. This information includes but is not limited to the types of documents discussed in #1.

10. Any and all information in the possession of the NRC related to the nature, possession, use, storage, purchase, sale, generation, transportation or disposal or other handling of Radioactive Materials by Seiberling Company, its predecessors, successors and related entities and affiliates. This information includes but is not limited to the types of documents discussed in #1.

11. Any and all information in the possession of the NRC related to the nature, possession, use, storage, generation, treatment, purchase, sale, management, transportation, disposal or other handling of Radioactive Material by any manufacturing, defense or research and development facilities in Stark, Portage, Summit, Medina, Mahoning, Trumbull, Tuscarawas, Wayne, Holmes, Carroll, Columbiana Counties in Ohio from 1960 to 1980. This information includes but is not limited to the types of documents discussed in #1.

12. Any and all information in the possession of the NRC related to the nature, generation, transportation, treatment and disposal of high level and low level radioactive waste, mixed radioactive and hazardous waste and other Radioactive Materials by manufacturing, defense or research and development facilities in Stark, Portage, Summit, Medina, Mahoning, Trumbull, Tuscarawas, Wayne, Holmes, Carroll and Columbiana Counties in Ohio from 1960 to 1980.

13. Any and all information in the possession of the NRC related to the nature, storage, generation, management, transportation, treatment, disposal or other handling of high and low level radioactive waste, mixed radioactive and

hazardous waste and other Radioactive Materials by the Ravenna Arsenal and other military facilities operated by the United States in Stark, Portage, Summit, Medina, Mahoning, Trumbull, Tuscarawas, Wayne, Holmes, Carroll, Columbiana Counties in the State of Ohio from 1960 to 1980. This information includes but is not limited to the types of documents listed in #1.

14. Any and all information in the possession of the NRC related to the Industrial Excess Landfill located in Uniontown, Lake Township, Stark County, Ohio. By way of example and not limitation, the information requested includes any license application forms and license to receive, treat or dispose of Radioactive Materials and any amendments, supplements, renewals, changes and modification to the application or permit; any and all records, databases, reports, memoranda, notes and any other documentation of the transportation to or disposal of Radioactive Material at the Industrial Excess Landfill from 1955 to 1980; any and all information identifying the persons and entities that may have transported or disposed of Radioactive Materials at the Industrial Excess Landfill; any and all documents regarding the nature and quantity of Radioactive Materials disposed of or transported to the Industrial Excess Landfill; the identity of any and all persons with personal knowledge of the transportation to, receipt of or disposal of Radioactive Materials at the Industrial Excess Landfill.

15. Any and all guidance documents, handbooks or other documents of the NRC related to the transportation and disposal of Radioactive Material from 1955 to 1980.

Request for Waiver of Fees. Pursuant to 10 CFR §9.41 the Lake Township Board of Trustees requests a waiver of fees for searching for, reviewing and duplicating any agency records. This request for information is not made for commercial purposes, but rather, to gather facts necessary to ensure that the health and safety of the citizens of Lake Township is protected. The Board of Township Trustees has received reports of night dumping of wastes from rubber company trucks placarded with radioactivity signs at the Industrial Excess Landfill Superfund Site. Groundwater samples indicate that high levels of radioactivity exist at various points of the Superfund Site. The Board of Township Trustees seeks the requested information to investigate the reports of dumping, determine what people and entities may have had Radioactive Materials in their possession in the area served by the Industrial Excess Landfill and document the proper disposal of known Radioactive Materials. Further, without more detailed information regarding the type of Radioactive Material that was dumped, a proper investigation and remedy of the Industrial Excess Landfill may not be designed.

Our firm will review the information received from the NRC to identify the persons and entities that had Radioactive Materials in their possession and potentially disposed of Radioactive Material or mixed waste at the Site. The Township is currently seeking Technical Assistance under the EPA's TOSC program from the Hazardous Materials Research Center at Michigan State University. Technical information may be forwarded to the Center for review. Much public concern has been expressed over this issue for many years. To date, despite citizens' requests, the EPA has not investigated it. Once the Board of Township Trustees and their representatives complete their review of the data and communicated its findings to the EPA and the public, public access to the information will be provided; however, the cost to copy the information may be charged to defray the Township's administrative expenses.

The disclosure of the information in the NRC's records is not in the commercial interest of the Lake Township Board of Trustees. Further, the disclosure of the information is in the public interest because it is likely to contribute significantly to public understanding of the regulation and control of Radioactive Material and radioactive waste by the NRC and identify potential sources and types of radioactive contamination that may have been disposed at the Industrial Excess Landfill Superfund Site. Such information will enable the EPA and the PRPs to design a proper investigation and remedy of the Site. Accordingly, pursuant to 10 CFR §9.41(c) and (d), the NRC should waive the fees for this information request.

If you have any questions or require any additional information to process this request, please feel free to contact me at the telephone number listed above.

Very truly yours,

Edda Sara Post

Edda Sara Post

ESP/jmp

cc: David Herbert, Esq.
Frank J Cumberland, Esq.

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SAMPLES COLLECTED AROUND
AND IN THE VICINITY OF GOODYEAR

12 WATER SAMPLES WERE COLLECTED AS FOLLOWS:

A. 2 WELLS WERE SAMPLED ON THE GOODYEAR PROPERTY

B. 8 RESIDENCES WERE SAMPLED AROUND THE GOODYEAR SITE

C. ONE WELL SAMPLED ON A CHURCH PROPERTY ADJOINING THE GOODYEAR SITE

D. ONE LAKE WATER SAMPLE TAKEN FROM WING FOOT LAKE

11 SOIL/SEDIMENT SAMPLES TAKEN AS FOLLOWS:

A. 2 OUTFALL SAMPLES COLLECTED, WATER COLLECTED FROM BUILDING RUN OFF IS DISCHARGED THROUGH THIS PIPE INTO WING FOOT LAKE.

B. 2 LEACH FIELD SAMPLES COLLECTED, THIS SEWER W LINE WAS CONTAMINATED AND ULTIMATELY REMOVED

C. 2 SPILLWAY SAMPLES COLLECTED, THIS IS THE POINT WHERE THE LAKE DISCHARGES INTO A CREEK.

D. 5 LAKE BED SEDIMENT SAMPLES WERE COLLECTED FROM VARIOUS PARTS OF THE LAKE.

A/1

Your neighborhood is contaminated with toxic chemicals, and a lot of people are sick. Either nothing is being done at all, or you and your neighbors aren't sure the cleanup is protecting your health. You need help and you need information.....

THE AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

Sounds like just what you need, doesn't it?

It should have been: ATSDR is a federal health agency which was designed by Congress to keep one goal above all others at toxic waste sites,

THE PROTECTION OF HUMAN HEALTH.

ATSDR is authorized to investigate the connections between toxic exposure and disease, to recommend protective measures, and to provide treatment.

In fact, ATSDR isn't protecting you, and it won't until major changes are made.*

What should be a medical agency functions as a public relations organization, providing false reassurance in the form of assessments, testing, and studies deliberately set up to find nothing. ATSDR has more power than it's using, and it should assert its ability to set up environmental clinics, to define toxic substances, to recognize the deadly interactions of toxics, and to demand financial compensation by polluters. ATSDR's budget must not continue to be subject to EPA approval. As it is, EPA controls ATSDR's budget, so ATSDR is just EPA's cheerleader. Cleanup decisions are based on technical, political, and economic considerations, not on public health protection.

If you've dealt with this agency, we don't need to tell you.

You also know you don't stand a chance of reforming ATSDR by yourself. As part of a carefully coordinated nationwide coalition, however, you can help make ATSDR the agency it should have been all along.

We're determined to make it right, or make it disappear.

Join us to give health issues top priority. Our strategy is intense and demanding: we have only till June 1, and there's a lot of work all around. We intend to give this campaign our best, for the sake of our communities and for yours, too. If this doesn't work, we'll regroup and consider pushing to abolish ATSDR, rather than letting it continue as a cruel joke on victims of toxics. On the other side of this sheet is the name of a coalition member who'd like to discuss our plan with your group as soon as possible.

* For background on ATSDR and its failure to help contaminated communities, read ***Inconclusive by Design: Waste, Fraud and Abuse in Federal Health Research***, $15 from Environmental Health Network, Great Bridge Station, P.O.Box 16267, Chesapeake, VA 23328-6267

A/3

September 13, 1993

We will also ask employees within the agencies to come forward and tell the truth about what is going on inside. We will offer "whistleblower" protection to these brave individuals. We know that there are sincere, hardworking people who want to do a good job but cannot under the circumstances.

If you are still not convinced that it is time to take action, look at the following two communities and decide if anything has changed:

o **Minden, West Virginia** - In June 1993 ATSDR went to this small, rural community to release a long awaited health assessment. Not only were the agency personnel inept, misleading and insulting to the community but the assessment presented was of incredibly poor quality. The report was full of blatant errors. For instance, ATSDR included an independent gynecological study in the report. The only problem was that the study was for another town three hundred miles from Minden. When the community questioned why this study was included, agency officials said "Someone must have misrepresented the data." If you can't believe this you can order a copy of the video tape EHN took of the meeting (send $6.00 for the cost of the tape and postage). If YOU have a video tape of an ATSDR meeting in your town, send it to us and we will get it out to the public.

o **Kellogg, Idaho** - numerous meetings have been held in this community with ATSDR officials, including with the agency's assistant director, Dr. Barry Johnson. Initial meetings led the local citizens group to believe there were hopeful signs of progress, assistance and cooperation. The community asked for pro-active health interventions: a screening program with real testing for families who are experiencing lead and other toxic related problems; a school nurse program; a workshop with grassroots representation for local physicians on the toxics health-related problems specific to their site; and a cohort (a listing) established of all children who were exposed and tested during the 1970's. As of this date, the school nurse program is in question, the physicians workshop will not include grassroots representation, the community members are wondering about the progress and protocol of the cohort and Dr. Johnson denies any need for an independent screening program for exposed families, claiming the local doctors can provide all the medical care needed.

The time for meeting with ATSDR is over! We have been playing by their rules much too long and as a result families are suffering. Only YOU can continue to put pressure on ATSDR to meet its mandates and mission. Only YOU can make sure the work ATSDR does in your community and others is beneficial not detrimental.. Only YOU can make Congress take notice. By "barring the door" to ATSDR you can take control of what is happening in your community.
come join us and "Blow the Whistle."

Sincerely,

Linda Price-King

Linda Price-King
Executive Director

" FOR WANT OF A NAIL ... THE RIDER WAS LOST " :
A BIG FLAG OF WARNING,
FROM
THE RADIATION ISSUE

by John W. Gofman, M.D., Ph.D., November 1989

We are now only a few months away from the 20th anniversary of Earth Day. As the environmental movement here and abroad is gaining strength (in the Soviet Union, too), it is appropriate to consider certain lessons -- of great importance to the entire movement -- which can be uniquely illuminated by the nuclear energy controversy.

• -- THE BURDEN OF PROOF -- •

Industrialization and the introduction of popular consumer-items, like cars and radios, proceeded apace before it became evident that serious thought should be given to injection into the environment of legions of physical, chemical, and agricultural pollutants -- ranging from radiation, asbestos, lead, and mercury, to precursors of sulfuric and nitric acids, pesticides, dioxin, chloro-fluorocarbons, and more ... much more.

As concern about pollution ("dumping") began to grow, the response with respect to each type of pollutant was: "Show us the harm, before you ask us to restrict anything." For instance, we spread lead from leaded gasoline everywhere before there was evidence of its damage to the central nervous system, the kidneys, etc. Recently, the Center for Disease Control acknowledged that long-term effects "are increasingly being observed ... with lead levels much lower than previously believed harmful" (Associated Press, 8/19/88).

Still resisting the great environmental awareness in the public today is a very influential group of Special Interests. These Special Interests say that neither we nor the Third World should waste resources preventing environmental pollution by any agent whose harm is not yet proven. They insist that the burden of proof is on those who think such measures are necessary.

Special Interests, citing "scientific uncertainties," come close to denying that pollution hurts anything at all -- and the denials are particularly vehement with respect to hurting HUMAN HEALTH.

Along with the denials, the Special Interests predict that the result will be DISASTER for everyone, if the so-called extremists prevail: Lower standards of living, unemployment, an end to human progress, famines, perpetual poverty for the Third World. In short, they say "the sky will fall." (At the same time, they try to pin the "Chicken Little" label on environmentalists!)

• -- AREN'T WE LIVING LONGER ? -- •

The Chicken Little accusation against environmentalists is often accompanied by a non-sequitur: "Life expectancy is LONGER in the so-called polluted world than it was in the past." And it certainly SHOULD be longer. After decades of progress in sanitation and in controlling infectious diseases, and after decades of advances in medical knowledge, if life expectancy were still the SAME, it would mean that these advances in health were just barely able to balance new forces which were tending to SHORTEN life expectancy.

The fact that life expectancy has grown in the presence of pollution means nothing. It might have grown a lot MORE

"We take the view that if you can't stand the pollution, you should stay out of the environment."

in the ABSENCE of pollution. It is not possible for anyone to know what life expectancy would be today, if pollution were absent. Therefore, no one should suggest that pollution is harmless to human health by referring to average life expectancy. Moreover, it would be a mistake to regard good health and years alive as the same thing. Clearly they are not identical. We ask each other, "How's your health?", not "Are you still alive?"

I think it is fair to say that no one can measure the aggregate impact of pollution on human health -- and as for its possible effects on the central nervous system (including mental acuity and irrational behavior), the absence of information is just about total.

So, the central question is: What is the proper approach to pollution in the ABSENCE of solid health data on toxicity and possible safe doses, for each of 10,000 or more different pollutants and their interactions?

• -- A SUGGESTED MAJOR PRINCIPLE -- •

One approach can be stated as the no-dumping principle: No one has any right whatever to dump any industrial or personal waste-products into any part of the commons or into any kind of personal property. The principle does not require demonstration of potential HARM from such dumping. (Personal property includes a person's own body, of course, as well as external possessions, and the "commons" includes whatever is publicly owned in common -- the air we breathe and the atmosphere beyond, the waters of the planet, including sub-surface aquifers, and public lands.)

Where might we be now, if the no-dumping principle had been in full force 100 years ago?

Industry's development would have occurred along totally different lines. Industrial processes would have been designed to produce as little waste as possible, and with

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Federal Agencies Established To Aid Communities At Risk

has a broad mission to monitor public health and conduct educational activities. It has become involved in environmental health issues through its Center for Environmental Health from the time of discovery of Love Canal and other early toxic sites.

Congress charged the Agency for Toxic Substances and Disease Registry (ATSDR), in the Comprehensive Environmental Response, Compensation, and Liability Act (Superfund), with assuming a principal role in identifying health problems related to the release of hazardous substances into the environment and to establish public health strategies to prevent or mitigate such problems. ATSDR tasks include conducting "health assessments" of all Superfund waste sites, developing toxicological profiles of the hazardous substances detected at the sites, establishing registries of people exposed to hazardous substances, and educating the public and professionals in regard to hazardous substances. The agency's current annual budget is $54.5 million.

During the 1980's first CDC, and then ATSDR, were cast in the leading federal role for the investigation of public health effects of toxic pollution. From the standpoint of the communities who were investigated, the first ten years of environmental health efforts by these agencies have been a severe disappointment.

Two fundamentally different tasks may be subsumed under the heading of "environmental health." One of the tasks, a traditional role of public health professionals, is to utilize available scientific data to protect the public's health. In this role, it is the duty of the scientist to ensure that toxic exposures are reduced below an adequate margin of safety, so as to prevent harm to exposed populations. The second task is pure research -- advancing the state of science itself. In this role, it is the job of public health professionals to devise new methods of studying people and populations, in order to assess the extent of damage that toxic chemicals inflict on health.

So far, due to the inapplicability of many assessment techniques previously used in other public health contexts, the science of assessing how much harm is done to local populations from pollution sources is fairly weak, and frequently incapable of drawing scientifically defensible conclusions.

Unfortunately, our federal public health officials have often erred by confusing these two tasks. As a result, the many predictably inconclusive health assessments and studies in local communities have been allowed to misinform public decisions regarding precautionary health protection measures, i.e. to prevent and even discourage appropriate action from being taken to reduce toxic exposures.

The remainder of this report will review the efforts of the federal agencies, and make recommendations for changes to ensure that the next ten years of federal environmental health programs are more viable.

Chapter Two:

Historical Background on the Federal Environmental Health Agencies

Public Demand for Expert Assistance

In case after case, otherwise inexplicable clusters of illness have emerged around toxic sites. Neighborhoods have suffered horrific epidemics of miscarriages, birth defects, and cancers as well as respiratory disease, skin disease, and depressed immune systems. Not every person who gets sick near a hazardous waste site gets sick *because of* the waste in the site. Yet very often there is strong circumstantial evidence to corroborate residents' beliefs that illnesses derive from toxic exposures.

Connecting toxic pollution with specific outbreaks of illness is scientifically difficult and politically charged. In an ironic turning of the tables, sick people residing near toxic waste sites are often treated by local officials as if they are mere trouble-makers or publicity hounds, or at best, as victims of randomly occurring illness who seek to pin the blame on the nearest target. Not surprisingly, the victims at these sites often look to public health experts to vindicate their suspicions of a causal link between illnesses and toxic sites, and to provide authoritative recommendations that will result in exposure reduction measures such as relocation of exposed persons.

Thus, cross-linked with the scientific debate regarding causation of the health problems from the sites are separate issues regarding elimination of exposures and shouldering the costs. While we may never know conclusively in many toxic-saturated neighborhoods whose illnesses were and were not caused by the chemical-laden environment, other public health questions demand immediate answers: Should or will local residents be relocated away from the sites? Is an alternative water supply needed? Are extra remediation measures needed to curtail exposures? Who will pay for such measures? Reasonable public health precautions may require additional steps. By law, the costs are imposed on the parties who dumped the wastes. Therefore, the companies who dumped wastes in Superfund sites have a strong interest in minimizing risk estimates and thereby containing their corresponding costs.

It is within this sensitive and politically charged context that Congress asked federal public health agencies to investigate environmental health concerns. Congress charged two federal agencies with investigating the health effects of toxic chemicals in the environment. The Centers for Disease Control (CDC)

Chemically Induced Illness Cont. from page 10

In addition, these "pioneer" physicians must be accorded respect for their role in helping to determine what is happening to the communities and patients they are attempting to help.

Once Diagnosed, What Then?

Finding a correct diagnosis and treatment is a journey that is frustrating and often expensive for a person suffering from chemical sensitivity or environmental illness. After finding a doctor who can help, the next step is to find a way to pay for treatment. Ongoing treatment, if needed, can be costly and, if not covered by insurance, will often be out of reach for most middle-income persons. Low-income individuals in rural communities — who often live in the areas hit hardest by polluting industries — have the least opportunities available to them. The constraints of our health care system place many middle to low-income families in a cycle of chronic health problems from which they cannot escape.

Psychological Considerations

Communities do not just suffer from physical problems due to exposure. There are social and psychological considerations that are not being addressed by any public or private agency.

According to Steven Kroll-Smith, a leading sociologist from Pennsylvania State University and author of the *The Real Disaster is Above Ground*, [redacted] These levels are frequently greater and exist for longer periods of time than the stress and social disruption following natural calamities.[3]

In communities facing natural disaster, relief is usually immediately available. Natural disaster victims are able to pick up and start over again. There is an end to the fear of being harmed. In a community facing contamination and health problems, [redacted] Nor is financial or psychological support available to the community as it seeks to recover from man-made disaster. In fact, [redacted]

Our federal and state health agencies have become, in the words of Dr. David Ozonoff, of Boston University School of Public Health, "Departments of Public Reassurance." These agencies should take a leading role in helping to educate physicians and the lay public on the subject of toxic hazards. However, we have found time after time they have either ignored problems facing communities or they have deliberately aided the industry that is causing the problem. Their standard approach has been to err on the side of industry rather than on the side of public health.

Obtaining Justice

Finally, after traveling down the often frustrating road of the medical, insurance, and governmental systems, a person or community may choose — if they want to obtain justice — to tackle the confusing world of victims compensation, toxic torts, personal injury, and workers' compensation, in the courts.

Like the health care profession, the legal profession is suffering from a lack of knowledge and tools to truly help those who have been injured. There are few expert attorneys who have the knowledge and the resources to take on a toxic tort or personal injury case. Proving cause and effect in the courts is difficult. [redacted]

Considerations for clients and attorneys choosing to pursue legal remediation of grievances include:

- Creative case presentation by the attorney, including compensation asked for and the expert witnesses chosen, is important.
- Candid communication between attorney and client as to what is possible to achieve from a lawsuit and what is not, is important.
- Clients must be prepared to provide depositions, and attorneys must realize that chemical exposure victims are often unable to hold up under the pressure and length of some types of depositions.
- Clients should not assume that the attorney has a complete understanding of their personal circumstances and what they will need in order to live a full productive life. This is especially true in class action suits.
- Also, a judge or jury cannot possibly understand the physical, social, and psychological impacts to a community suffering from chemical exposures.
- Judges and juries must be educated as much as possible in *plain* language, and not dazzled exclusively by expert witnesses. The battle of the experts has always been won by industry.
- Play by a new set of rules that includes the wisdom of the client, community organizing or political pressure, and knowledge of the subject itself.

Summary

The impact of chemicals on human health has become an issue that can no longer be ignored or minimized. The cost to our society is too great. Creative and innovative approaches are needed to solve the problems surrounding chemical exposure so that society will have the chance to heal and move forward.

The bottom line is that true pollution prevention must occur at the source; i.e., industry must not be allowed to create or emit chemicals that will harm human life or the environment that supports us. In the meantime, medical and legal communities face the challenge to develop new and effective methods of protecting innocent people from the man-made disaster — toxic pollution.

Linda King is the Director and founder of the Environmental Health Network, Inc., a non-profit 501-C3 national organization that gives organizing, technical and networking assistance to workers, communities, primary care physicians and attorneys in the area of environmental health issues. If you would like further information on the services that are available to both professionals and communities on a variety of subjects or if you would like a copy of the quarterly newsletter, Profiles on Environmental Health, *write or call EHN, P.O. Box 1628, Harvey, LA 70058; 504-362-6574.*

[1] *The Global Ecology Handbook: What You Can Do About the Environmental Crisis*, The Global Tomorrow Coalition, 1990, Beacon Press, Boston, pp. 246.

[2] Ibid.

[3] Castleman, Barry I., ScD, and Grace E. Ziem, MD, DrPH, "Corporate Influence on Threshold Limit Values," *American Journal of Industrial Medicine* 13:531-559 (1988)

[4] *Webster's Ninth New Collegiate Dictionary*

Unbelievably, no data are available on the toxic effects of 79 percent of all chemicals, and complete data exist for only 2 percent.[2] In other words, most chemicals are disseminated for use with their toxicity potential either unknown or clouded by the manufacturer. Out of the thousands of chemicals manufactured, only *seven* chemicals have been set by the Environmental Protection Agency (EPA) as *carcinogenic* (cancer-causing). These seven chemicals are *still* being manufactured and released into our environment.

Many chemicals are referred to as *probable* or *suspected* carcinogens, mutagens, or teratogens. But, conclusive proof of their toxicity remains elusive due to the elaborate maneuvering of manufacturers to discredit claims against their products.

Occasionally, based upon the overwhelming evidence of toxic threat to the environment or health, a chemical is banned for use in the United States. But ususally, as in the case of DDT for example, manufacturing continues. Because our laws don't prohibit shipment to other countries, the poisons are then sold to developing nations. Not only is this policy contributing to environmental and human degradation in these countries, but it has instigated what is referred to, in the case of pesticides, as the *Circle of Poison*: the pesticide is used on crops which are then exported back to the United States, pesticide residue intact, to be ingested by unsuspecting consumers.

"Safe Exposure Levels?"

Safe exposure levels have been set for approximately 600 chemicals by the American Conference of Government Industrial Hygienists. However, the established scientific view of studying one chemical and its effect on the body while trying to set limits is proving to be ineffective in establishing true body burden levels. We live and work in chemical stews, yet we continue to rely on limited toxicological information and faulty Threshold Limit Values (TLV's) to determine how much of a certain chemical we can tolerate. Scientists do not know how these chemicals affect the body in mixtures. They also do not know the effect on the body from long-term exposure to small amounts. Science does not, for the most part, base its statistical data on those in the population more susceptible to adverse effects by reason of weight, age, gender, genetic background, or medical condition. Research by Dr. Barry Castleman and Grace Ziem, M.D.[3], shows that science has based its TLVs on studies researched and paid for by industry. And, TLVs have been based on a male worker of average weight, on the job eight hours a day, five days a week. Yet the Environmental Protection Agency (EPA) and Agency for Toxic Substances and Disease Registry (ATSDR) continue to permit and regulate facilities based on this data, and determine community exposure threats by those faulty formulas.

Health Effects of Chemical Exposure

What *are* the proven and suspected effects on human health from exposure to toxic chemicals?

In addition to causing cancer, birth defects, and/or genetic mutations, chemical exposure is thought to cause or exacerbate a wide range of symptoms that doctors find hard to diagnose and treat. Symptoms that range from rashes and diarrhea, to loss of motor skills and memory, to the extreme of not being able to function in every-day

(EI) [illegible]

These illnesses have been known to start either from a single acute exposure or from many low-level long-term exposures. (See article, page12, *Deadly Deceit* for information on the implications of radiation exposure on the immune system.)

The average chemically-ill patient sees at least 10 physicians before one recognizes there might be a possibility of chemical exposure. Why is the diagnostic process so circuitous?

The Medical Community at Odds

The National Academy of Sciences Institute of Medicine released a report showing that most primary care physicians are inadequately trained to recognize and treat illnesses that stem from [illegible] environments at work or in the [illegible] school. [illegible] medical schools [illegible] this deficiency has been recognized for many years, yet revising curriculums has not been attempted overall. The result is that still another generation of doctors will see patients with [illegible] patterns that, because they don't fit into textbook theories, will not be readily identified or treated. A conservative estimate is that by the year 2000, there will be a two-fold increase of those needing specific help for chemically-induced illnesses. The medical profession is not prepared for this demand.

This slowness in recognizing the significance of enviromental illness is due, in part, to the fact that medical communities are warring over who has the right answers to environmental health issues. The war rages between those doctors attempting to diagnose and treat patients exhibiting the symptoms mentioned earlier, and those physicians and scientists who take a more conservative, "scientific" approach to patient problems.

Cooperation Needed

Neither group has all the answers. The science of identifying and treating EI is in its infancy stage and the many evolving issues can only be solved through cooperation between these medical communities.

One of the areas in which cooperation is essential is in the field of *epidemiology* — the scientific study of "incidence, distribution, and control of disease in a population". Epidemiology has become a clumsy dinosaur in helping communities and workers understand the health problems they are facing. Pure science has not kept up with the realities of the average contaminated community or exposed worker.

Primary care physicians, who *are* experienced in recognizing exposure-related problems in their patients, have much to offer the epidemiologist or scientist who is looking at an exposed community. There is nothing to replace the hands-on experience of seeing patients on a daily basis and recognizing the common threads that run through each separate case. Epidemiology, by the vary nature of how it is currently implemented, will be inconclusive in its study of a contaminated community. According to Dr. Marvin Legator of the University of Texas Medical School in Galveston, "Out of 120 studies completed by CDC and the Agency for Toxic Substances and Disease Registry (ATSDR), all were found to be inconclusive in linking health problems with contamination."

A new science must be born from several disciplines and professions in order to see the true picture of a contaminated community. Primary care physicians must be educated to recognize these problems.

Chemically Induced Illness, cont. on page 18

Fission products are also getting out by INTENTION: The so-called "permissible" releases.

Today, even scientists in the very heart of the radiation community are finally warning that ionizing radiation is about 11 times more carcinogenic than they previously admitted (and my independent analysis shows the hazard is worse than THAT). Nonetheless, the Nuclear Regulatory Commission proposes to designate certain low-level waste "below regulatory concern," and to let it go straight into your local dump. And accumulate there. N.R.C. admits some of it may get into people via air and water, but claims the cancer-hazard won't exceed "permissible" rates like 1 case per million people. Such proposals, like all other "permissible" radioactive releases to the environment, are based on denying the true toxicity, and using dubious data on transport in the environment, and promoting the doctrine that it's morally "acceptable" to cut our own expenses by contaminating the planet for future generations.

With that kind of moral code, I see no barrier against steps toward the following scenario: You have a nuclear facility with vents and pipes for the "permissible emission-levels" to the environment. Each exit is monitored by a meter whose threshold for detection can be set at various levels. If you design enough vents and set the detection-threshold high enough, you could release up to 100% of your radioactive poisons — the "whole ball of wax" — and still produce a monitoring record which says you released ZERO. When would people find out?

If the nuclear community claims that releases from nuclear power plants cause an average dose below a millirem per year, or that radioactive poisons will be contained to 1 part per million or whatever, deep skepticism is the APPROPRIATE response. It's been earned.

11 • **"So your opposition to reviving nuclear power is based on distrust of the industry?"**

The very NATURE of nuclear power makes it unacceptable, even under a better moral code. I oppose it because it creates astronomical quantities of radioactive poisons which will remain toxic for hundreds and sometimes thousands of years. These poisons cannot be reduced, they cannot be detoxified, they cannot be recycled, and they are not biodegradable. They decay at their own immutable rates. Even when they are contained, they cannot be "disposed of" at all — they can only be moved from one location to another. Preferably by robots, since the powerful gamma rays from such wastes penetrate right through their containers.

Ionizing radiation, which is the hazard from these poisons, is definitely one cause of heritable genetic mutations and chromosome injuries. And when exposures occur after conception, in utero, one of the proven hazards is mental retardation.

Furthermore, ionizing radiation is not just one entry on a long list of SUSPECTED causes of human cancer — it is one of the few PROVEN causes. In fact, it may be the only one where proof now exists that there is no harmless threshold dose or dose-rate. Every bit of exposure adds to the rate of real human misery for sure.

So I have to regard nuclear power as a loony, demented choice, and a real crime against all our descendants too. I've said enough.

12 • **"So it would be fair for me to report that you differ with a number of environmentalists who are saying perhaps we ought to give nuclear power another chance, because of the greenhouse effect?"**

That suggestion amounts to replacing one outrage by another: The menace of fossil fuels by the menace of nuclear power. It's ethically bankrupt. That's why I said at the beginning that changes are needed somewhere in the environmental movement if we want to achieve acceptable energy sources.

Weak people pose a hazard which extends far beyond the energy-issue. Instead of fighting to establish the no-dumping principle, they deny it. By supporting the doctrine of "permissible dumping," they have reduced their fellow citizens to living dose-meters ("excess cancer is occurring here") and to pitiable beggars pleading to be less dumped upon, as they face squads of attorneys and scientists lavishly funded by the polluters and their friends in government. The doctrine of "permissible dumping" means "the fix is in" ... in FAVOR of poisoning the planet.

13 • **"Do you have an explanation for what you think is their bad behavior?"**

Back in 1957, my own position on dumping was shallow and shameful too. Everyone can improve! But in some circles, it's considered "bad behavior" to talk about ethics. Preachy, shrill, and arrogant.

I'm amazed how people are manipulated by the myth that goodwill and humility require everyone to say, "Your principles are just as good as mine, of course. It's merely a matter of opinion." That's too much humility. It's a humility which is equivalent to thinking that maybe Nazi, Stalinist, and Khmer Rouge principles are as good as any others, that there is no higher law, no way to judge right and wrong, no inalienable human rights.

People who are too willing to compromise a good principle are definitely NOT showing goodwill to others, in my opinion. Just the contrary. But as they quietly sell-out your rights, they will praise themselves for being "reasonable."

I participated in the first Earth Day, 1970, and proposed some strategies for stopping the nuclear power juggernaut. There were 1,000 nuclear plants planned then for the U.S. alone! I proposed a 5-year moratorium on any new licenses, so that independent people could evaluate the dangers. For several years, many environmental groups said the proposal was too extreme. Imagine. It was so MILD.

All!

The Law of CONCENTRATED BENEFIT over DIFFUSE INJURY

by John W. Gofman and Egan O'Connor, November 1993

The law of Concentrated Benefit over Diffuse Injury can be stated as follows:

A small, determined group, working energetically for its own narrow interests, can almost always impose an injustice upon a vastly larger group, provided that the larger group believes that the injury is "hypothetical," or distant-in-the-future, or real-but-small relative to the real-and-large cost of preventing it.

1 • The Surprising Aspect of This Law

Many scholars have written about this extremely important axiom before --- it is not original with us. The fact that narrow special interests are always at work for their own benefit AT THE EXPENSE OF OTHERS is not at all surprising, given human nature. And it is not surprising that the victims select what appears to be the strategy of least cost to themselves.

The surprising aspect is the failure of so many victims --- especially in peaceful democracies --- to appreciate the AGGREGATE consequences which inevitably accrue, when each small injustice has such a high chance of prevailing.

2 • The Real Scope of the Injury

We regard Concentrated Benefit as the most harmful law of all humanity. Is this correct?

The terrible feature of this law is that each incremental injustice has a very high chance of prevailing. So, even when new injuries or injustices truly are small, the aggregate abuse can accumulate to tragic proportions after the axiom of Concentrated Benefit has operated on behalf of various narrow interests again ... and again ... and again.

We often wonder at the vast abuse which the general public has failed to prevent: Tyrannies, wars, genocides, mass starvations, proliferation of nuclear weapons, intimidation by well-armed international and local thugs, corrupted democracies, corrupted markets, massive thefts via inflation, inadequate schools, unnecessary poverty, destruction of wildlife, and gross pollution, to name a few.

Why do people tolerate this severe abuse, when they so vastly outnumber the few beneficiaries?

The main explanation, in our opinion, is the operation of Concentrated Benefit over Diffuse Injury, insidiously and incessantly. By the time people think, "We're just not going to take this anymore," the costs and personal dangers of reversing the abuse have usually grown too. Moreover, there is no inherent limit to the scope and number of attempted abuses, whereas citizens have inherently limited resources to resist.

3 • Pollution Fights: What Every Activist Soon Learns

Narrow, special interests can prevail via government force, via direct force, or via deceit. Direct force is used by gangs

Malcolm "Mal" Hancock

and tyrants, but polluters achieve their aims "peacefully" by using both deceit and the force of government on their behalf.

This essay explores some strategies in the environmental movement toward the law of Concentrated Benefit --- with emphasis on the problem of pollution at LOW levels.

The axiom of Concentrated Benefit over Diffuse Injury accounts for the current promotion of a "de minimis" policy toward nuclear (and other) pollution. A de minimis policy asserts that society should not concern itself with trivia. (Latin: De minimis non curat lex. The law does not concern itself with trifles.) A de minimis policy toward POLLUTION asserts that poisonous discharges and human exposures below a certain level should be treated as non-existent --- because their consequences are allegedly trivial.

Trivial. That is the essence of the axiom. Triumph for each injustice is virtually assured if the advocates succeed in presenting it as trivial.

When polluters and their agents accuse citizens who oppose them ("activists") of being Chicken Littles and hysterics and ignorant extremists, the polluters are working for a public perception that the injury is trivial.

And because the general public can not afford to do battle against TRIVIAL injustices, citizen activists against pollution know that their chances of prevailing are improved if they can show that the pollution constitutes a calamity for the community. Anyone who has been an activist for a year has learned how the axiom of Concentrated Benefit over Diffuse Injury "demands" proof of a calamity.

4 • The Meaning of "No Safe Dose"

As a result of the axiom, we receive appeals again and again from citizen-groups who need an expert to swear that nuclear pollution in their locality is (or will be) a calamity. And since we are well known for stating that human evidence proves, "There is no safe dose of radiation," it is natural that we hear from these groups.

The word "safe" means free from risk of injury. Existing human studies combined with nuclear track-analysis show that every dose of ionizing radiation confers a risk of carcinogenic injury, even at the lowest possible total dose and dose-rate (Gofman 1981, Gofman 1990). Government statements are false when they say that it is impossible to know what happens at very low doses of ionizing radiation.

Our statement that there is no safe dose of ionizing radiation does not mean that every dose --- regardless of its size --- produces the SAME amount of hazard or qualifies as a calamity. Our books show again and again that the size of a radiation risk is tied to the amount of the accumulated dose and the number of people who receive it.

We have demonstrated a scientifically OBJECTIVE way to make use of revised dose-estimates in these dose-response studies, but we alone are using it (Gofman 1990, 1994). The government-sponsored radiation community now uses only the retroactively shuffled databases. Moreover, retroactive alterations of the databases by RERF will continue indefinitely. With enough disregard for the rules of credible research at RERF, ultimately the databases may produce ANY answers the sponsors want.

8E • The Chernobyl study of 1991. The chairman of RERF (see 8D) was also the Chairman of the 1990 survey of alleged Chernobyl health effects conducted for the International Atomic Energy Agency (IAEA, in Vienna). Although the IAEA survey was presented in May 1991 as if it were a scientifically valid refutation of such alleged health effects, the presentation was a grand deception because the database was incapable of supporting any such conclusion (see Gofman 1991, 1994). With respect to estimating Chernobyl health effects, DOE's own 1987 evaluation emphasizes its "zero-risk model" --- a euphemism for declaring that doses below a threshold level have no health effects --- despite human evidence to the contrary (Gofman 1981, 86, 90).

8F • The Chelyabinsk database in Russia. RERF (see 8D) is deeply involved in the structuring and analysis of these tainted data. It would be folly to believe any "finding" from a database where the doses are totally unknown, where the Russians were instructed to lie if someone developed a health problem known to be radiation-inducible, and where there are no rules about blinding, etc. But our DOE, through RERF, appears eager to work with such data.

8G • The future Chernobyl databases. The US Government, along with the nuclear-promoting governments of Japan, France, England, Germany, and Russia, is sponsoring the database for Chernobyl health effects under the umbrella of the World Health Organization (WHO, in Geneva). RERF is involved, too (see 8D). Who will guarantee exclusion of the utterly untrustworthy database assembled in Obninsk under the Gorbachev regime --- a regime which forbid (a) anyone to make independent measurements of dose during the accident, and which forbid (b) any diagnoses of problems known to be radiation-inducible?

8H • The "Atomic Veterans." As for the American military personnel exposed to nuclear bomb-tests, the government presently controls all the dose-estimates --- which it frequently says are unfindable or are in a group destroyed by a warehouse fire.

However, advancing techniques in biological dosimetry (the growing ability to detect smaller and smaller chromosome aberrations) may make it possible --- with good "blinding" procedures in place --- to ascertain past accumulated whole-body doses of radiation received by "atomic veterans" and by many other populations under study. The National Assn. of Atomic Veterans (a grassroots volunteer group in Salem, Mass.) is trying to collect information on the health status of such veterans. However, NAAV can not sponsor a properly done follow-up study, because such studies cost multi-millions of dollars.

A Protest about Databases Never Attempted

While the government provides large budgets decade after decade to study radiation effects on mice and rats, we protest the failure of our government to find out what happened to the health of important sets of exposed HUMANS --- not only a quarter-million "atomic veterans," but also special groups such as the 25 firefighters who inhaled plutonium during the 1965 fire at Rocky Flats, and the 200 Americans who were sent to clean up the plutonium which was spread over the ice around Greenland by a crashed bomber in 1968. It looks as if our government has tried to prevent some kinds of knowledge from existing at all.

• - We encourage people (especially at DOE and its labs and subsidiaries) to reprint and distribute these proposals widely. No permission is required.

• - John W. Gofman, M.D., Ph.D., is chairman of the Committee for Nuclear Responsibility, and Egan O'Connor is editor. Dr. Gofman is professor emeritus of Molecular and Cell Biology at the University of California, Berkeley, and author of four books on the health consequences of exposure to ionizing radiation --- 1981, 85, 90, 94 (in preparation). In earlier years, JWG proved the fissionability of uranium-233 (in 1942) and developed chemical techniques to deliver the first milligram-quantities of plutonium for the Manhattan Project (in 1943); did pioneer research on heart disease and lipoproteins (1947-1963); established (in 1963) the Biomedical Research Division of the Livermore National Lab, where he examined the health effects of radiation and studied chromosomal origins of cancer. Support for his research was taken away in 1972, in reprisal for his emphatic and persistent public statements about the health hazards of radiation.

"Power concedes nothing without a demand. It never did and it never will. Find out just what people will submit to, and you have found out the exact amount of injustice and wrong which will be imposed upon them ..." • Frederick Douglass, former slave (USA) and educator, 1817-1895.

(9) Creating Bonds of Trust, or Just "Smoke and Mirrors"?

Hazel O'Leary wants DOE to be high on a list of trusted institutions by the end of 1994. So she needs to ponder the reason that people are so very ANGRY about DOE's non-existent credibility. It is because they are worried about their HEALTH and the health of their children and grandchildren.

If people are left at the end of 1994 and 1996 with no new reasons to trust the DATABASES on radiation health effects, then they will still have no reason to trust any ANALYSES and "risk assessments" which involve radiation health effects.

If no meaningful steps are taken to protect future databases on health effects, and to assess the credibility of the existing databases, then our government will again be putting protection of nuclear enterprises ahead of protecting the public health and the integrity of health-science itself. Without effective steps to protect the databases, most of the other efforts to earn public trust will amount just to "smoke and mirrors" again.

Measures to assure the integrity of the databases are essential ... but not sufficient. In addition, there must be measures to protect dissent in their ANALYSIS. But if ONLY dissent in analysis is protected --- without protecting the databases THEMSELVES --- then there will still be no barriers to dis-information. "If crooks make a database, even Einstein would get false answers from it."

If we care about the health of future generations, we have an obligation to make the best kinds of behavior "pay." And that is the aim of our suggestions in Part 3. No such goal was evident in measures taken by the previous DOE Secretary, who also prayed a lot for DOE's credibility, but not realistically. While Hazel O'Leary is in office, there is a brief chance to establish a set of new rules --- realistically based in human nature --- which could endure after her departure ... and which could be an inspiration reaching far beyond DOE.

Hazel O'Leary will face a fireball of opposition plus massive inertia on proposals to assure "truth in radiation research." As good as she is, she faces the powerful law of "Concentrated Benefit over Diffuse Injury" (CNR essay, Fall 1993). She can not defeat it by herself. She will need encouragement, specific suggestions, and helpful pressure.

The fact that so many people are taking Hazel O'Leary into their hearts is poignant evidence of how much we yearn to be free from the expectation of deceit and betrayal by our government. Hazel O'Leary has become an exciting symbol of hope ... but she will surely become a heroine who fails, if we leave her to plan and attempt this revolution ALONE.

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(4) Some Sympathetic Remarks to the Current Insiders

To the current insiders, we say that the proposed measures should assure your liberation from any humiliating choices in the future between your conscience and your career.

In 1986, to their ever-lasting shame, some engineers who opposed launching the "Challenger" space-shuttle failed to "go public" with their warning. They shut up, and it blew up.

Avoiding Chronic Hassles

If people doing "risk assessment" are distressed by the prospect of spending a lot of time dealing with inquiries and complaints by colleagues and by the public, to you we say that there is a way to avoid chronic hassles:

Clarify every questionable research procedure or assumption EARLY and in PUBLIC. You can not be harrassed under the proposed system. If YOU issue the challenges, and if YOU issue reports which explain your jargon and statistical maneuvers, people will not need to hassle you. Being clear may slow up your work a bit, but the public will trust you and even come to appreciate you. If some unfair hassling occurs anyway, an arbitration panel will quickly terminate such hassles.

(5) Where the Real Action Occurs: Database Control

We began with the statement that, "If crooks make a database, even Einstein would get false answers from it." This point (2A) deserves frequent emphasis.

Is there any reason at all to trust the radiation databases which are controlled by governments? If the tobacco industry produced a database on the relationship between tobacco consumption and health problems, almost no one would take it seriously because there is an obvious motive for falsification.

We would not regard such doubters as "paranoid." We might regard people as fools if they did NOT doubt such databases. And the same reasoning applies to the current RADIATION databases.

Radiation health effects are the main obstacle to nuclear programs everywhere. Potential health effects are the REASON that people care about residual nuclear pollution at bomb-plants, worry about escape of radionuclides from proposed storage sites, and object to routine and accidental nuclear pollution from current and proposed facilities.

As the chief sponsors of civilian and military nuclear activities, governments have a very large motive for falsifying the radiation databases which they control. If they use their control to produce databases which FALSELY indicate that low-dose radiation has no harmful effects, then everyone who uses such databases for the next 50 or 100 years would disseminate this dis-information.

So, if a cover-up of health hazards from radiation is wanted, the real action will occur in the construction, maintenance, and retroactive revision of the databases. Is it happening? Unless dissent is protected, how would anyone except the culprits know?

DOE, for example, controls many key databases on radiation health effects (Part 8), but we've not seen public commitments from Hazel O'Leary, yet, to doing "whatever it takes" to assure the protection of the databases THEMSELVES from bias.

(6) Some 'Eyewash" Proposals Which Will NOT Work

Moving control of databases from one agency to another solves nothing. The key to truth in radiation health research is protection of the databases —— wherever they are —— from biased entries (next paragraph). This can NOT be assured by the current "citizen advisory panels," or by "independent external review" (suggested via the National Academy, Jan. 1994), unless such panels are hands-on "watchdogs" located on-site day after day, year after year, with the authority and expertise to assure proper procedures in all the labs and institutes which are involved with each database.

There are many ways to "fix" a database to produce desired results (warnings and discussions in Gofman 1988, 89, 90, 91, 92, 93a, 94). Especially with low-dose effects, the un-blinded reassignment of just a handful of cases to higher or lower dose-groups, or the dropping of just a few cases, or the re-diagnosis of just a few cases, can produce any answer the sponsor desires. And this kind of improper action would all occur out of sight, BEFORE any tables of data appear in a report or paper for "independent review."

It is ludicrous to bel. that the current citizen advisory panels, or independent technical panels, or "peer-reviewers" looking at results before publication, would be able to detect questionable changes in the databases.

To assure the objectivity of past and future radiation databases, it will require the continuous on-site presence of some independent "watchdog" experts who are accountable directly to the appropriate arbitration panels. Fewer and fewer "watchdogs" will be needed as the regular workers with these databases gain confidence that they can "tell all" in public without reprisals.

(7) A Terrible Silence in Our Universities and Medical Schools

Our government controls ALL the important radiation health databases in this country, and some abroad (list in Part 8). It's as if the tobacco industry controlled all the databases about the health effects of tobacco (see Part 5).

The obvious conflict of interest in the control of radiation databases is something which editors of our leading biomedical journals and professors of epidemiology, in our medical schools and schools of public health, should have protested long ago —— even if they knew nothing of specific problems with these databases.

But such people, outside the radiation community, also depend on government grants. All our government agencies are fingers on a single hand, and experts probably fear (correctly) that "boat-rockers" in biomedical research will be less favored to receive grants and appointments to "prestigious" committees and peer-review panels. And so they appear to be injected, not by a syringe of "experimental plutonium," but by a syringe of silence.

It would be silly to lament that "almost everyone has his/her price" and "money talks." Although people can not change human nature, they can change what society pays FOR. Why not devise a system which pays generously for TRUTH —— starting with health and safety issues?

(8) The Current Situation regarding Radiation Databases

Under the current incentives for silence and non-announcement of undesired "findings," our government either funds or directly controls the radiation health-effects databases listed below.

8A • New databases currently under construction on public doses and possible effects from:
Hanford Nuclear Reservation. Nevada Test Site.
Oak Ridge National Lab. Savannah River Nuclear Facility.
Rocky Flats Nuclear Warhead Factory.
Additional nuclear fuel and bomb facilities.

8B • The old and new nuclear-worker databases at Hanford, Oak Ridge, etc. In 1977, when Dr. Thomas Mancuso and co-workers found excess cancer in the Hanford workers at low doses, the US Government impounded the database which Mancuso had organized, and subsequently did who-knows-what with this database before it released computer tapes to selected analysts years later. Do these tapes provide improperly manipulated data? Outsiders are not given access to the original records —— indeed, a Senate Committee claims Oak Ridge has destroyed many original records (Sci. News, March 23, 1991, p.181).

8C • Follow-up studies of workers exposed to plutonium and external radiation. Dr. Gregg Wilkinson undertook some of such work as an epidemiologist at the Los Alamos National Lab (a DOE lab). Wilkinson is now at the University of Texas, Galveston. Why? Because not quite everyone has a price. In the 1980s, Wilkinson refused to alter his findings or their interpretation concerning excess cancer, despite "definite pressure from several sources within DOE." He was threatened with demotion if he published the results without revision. He published the unaltered study in 1987, and left the Lab. One of us (JWG) had similar experiences at the Livermore National Lab between 1969-1972.

8D • The Atomic-Bomb Survivor Studies. These databases are under the control of RERF (Radiation Effects Research Foundation, in Hiroshima), which is a joint enterprise of DOE and the Japanese Ministry of Health. DOE routes its input to RERF via the National Academy of Sciences. In violation of one of the most basic rules of credible epidemiologic research, in 1986 RERF began imposing massive, retroactive alterations upon this database, after results were already known from 40 years of follow-up. These retroactive alterations of the cohorts are not UPDATES —— they are potential opportunities for the entry of bias into the databases.

"Man's most valuable trait is a judicious sense of what not to believe." • Euripedes, Greek dramatist, 5th century B.C.

2-Eye • Almost all people involved in public health and safety would eagerly follow their consciences if current incentives were reversed, so that the consequences of the best behavior were pleasant rather than painful for themselves. They want to do the right thing, and the public wants them to do it. Nonetheless, this vast pool of talent and experience is necessarily distrusted by much of the public because the current system rewards silence and punishes open dissent.

2 J • Most of the wrongdoing which leads to whistleblowing could be AVERTED --- if people in an enterprise really felt safe about raising questions early and openly. By the time whistleblowing occurs, the wrongdoing has already occurred. Although recent federal laws on whistleblowing are better than past laws, powerful deterrents are still allowed to operate against whistleblowers --- who can apply for redress via the Dept. of Labor after they have already suffered reprisals. So, current "protection" does not go into operation until both the wrongdoing and the reprisals have already occurred.

(3) Specific Suggestions for DOE and Others

3A • The key to credibility for DOE lies in genuine encouragement of dissent in public (Part 2). Although this will require a "sea change" in current practices, several of the suggestions below could be promptly "do-able" by Hazel O'Leary without any Congressional action. If Hazel O'Leary receives the support she will need to establish a functioning model of GENUINE support for open dissent, she could create a magnificent legacy for humanity, inspiring change far beyond just the US Dept. of Energy. Consider the dismal report in 3B, below.

3B • On July 22, 1992, the Wall Street Journal carried a front-page report entitled, "General Electric's Drive to Purge Fraud Is Hampered by Workers' Mistrust; Some Fear Getting the Ax If They Follow Directive to Report Wrongdoing." The report includes a quote from the editor of DOJ Alert (a journal covering events at the US Dept. of Justice) who says that throughout the defense industry, "if you're an employee and you complain [of wrongdoing], you take your career in your hand." Is it any wonder that induction of a slave-mentality is so common?

3C • At DOE and elsewhere, just a declaration supporting dissent in public would be meaningless unless retaliation, by immediate supervisors and fearful co-workers, is suppressed by new incentives and disincentives.

3D • Supervisors and co-workers who actively help to protect dissent and to see that the rules of objective research are scrupulously followed, should expect and receive rewards --- such as meaningful merits in their personnel files, and public honors. One might even consider having a few cash-bearing prizes awarded annually by grateful grassroots groups, out of "the credibility pot" of government funds (see 2F).

3E • Supervisors and co-workers who are found to have impeded dissent or impeded adherence to the rules of objective research --- actively or by turning a "blind eye" --- must be the ones to receive severe demerits or other punishments for this behavior. They have gambled with the public's health and safety. Response to such behavior must be more than a "slap on the wrist" or a monetary fine for the institution. The pain needs to be felt personally by the responsible individuals.

3F • Genuine encouragement of dissent means that, whenever necessary, employees who raise unpopular questions can count on receiving immediate protection from "goons" and their threats (car tamperings, pet poisonings, arson, etc.). Costs of appropriate security will be paid from "the credibility pot."

"All that is necessary for the triumph of evil is that good men do nothing." • Edmund Burke, English statesman, 1729-1797.

3G • To help discourage frivolous complaints, the complainers themselves receive no rewards. Moreover, we do not propose changes for routine grievances between employers and employees. Our suggestions apply only to complaints and inquiries connected with public health and safety.

3H • An employee is entitled to initiate a public hearing about his/her concern (see 3-Eye).

3-Eye • Citizens at large (not just people whose work relates to health and safety) also have "standing" to raise questions and to require clarifications about health and safety issues, to initiate a public hearing before people whose fairness they trust (see 3K & 3L), and to receive protection from "goons" when necessary.

3 J • Every complaint from employees or the public must get a hearing, open to the public and press. Although the current distrust may cause "too many" complaints at first, the number of complaints by the public will fall dramatically after the system is seen effectively to encourage and protect dissenters WITHIN the government and its contractors.

3K • Questions and complaints should be handled promptly and with common sense, without the use of any attorneys or courts. Instead, the system can use arbitrators (professional or informal).

3L • Both parties must agree on the choice of each arbitrator, so they agree that their panel consists of people who are fair-minded and non-corrupt. If one party tries to delay the hearing by refusing to reach agreement on arbitrators, the entire panel will be selected by drawing proposed names from a bag. Arbitrators will be paid, as appropriate, from "the credibility pot." The arbitrators will jointly set common-sense guidelines for their hearing, with respect to duration, sequence, avoidance of slander, etc., after considering suggestions from the parties.

3M • Arbitrators will be charged with working out solutions which promote public confidence. If government agencies and contractors genuinely want to be trusted, they will inquire very willingly from their grassroots opponents, "What must we do so that you will believe our information?" If citizens convince various arbitration panels that this goal requires re-doing some past research (e.g., "dose reconstruction") or hiring "watchdog" experts, selected by the complaining group, then the cost of such experts for the needed duration is part of the policing function and is paid for from "the credibility pot."

3N • The policing costs to generate believable studies will diminish when the "old hands" at DOE and government contractors develop faith that an ENDURING system is finally in place which encourages THEM to speak directly and candidly to the public without reprisals.

3-Oh • Because the network of government-funded "risk assessment" extends into universities, commercial businesses, and non-profit "think-tanks," government grants and contracts for such work need to require that the arbitration process described above operates also with respect to such grants and contracts.

3P • To achieve a goal, the SIMPLEST possible procedures are desirable, of course. If anyone can think of even simpler proposals than these, please MAKE them.

The Bonds of Trust vs. Deceit by DOE: Some Enduring Measures for Your Health and Safety

By John W. Gofman and Egan O'Connor, Spring 1994
A list of sources and addresses is available on request.

Courtesy of Gary Oliver

(1) Reconciliation after a Long War

Secretary of Energy Hazel O'Leary is an extraordinary person whom we and many others have come to trust as an individual. She inherited a government agency whose history of deception, intimidation, and pollution amounts to a war against the public and its health. Indeed, Hazel O'Leary acknowledges the extremely low credibility of DOE (Department of Energy) with the public --- a formidable obstacle to DOE's current goals.

One of Hazel O'Leary's top priorities, according to her own public statements (e.g., National Press Club, February 1994), is to place the DOE itself high on a list of trusted institutions by the end of 1994. It will require systematic and profound changes before the rest of DOE can enjoy public trust, in the opinion of many people (ourselves included). But it may be "do-able."

What are some essential ingredients of a system which would produce information on health and safety issues which the public could BELIEVE? We propose, for discussion and modifications, some ideas about the required ingredients (Part 3).

Although we will speak here about RADIATION, the ideas should also apply to generating believable information (a) about health effects from other pollutants too, e.g., heavy metals and environmental estrogens, (b) about current and proposed containment systems for various poisons, and (c) about the size of human doses from the non-contained fraction of such poisons after their complex behavior in the free environment.

Believable information requires trustworthy databases --- computerized collections of data from which analysts can derive relationships (for example, the relationship between the amount of exposure to a pollutant and health status). It is urgent to guard the databases from falsification (Parts 5, 6, 7, 8).

Unfortunately, Hazel O'Leary plans to leave DOE after one term, at the end of 1996. So, there are only 2.5 years to help her to install a system for DOE and its subsidiaries which (a) will deserve public trust after Hazel O'Leary's departure, and which (b) could be adopted also by the NRC (Nuclear Regulatory Commission), EPA (Environmental Protection Agency), CDC (Centers for Disease Control), NCI (National Cancer Institute), FDA (Food and Drug Administration), and many other government agencies which deal (directly, or via numerous grants and contracts) with public health and safety.

(2) A Set of Premises about Truth and Deceit

Deceit is a gross violation of human rights when its use jeopardizes people's health and safety. Thus, everyone has a duty to prevent or expose this class of deceit. But if the pains of performing a duty are large while the pains of non-performance are small, do not expect much performance.

2A • If crooks make a database, even Einstein would get false answers from it. (See Parts 5, 6, 7, 8.)

2B • As statistical treatment of biological data becomes more elaborate, the results become more suspect --- and doubts are often justified.

2C • In any enterprise, if dissenters are likely to be punished, their colleagues prefer to stay out of trouble by censoring THEMSELVES. Self-censorship is the main way in which dissent and warnings are stifled, whether the enterprise is research, construction, or operations.

2D • An enterprise which does not strongly encourage and protect dissent, is not looking for the truth. Instead, it is building an artificial consensus, and deceiving the public by pointing to such a consensus as evidence of truth. On issues of public health and safety, the only consensus which the public can trust is one which evolves when dissenters are genuinely safe to express their views in public and when individuals who attempt to stifle dissent experience severe sanctions. The public has no basis for confidence in enterprises which merely claim that they handle dissent correctly --- by processes out of public view.

2E • There is an economic cost in every enterprise to suppressing the morally weak (and sometimes actively evil) parts of human nature. So let's clearly acknowledge that "policing" measures --- to assure that TRUTH receives the top priority on matters of public health and safety --- will cost some money. DOE, for example, will never gain public trust just by saying, "Trust us!" The public is no longer naive. (See Part 9.)

2F • Some fraction of DOE's annual budget should be set aside indefinitely for measures to EARN public trust. We shall refer to this set-aside as "the credibility pot." Set-asides have a precedent. When Congress established the Human Genome Project, it required a percentage of the budget to be devoted to investigating the implications and ethical problems with the project, in order to PREVENT later difficulties and to earn public confidence (Cable News Network, Feb. 4, 1994).

2G • Self-policing systems are the most effective, most pleasant, and least costly. Self-policing occurs when people have incentives to make morally good choices, and incentives to avoid the rotten options.

2H • Most people --- including those who are now distrusted by the public --- prefer to be trusted, to be praised, to be genuinely proud of their work, and to help protect public health and safety. Individuals feel such a strong need to regard THEMSELVES as morally good people that even the worst scoundrels and cowards seem to JUSTIFY their bad behavior to themselves.

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT

GOODYEAR AEROSPACE CORPORATION
OHD 004 163 275

The Goodyear Aerospace Coporation (GAC) is located near the southern boundary of Akron and adjacent to the Akron Municipal Airport. The city's residential and business areas range from northeast to northwest of the site; smaller community developments are to the south. Springfield Lake, east of Goodyear, is on the north side of the divide between the Cuyahoga River and the Tuscarawas River watersheds. This divide passes between Goodyear's Plants E, A, B, F and C, D, G (see attached maps).

Goodyear Aerospace's operations have included electroplating, anodizing metal parts, and the use of spray painting booths for some products. Goodyear submitted their plans for a RCRA Part B Permit, which are currently under review by OEPA. However, some portions of the site were closed prior to RCRA and have been unregulated and uninspected. These were reported to U.S. EPA on two separate CERCLA 103(c)'s, one in June 1981 and the other in November 1984.

Due to more recent information, the Ecology & Environment (E & E, March 4, 1983) Preliminary Assessment completed for Goodyear has been updated. The first CERCLA Notification (June 19, 1981) described the use of a landfill and a pit for the treatment and disposal of electroplating wastes; the second notification (November 2, 1984) reported a landfill of paint sludge near Plant B. Although the 1981 CERCLA form indicated 6,000 cubic feet of waste was disposed in a 600 sq.ft. landfill, its exact location was not included in the site description drawing. The treatment pit, shown in the drawing, was on a triangular piece of property south of the GAC plants and it is assumed the landfill was nearby (Soil Survey Map, 1974, Summit County). No information is available on the construction of the pit, or whether wastes were treated prior to placement in the pit. The neutralization of wastes and the reduction of chromium to the trivalent state is mentioned on the 1981 CERCLA form, but not the treatment for cyanides used in the electroplating process.

In addition to the above landfills and pit, a Hydrogeological Survey was performed in and around Plant B when it was suspected ground water had been contaminated beneath the plant. This survey provides information on the geology and soils in the general vicinity of the landfills, ground water flow direction north of the watershed divide, type of contaminants and their concentrations, and the extent of the contaminant plume. The paint sludge disposal site, reported on the November 1984 CERCLA form, contained arsenic (D004) and lead (D008) in unknown concentrations. These hazardous substances were also found in samples taken of water from the monitoring wells/test borings near (and inside) Plant B.

1 it, 2 landfills + known g.w. Contam. from Plant

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: OH | 02 SITE NUMBER: D 004 763 273

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☑ A. GROUNDWATER CONTAMINATION | 02 ☐ OBSERVED (DATE _____) | ☑ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Approx. 74,400 | 04 NARRATIVE DESCRIPTION
Need to know what type of pit was used for treatment of chromic acid & other plating wastes - used cyanides in process. Gravel pits located north & south of site - permeable sand and gravel deposits are likely under the landfill/pit areas. SEE G. - groundwater usage. High water table around stream near site.

01 ☑ B. SURFACE WATER CONTAMINATION | 02 ☐ OBSERVED (DATE _____) | ☑ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Approx. 450 | 04 NARRATIVE DESCRIPTION
The pit & landfills reported on CERCLA 103(c) Notifications were located near a stream & wetland area. Approx. 90 homes & a trailer park are within 2 miles downstream & would have access to possibly contaminated water from groundwater discharge or runoff from site.

01 ☐ C. CONTAMINATION OF AIR | 02 ☐ OBSERVED (DATE _____) | ☐ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION
See E & E P.A.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS | 02 ☐ OBSERVED (DATE _____) | ☐ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION
See E & E PA.

01 ☐ E. DIRECT CONTACT | 02 ☐ OBSERVED (DATE _____) | ☐ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION
N.A. Depends on public/employee access to the waste disposal/treatment area.

01 ☑ F. CONTAMINATION OF SOIL | 02 ☐ OBSERVED (DATE _____) | ☑ POTENTIAL | ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: < 1 (Acres) | 04 NARRATIVE DESCRIPTION
Goodyear reported using a landfill for the disposal of 6000 cu. ft. of waste, which may have included plating sludges, etc. It is impossible to tell from the CERCLA Notification whether the landfill & the "treatment pit" were the same portion of the site.

01 ☑ G. DRINKING WATER CONTAMINATION | 02 ☐ OBSERVED (DATE _____) | ☑ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Approx. 14,500 | 04 NARRATIVE DESCRIPTION
The divide between Cuyahoga River & Tuscarawas River watersheds cuts through the Goodyear site. - No water can be diverted from the Cuyahoga to the south, so residents south of Goodyear & Akron Corp. boundary rely on groundwater for their water supply.

01 ☐ H. WORKER EXPOSURE/INJURY | 02 ☐ OBSERVED (DATE _____) | ☐ POTENTIAL | ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION
See E & E P.A.

01 ☐ I. POPULATION EXPOSURE/INJURY | 02 ☐ OBSERVED (DATE _____) | ☐ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION
See E & E P.A.

EPA FORM 2070-12 (7-81)

* Goodyear indicated area of concern is south of Waterloo Rd; a triangle formed by railroad tracks in the streams flood plain - see attached map.

They Served In 2 Wars, But Now It's Time To Die

A.B.J. 2-10-72 Goodyear Aerospace Corp.

By KENNETH NICHOLS and WAYNE LYNCH

They came from every corner of a tense land — young, rollicking, idealistic; 600 of them.

Many were not yet men but no longer boys.

In the barracks and mess halls still smelling of new lumber and fresh paint, they sang "We'll Hang Kaiser Bill from a Sour Apple Tree" and "Over There."

WHEN INVITED to dances in town, they tried valiantly with their long skirted partners to learn the "new" fox trot, tango and hesitation waltz.

Some fell in love.

They drilled and sweated; drilled and shivered.

On weekends they rode in cars that carried the nameplates of the Packard Twin Six, Marmon and Apperson Jack Rabbit.

Their aims like their lives were tied to patriotism. Firmly on the side of the right, they trained to fight for democracy, freedom and everlasting peace.

NOW nearly the last vestiges of that time are to go, too, with the wind — the smoke and the flames.

Four frame buildings at Wingfoot Lake near Suffield built by the Navy in 1916 to house officers and enlisted men assigned to a lighter-than-air program are to be torched Sunday.

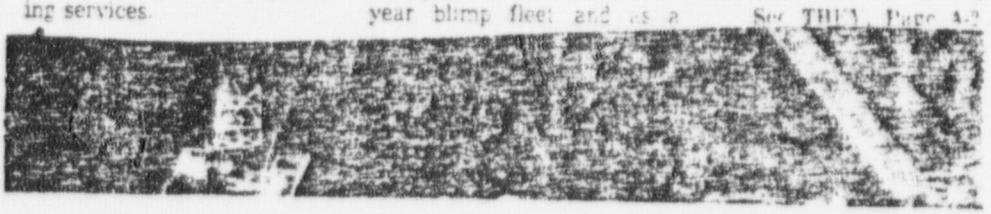
One wooden veteran of that World War I era will remain there — a two-story originally built as a 140-man barracks for enlisted personnel. It will continue to serve as an office for Goodyear Aerospace engineers.

The floor space afforded by the others is no longer needed and the cost of taxes and maintenance too high in the eyes of Bill Knight, GAC's manager of general engineering services.

NEITHER will the hangar be touched. It was built by Goodyear in 1914 for the manufacture of balloons and was then 200 feet long; doubled in size in 1916, it was doubled again in 1917.

The hangar and its satellite buildings serve now as headquarters for the Goodyear blimp fleet and as a

See THEY, Page A-2



War I-era buildings at Wingfoot Lake. They are: (1) the officers quarters, (2) more officers quarters and mess hall, (3) dispensary and (4) maintenance building.

ey Served In 2 Wars

But for some area families the old Navy facility has always been a shining place. More than a few sailors came back to marry the girl they met at a dance. They're Grandpa and Grandma now.

Goodyear bought the lake — then called Fritch's — in 1914 and most of the land (72[illegible] acres) around it. The lake is a source of the Little Cuyahoga river, which supplies raw water to East Akron industries.

THE NAVY took over in '17 and returned the base to Goodyear in 1918. It became the center then for Goodyear airship operations.

In 1942 the old base was transferred from Goodyear to the then Goodyear Aircraft and once again took a place in the nation's war effort.

They will go down, the unwanted four, "by the numbers" — No. 86, officers' quarters; No. 95, officers' housing, mess hall; No. 97, dispensary; No. 98, maintenance.

For them World War I is finally over.

The hazard potential has been estimated differently from the E & E P.A. for ground water, surface water, and drinking water. Residents south of the watershed divide, as well as many east of the Akron Corp. boundary, are dependent on ground water for their drinking water supplies. A small pond and wetland area share the triangular piece of property where the CAC pit is located; this is the floodplain for a small tributary to the Tuscarawas River. The water table in this area is high. Permeable sand and gravel deposits can be expected under the more poorly drained silty soils along the stream, evidenced by several gravel pits within a mile of the site (see Hydrogeological Survey be Woodward-Clyde, October 26, 1984). Permeable fill material was used in and around the site, which may allow the infiltration of water through contaminants and the generation of leachate. Several routes exist at this site for the movement of contaminants into either ground or surface waters. The change in population figures are based on the ground water usage and proximity to the stream.

We recommend a medium priority for on-going State ground water monitoring activities at Goodyear. The site is not a likely NPL candidate thus a low priority for FIT is recommended. Activities will depend on current site conditions, but may include soil sampling, leachate outbreak observation, and stream sampling.

PW:kr
December 27, 1984

Aerospace erecting an underwater lab

Wingfoot used for MK-30 tests

ABJ 11-13-81

By James Toms
Beacon Journal business editor

Goodyear Aerospace Corp. said it will spend about $610,000 to build and equip an underwater test facility being constructed on Wingfoot Lake in southwestern Portage County.

The facility, consisting of a metal building anchored above water and an underwater area dredged to a depth of 35 feet, is expected to be completed by next spring.

The dredging work, being done now by the Ruhlin Construction Co., will be finished by mid-December.

AEROSPACE officials said the facility will be used mainly for acoustic radar testing in conjunction with the MK-30 submarine target program.

The MK-30 is a torpedo-like device which can be programmed to sound like a submarine to sophisticated ship-board and airborne tracking equipment.

It will be used by the Navy for anti-submarine warfare training.

DREDGING will remove some 26,000 cubic yards of material from the lake, the company said, creating an underwater "hole" 100 feet in diameter. The fill will be dumped in an adjacent swamp area.

Officials said the barge-mounted, steel-sided building will have a 34-foot opening in the floor, giving technicians access to the water.

An overhead monorail and bridge crane will be used to hoist the torpedoes and other items.

THE COMPANY'S weapons systems engineering manager, Dr. James J. Hogan, described the facility as having an almost completely automated data collection system. It will be controlled from a computer in the building.

He said two or three technicians will be able to operate the facility. No additional jobs will be created.

The need for Aerospace to build its own underwater test center came with the closing of a New York site where some work had been subcontracted, Hogan said.

THE TEST center will be southwest of the Wingfoot Lake hangar, accessible by a causeway.

A group of Aerospace executives attended a Suffield Township trustees meeting last week to explain the project and deny rumors the company was putting a nuclear installation in the lake.

"We told them that's ridiculous," one official said. "This has nothing to do with any of our projects that involve nuclear energy."

December 14th
January 1980

ar Aerospace wins
nillion NASA pact

2-15-79 ABJ A5

ce said it has contract from nautics and n for a com- or subtract es a second. uch is to be 's Goddard in Greenbelt, process the h image data earth from

allel proce- odyear calls ny computa- y instead of s many com-

work by the computer to store the images and be able to reproduce color images of that seen by a satellite.

Much of the data is used to study agriculture, urban sites, pollution and geology and for map making.

The parallel processor will also be able to process images produced by X-rays and radar, Goodyear said.

rocessing is transmission assive, rapid

lyear Aerospace wins pact
aptor work through 1982

2-29-80 ABJ

rospace has re- illion Navy con- ued construction anti-submarine re.

s for construction through 1982.

sideration is another $65 million in production, which would come out of next year's budget. That contract won't be decided until the Defense Department is convinced certain technical problems have been worked out, the company said last month.

"WE ARE confident we will have a continuing program for many years to come," Aerospace president Morris B. Jobe said.

A source in the government said the fiscal 1981 funding was held up by the defense budget office, which raised questions about capabilities based on outdated technical information.

The Captor is a mine that can be placed in deep waters below the reach of mine sweepers, according to previously released information.

Top Secret project

THE MINE is able to differentiate between friendly and enemy ships, and will fire a torpedo at enemy submarines.

The Captor would be a strategic weapon in sealing off important sea lanes for enemy ships.

About 350 persons work on the Captor project at Aerospace's operations here.

...Airport

...s new addition

...bout

The centrifuges use a new enrichment technology that requires about 5 percent of the power used by conventional means.

...Goodyear's first phase work is ...valued at $90 million.

In the second phase, however, "tens of thousands" of centrifuges will be needed, one official said. Two centrifuge manufactur...

...ll be ...ran

...first phase, estimated to cost about $1 billion.

...subtractions in one second.

...that the project would be ...while.

"At that time, no centrifuge equipment had been manufactured in this country," Pilliod said in a speech at the dedication ceremony. "So if Goodyear should undertake such a program, it would be on a pioneering basis. And it would call for heavy up-front corporate investments.

There were a number of risks involved, Pilliod said. Because "nuclear" was considered a "very dirty word" on some fronts, the company decided to do the research at the hangar at Wingfoot Lake in Portage County. That site was selected because, "as you know if you have been at Wingfoot Lake — a herd of elephants could easily be hidden inside (the hangar)."

Goodyear is currently manufacturing some centrifuges at the Wingfoot Lake facility for installation at a demonstration plant in Oak Ridge, Tenn. When production begins in Akron at the end of this year, it's expected that those units will be installed at a new enrichment facility now under construction at Portsmouth, Oh...

PILLIOD complimented the United Auto Workers union and Aerospace for agreeing to contract changes that will help the company produce the centrifuges economically.

He warned, however, that the use of centrifuges may be hastened by other breakthroughs in the methods of enriching uranium. He said that "down the road" advanced isotope separation methods could compete effectively with centrifuge operations.

"The choice between these technologies in the long run will be based on pure economics," he said.

...be government of the corporation's ...vention.

Oldham said he couldn't specu...ate on the amount of monetary ...ompensation GAC contends it is ...wed.

Renewed

GAC gets sixth Navy torpedo contract

By LARRY FROELICH
Beacon Journal Financial Editor

Goodyear Aerospace Corp. received a double dose of good news Thursday.

From the Navy, the high technology Goodyear subsidiary was awarded a $4.1 million contract to continue producing warheads, exploders and associated spare parts for the MK-48 torpedo.

And from the Air Force, GAC received a $600,000 contract to retrofit that branch's fleet of 136 T-39 aircraft with the company's antiskid braking system.

THE WORK on both projects will be accomplished at GAC's Akron complex, where 3,202 white and blue collar workers are employed, said GAC spokesman Lyle Schwilling.

Allan E. Bjerke, general manager of GAC's Defense Systems division, noted that the MK-48 pact is the sixth straight award for that program, which dates back to July 1971 and now totals $41.7 million.

Described as a modern, deep-diving weapon to meet the enemy threat of the 1970s and 1980s, the MK-48 can be launched from submarines against surface ships or enemy subs and is by far the most ...torpedo ever designed, GAC said. It can be operated with or without wire command guidance and is capable of multiple reattacks if it misses its target.

Rows of transformers for the Navy's MK-48 torpedo electronics are inspected at Goodyear Aerospace Corp.'s Akron plant by Charles E. Berger, 2118 Galewood Dr.

HARDWARE produced under the new contract will be delivefed in 1978, Bjerke said. GAC is currently fulfilling $5.2 million in contract commitments for MK-48 components received in late 1975.

The warhead sections are precision milled aluminum tubes 21 inches in diameter. The highly-sophisticated exploder is only three inches in diameter and consists of an electronic "cordwood" module containing more than 700 individual welds.

The torpedo itself is 19 feet long, weighs about 3,500 pounds and has been operational with the Navy since early 1972.

GAC SAID its antiskid system will be put on the T-39 aircraft late this year. The T-39 is the military version of Rockwell International's Sabreliner business jet.

Goodyear Aerospace said it will deliver a prototype kit consisting of antiskid, wiring, hydraulic tubing and associated hardware by June 1. Actual deliveries of the Akron-built units will begin Nov. 1 at the rate of 30 a month.

Schwilling noted that this award marked the first time GAC has supplied its antiskid system for the T-39 and that the Air Force's decision was based on the improved safety characteristics the units ...fered.

FORM # 90230140 REV 1/92

AKRON CITY
A Summa Health System Hospital

525 E. MARKET ST.
AKRON, OHIO 44304

PHYSICIAN REFERRAL (STAMP)

PHONE NUMBERS			PHONE NUMBERS	
INTERNAL MEDICINE CENTER (SUITE 302; PCN)	375-3315		LOCUST DENTAL CLINIC	535-7876
OPHTHALMOLOGY CENTER (SUITE 504; PCN)	375-4831		CHILDREN'S HOSPITAL BURN CENTER	379-8525
SUBSPECIALTY CENTER (SUITE B-1; PCN)	375-4844		FAMILY PRACTICE CENTER (SUITE 101; PCN)	375-3584

PLEASE NOTE:

TREATMENT IN THE EMERGENCY DEPARTMENT IS OFFERED AS EMERGENCY CARE ONLY. IN ORDER TO ENSURE CONTINUITY OF CARE, **IT IS IMPORTANT THAT YOU SEE YOUR PHYSICIAN FOR FOLLOW-UP TREATMENT.** IF YOU DO NOT HAVE A DOCTOR, ONE WILL BE ASSIGNED FOR YOU.

IF YOU HAD X-RAYS TAKEN, THEY WERE INITIALLY READ BY THE EMERGENCY DEPARTMENT PHYSICIAN. THE FILMS ARE REVIEWED BY A RADIOLOGIST AND, IF A DISCREPANCY IS FOUND THAT NECESSITATES FURTHER EVALUATION OR TREATMENT, THE EMERGENCY DEPARTMENT WILL ATTEMPT TO NOTIFY YOU AND/OR YOUR PHYSICIAN.

CONTACT YOUR PHYSICIAN IMMEDIATELY OR RETURN TO THE EMERGENCY DEPARTMENT IF YOU FEEL YOUR CONDITION IS WORSENING.

HOMEGOING INSTRUCTIONS

✓ CONTACT OFFICE OF DR. David Millet AS SOON AS POSSIBLE FOR AN APPOINTMENT TO BE SEEN IN ___ DAYS

CONTACT THE ABOVE PHYSICIAN

YOU MUST BE SEEN BY THE ABOVE PHYSICIAN BEFORE RETURNING TO WORK OR SCHOOL

YOU MAY RETURN TO WORK OR SCHOOL ON

SUTURES SHOULD BE REMOVED IN ____ DAYS. SEE YOUR DOCTOR OR RETURN TO THE EMERGENCY DEPARTMENT.

YOU HAVE RECEIVED MEDICATION WHICH MAY CAUSE DROWSINESS. DO NOT DRIVE, DRINK ALCOHOL OR OPERATE DANGEROUS MACHINERY.

Avoid exposure to environment until you get for evaluation. Respiratory ... [illegible] ... long ... [illegible] ... Doctor in ... [illegible]

ICE	TIMES PER DAY FOR DAYS
HEAT	TIMES PER DAY FOR DAYS
ELEVATE	FOR DAYS
CRUTCHES FOR DAYS THEN INCREASE	
WEIGHT BEARING AS TOLERATED	
INSTRUCTION SHEETS GIVEN	INITIAL
MEDICATIONS	
HEAD INJURY	
SPRAIN / STRAIN	
FRACTURE / CAST / CRUTCH / ACE	
LACERATION / WOUND / STERISTRIPS	
EYE	
UTI / URETHRITIS / VAGINITIS / PID / VD	
NECK / BACK / SHOULDER / MVA	

E.D. RESIDENT PHYSICIAN SIGNATURE

E.D. ATTENDING PHYSICIAN SIGNATURE: [signature] Herschel

DICTATED YES ☒ NO ☐ TIME | ADDENDUM YES ☐ NO ☐ TIME

RESIDENT CONSULTANT NOTIFIED | TIME | SERVICE | DISPOSITION DECISION @ | CONDITION ON DISCHARGE ☐ IMPROVED ☐ UNCHANGED | TIME OUT

ATTENDING NOTIFIED YES ☐ NO ☐ UNABLE ☐ | TIME | ☐ ADMIT TO DR.: | ☐ FLOOR ☐ TELEM ☐ ICU/CCU ☐ OBSERV. UNIT ☐ OTHER ROOM #

IF YOU ARE FEELING WORSE OR ARE NOT IMPROVING, CALL YOUR PHYSICIAN OR RETURN TO THE EMERGENCY DEPARTMENT.

MY INSTRUCTIONS HAVE BEEN READ AND EXPLAINED TO ME AND I UNDERSTAND THEM.
PATIENT, OR AUTHORIZED SIGNATURE / RELATIONSHIP
X [signature] Mary Grimmett

PATIENT'S CONTACT PHONE # | NURSE INITIAL: a

MEDICATION	DOSE	FREQUENCY	AMOUNT
1.			
2.			
3.			

VOID

PHYSICIAN M.D./D.O. DATE

NO REFILL ☐ DEA #

PRINT PHYSICIAN NAME ☐ MAY SUBSTITUTE GENERIC

INSURANCE YES ☒ NO ☐ E.D.#

0230 696188 1AB

Grimmett, Mary A

0 383 980 0 30391 ER
GRIMMETT MARY A
11/02/61 F 234 94 1838
I

697367

HOME GOING INSTRUCTIONS

U.S. NUCLEAR REGULATORY COMMI...

NRC Form 782
(1-82)

MATERIALS DATA I[illegible] JT—INDUSTRIAL, MEDICAL, SOUR[illegible] SPECIAL NUCLEAR

A. TYPE OF ACTION AND IDENTIFICATION CODES

1	NEW LICENSE	XX	AMENDMENT TO RENEW LICENSE		AMENDMENT TO TERMINATE	[X] VOID	DOCKET NUMBER 070-01489
	NEW LICENSE AND NEW LICENSEE		OTHER AMENDMENT		CLERICAL CHANGE NO AMENDMENT	3	MAIL CONTROL NUMBER 23906

B. INDICATIVE INFORMATION

INDIVIDUAL LICENSEES: NAME (Last, First, Middle) — (blank)

RO 1/31/85

3 ORGANIZATION LICENSEES — ORGANIZATION NAME (Alphabetic Sequence): Goodyear Aerospace Corp.

DEPARTMENT OR BUREAU:

VOID As result of HQ actions no 023558 on 10/15/85 -

5 ADDRESS — BUILDING, STREET: | CITY: Akron | STATE: OH | ZIP CODE: 4431[illegible]

BSM 3/19/86

6 TYPE OF APPLICANT: U.S. GOVERNMENT AGENCY / INDIVIDUAL LICENSEE / 3 ORGANIZATIONAL LICENSEE

DATE REQUEST RECEIVED: 08/01/84 | INSTITUTION CODE: 01149 | [illegible] PROG. CODE | ACTUAL P[illegible]

SECONDARY PROGRAM CODES (As required): #1 #2 #3 #4 #5

7 LICENSE NUMBER: SNM-1461 | DATE LICENSE ISSUED OR ACTION COMPLETED: 3/27/86 | EXPIRATION DATE:

C. STATISTICAL INFORMATION

MEDICAL CATEGORY | FOR HUMAN USE ONLY | FOR HUMAN AND NONHUMAN USE | FOR NONHU[MAN] USE ONLY

POSSESSION OF THE MATERIAL IS AUTHORIZED IN ONE OF THE FOLLOWING AREAS

SAME AS "STATE" IN ADDRESS | ALL STATES | ALL NON AGREEMENT STATES

AND/OR IN THE STATE(S), TERRITORY(IES), COUNTRY CHECKED (At right)

AL ALABAMA	GA GEORGIA	MD MARYLAND	NJ NEW JERSEY	SC SOUTH CAROLINA	WY WYOM[ING]
AK ALASKA	HI HAWAII	MA MASSACHUSETTS	NM NEW MEXICO	SD SOUTH DAKOTA	
AZ ARIZONA	ID IDAHO	MI MICHIGAN	NY NEW YORK	TN TENNESSEE	AS AMERI[CAN SAMOA]
AR ARKANSAS	IL ILLINOIS	MN MINNESOTA	NC NORTH CAROLINA	TX TEXAS	CZ CANA[L ZONE]
CA CALIFORNIA	IN INDIANA	MS MISSISSIPPI	ND NORTH DAKOTA	UT UTAH	GU GUAM
CO COLORADO	IA IOWA	MO MISSOURI	OH OHIO	VT VERMONT	PR PUERT[O RICO]
CT CONNECTICUT	KS KANSAS	MT MONTANA	OK OKLAHOMA	VA VIRGINIA	VI VIRGI[N ISLANDS]
DE DELAWARE	KY KENTUCKY	NB NEBRASKA	OR OREGON	WA WASHINGTON	
DC WASHINGTON DC	LA LOUISIANA	NV NEVADA	PA PENNSYLVANIA	WV WEST VIRGINIA	CN CANA[DA]
FL FLORIDA	ME MAINE	NH NEW HAMPSHIRE	RI RHODE ISLAND	WI WISCONSIN	

D. POSSESSION LIMITS OF SOURCE AND SPECIAL NUCLEAR MATERIALS AND TRITIUM

SOURCE MATERIAL CEILING | G GRAMS / Kg KILOGRAMS | SNM CEILING | G GRAMS / Kg KILOGRAMS | IF FOR POWER REACTOR ("X" here)

*MATERIAL	AMOUNT	UNIT	CONFIG	ENRICH	*MATERIAL	AMOUNT	UNIT	CONFIG
U5 U235		G / Kg	S / UNS				G / Kg	S / UNS
U3 U233		G / Kg	S / UNS				G / Kg	S / UNS
PU Plutonium		G / Kg	S / UNS				G / Kg	S / UNS
UR Uranium		G / Kg	S / UNS				G / Kg	S / UNS
TH Thorium		G / Kg	S / UNS				G / Kg	S / UNS
		G / Kg	S / UNS				G / Kg	S / UNS
		G / Kg	S / UNS				G / Kg	S / UNS

H3 Tritium | CURIES / MILLICURIES / MICROCURIES | HIS CODES

*Use two digit codes | S SEALED | UNS UNSEALED

NRC Form 782
(1-82)

MATERIALS DATA INPUT – INDUSTRIAL, MEDICAL, SOURCE/SPECIAL NUCLEAR

A. TYPE OF ACTION AND IDENTIFICATION CODES

	NEW LICENSE		AMENDMENT TO RENEW LICENSE		AMENDMENT TO TERMINATE		VOID	DOCKET NUMBER	MAIL CONTROL NUMBER	CHANGE NAME/ADDRESS ("X" box)
	NEW LICENSE AND NEW LICENSEE	XX	OTHER AMENDMENT		CLERICAL CHANGE NO AMENDMENT	4		070-01489	025580	

B. INDICATIVE INFORMATION

INDIVIDUAL LICENSEES

NAME (Last, First, Middle)	NAME (Last, First, Middle)
NAME (Last, First, Middle)	NAME (Last, First, Middle)
NAME (Last, First, Middle)	NAME (Last, First, Middle)

ORGANIZATION LICENSEES

ORGANIZATION NAME (Alphabetic Sequence): GOODYEAR AEROSPACE CORP.

DEPARTMENT OR BUREAU:

ADDRESS

BUILDING, STREET	CITY	STATE	ZIP CODE
	AKRON	OH	44315

TYPE OF APPLICANT	DATE REQUEST RECEIVED	INSTITUTION CODE	PENDING PROG. CODE	ACTUAL PROG. CODE
U.S. GOVERNMENT AGENCY INDIVIDUAL LICENSEE 339 ORGANIZATIONAL LICENSEE	8/2/85	01149		

SECONDARY PROGRAM CODES (As required)

#1	#2	#3	#4	#5

LICENSE NUMBER	DATE LICENSE ISSUED OR ACTION COMPLETED	EXPIRATION DATE	
SNM-1461	OCTOBER 15, 1985	APRIL 1, 1986	

C. STATISTICAL INFORMATION

MEDICAL CATEGORY: ☐ FOR HUMAN USE ONLY ☐ FOR HUMAN AND NONHUMAN USE ☐ FOR NONHUMAN USE ONLY

POSSESSION OF THE MATERIAL IS AUTHORIZED IN ONE OF THE FOLLOWING AREAS

AND/OR IN THE STATE(S), TERRITORY(IES), COUNTRY CHECKED (At right)

☐ SAME AS "STATE" IN ADDRESS		☐ ALL STATES			☐ ALL NON-AGREEMENT STATES		
☐ AL ALABAMA	☐ GA GEORGIA	☐ MD MARYLAND	☐ NJ NEW JERSEY		☐ SC SOUTH CAROLINA	☐ WY WYOMING	
☐ AK ALASKA	☐ HI HAWAII	☐ MA MASSACHUSETTS	☐ NM NEW MEXICO		☐ SD SOUTH DAKOTA		
☐ AZ ARIZONA	☐ ID IDAHO	☐ MI MICHIGAN	☐ NY NEW YORK		☐ TN TENNESSEE	☐ AS AMERICAN SOMOA	
☐ AR ARKANSAS	☐ IL ILLINOIS	☐ MN MINNESOTA	☐ NC NORTH CAROLINA		☐ TX TEXAS	☐ CZ CANAL ZONE	
☐ CA CALIFORNIA	☐ IN INDIANA	☐ MS MISSISSIPPI	☐ ND NORTH DAKOTA		☐ UT UTAH	☐ GU GUAM	
☐ CO COLORADO	☐ IA IOWA	☐ MO MISSOURI	☐ OH OHIO		☐ VT VERMONT	☐ PR PUERTO RICO	
☐ CT CONNECTICUT	☐ KS KANSAS	☐ MT MONTANA	☐ OK OKLAHOMA		☐ VA VIRGINIA	☐ VI VIRGIN ISLANDS	
☐ DE DELAWARE	☐ KY KENTUCKY	☐ NB NEBRASKA	☐ OR OREGON		☐ WA WASHINGTON		
☐ DC WASHINGTON DC	☐ LA LOUISIANA	☐ NV NEVADA	☐ PA PENNSYLVANIA		☐ WV WEST VIRGINIA	☐ CN CANADA	
☐ FL FLORIDA	☐ ME MAINE	☐ NH NEW HAMPSHIRE	☐ RI RHODE ISLAND		☐ WI WISCONSIN		

D. POSSESSION LIMITS OF SOURCE AND SPECIAL NUCLEAR MATERIALS AND TRITIUM

SOURCE MATERIAL CEILING: ☐ G GRAMS ☐ Kg KILOGRAMS

SNM CEILING: ☐ G GRAMS ☐ Kg KILOGRAMS

IF FOR POWER REACTOR ☐ ("X" here)

*MATERIAL	AMOUNT	UNIT	CONFIG	ENRICH	*MATERIAL	AMOUNT	UNIT	CONFIG	ENRICH
U5 U235		G Kg	S UNS				G Kg	S UNS	
U3 U233		G Kg	S UNS				G Kg	S UNS	
PU Plutonium		G Kg	S UNS				G Kg	S UNS	
UR Uranium		G Kg	S UNS				G Kg	S UNS	
TH Thorium		G Kg	S UNS				G Kg	S UNS	
		G Kg	S UNS				G Kg	S UNS	
		G Kg	S UNS				G Kg	S UNS	
H3 Tritium		☐ CURIES ☐ MILLICURIES ☐ MICROCURIES			RIS CODES				

*Use two-digit codes S SEALED UNS UNSEALED

NRC Form 782
(1-82)

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7-77

MATERIALS DATA INPUT: INDUSTRIAL

REFERENCE

A. TYPE OF ACTION AND IDENTIFICATION CODE

NEW LICENSE	XXX AMENDMENT TO RENEW LICENSE	AMENDMENT TO TERMINATE	VOID	DOCKET NUMBER	MAIL CONTROL NUMBER	CHANGE NAME/ ADDRESS
NEW LICENSE AND NEW LICENSEE	OTHER AMENDMENT	CLERICAL CHANGE NO AMENDMENT 3		070-01489	11515	

B. INDICATIVE INFORMATION:

INDIVIDUAL LICENSEES

NAME (LAST, FIRST, MIDDLE)	NAME (LAST, FIRST, MIDDLE)
NAME (LAST, FIRST, MIDDLE)	NAME (LAST, FIRST, MIDDLE)
NAME (LAST, FIRST, MIDDLE)	NAME (LAST, FIRST, MIDDLE)

APPLICANT

ORGANIZATION NAME (ALPHABETIC SEQUENCE)

Goodyear Aerospace Corporation

DEPARTMENT OR BUREAU

ADDRESS

BUILDING, STREET	CITY	STATE	ZIP CODE
1210 Massillon Road	Akron	OH	44315

TYPE OF APPLICANT	DATE REQUEST RECEIVED	INSTITUTION CODE	PENDING PROG. CODE	ACTUAL PROG. CODE
☐ U.S. GOVERNMENT AGENCY ☐ INDIVIDUAL LICENSEE ☐ ORGANIZATIONAL LICENSEE 333	12/26/78	01140		

SECONDARY PROGRAM CODES AS REQUIRED:

#1	#2	#3	#4	#5

LICENSE NUMBER	DATE LICENSE ISSUED OR ACTION COMPLETED	EXPIRATION DATE	
SUM-1445			

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Withdrawn per B. Nixon 1-

see Proprietary Ltr per W. Crow

AEC FORM 783 (4-71)

U.S. ATOMIC ENERGY COMMISSION

MATERIALS DATA INPUT S/SNM

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A. TYPE OF ACTION –

- [X] NEW LICENSE
- [ ] NEW LICENSE AND NEW LICENSEE
- [ ] AMENDMENT TO NEW LICENSE
- [ ] OTHER AMENDMENT
- [ ] AMENDMENT TO TERMINATE
- [ ] CLERICAL CHANGE NO AMENDMENT
- [ ] VOID
- [ ] CHANGE LICENSEE NAME/ADDRESS

B. INDICATIVE INFORMATION:

DOCKET NUMBER	MAIL CONTROL NO.	DATE REQUEST REC'D	INSTITUTION CODE	PENDING PROG. CODE	ACTUAL PROG. CODE
070-01489	08227	10-30-73	01149	22140	43120

SECONDARY PROGRAM CODES AS REQUIRED:

#1	#2	#3	#4	#5

INDIVIDUAL LICENSEES

NAME (LAST, FIRST, MIDDLE)	NAME (LAST, FIRST, MIDDLE)
NAME (LAST, FIRST, MIDDLE)	NAME (LAST, FIRST, MIDDLE)
NAME (LAST, FIRST, MIDDLE)	NAME (LAST, FIRST, MIDDLE)

ORGANIZATION LICENSEES

ORGANIZATION NAME (ALPHABETIC SEQUENCE)
Goodyear Aerospace Corporation

DEPARTMENT OR BUREAU

TYPE OF ORGANIZATION

- [ ] U. S. GOVERNMENT AGENCY
- [ ] EDUCATIONAL INSTITUTION
- [ ] MEDICAL INSTITUTION
- [X] INDUST
- [ ] OTHER

ADDRESS

BUILDING, STREET	CITY	STATE	ZIP CODE
1210 Massillon Road	Akron	OH	44315

C. STATISTICAL INFORMATION:

LICENSE NUMBER	DATE LICENSE ISSUED OR ACTION COMPLETED	EXPIRATION DATE
SNM 1448	01-14-74	01-31-19

USAGE OF MEDICAL BYPRODUCT:

- [ ] FOR HUMAN USE ONLY
- [ ] FOR HUMAN AND NONHUMAN USE
- [ ] FOR NONHUMAN USE ONLY

POSSESSION OF THE MATERIAL IS AUTHORIZED IN ONE OF THE FOLLOWING AREAS:

- [X] SAME AS 'STATE' IN ADDRESS
- [ ] ALL STATES
- [ ] ALL AGREEMENT STATES
- [ ] ALL NON-AGREEMENT STATES

AND/OR IN THE STATE(S), TERRITORY(S), COUNTRY CHECKED BELOW:

[ ] ALABAMA -AL	[ ] GEORGIA -GA	[ ] MARYLAND -MD	[ ] NEW JERSEY -NJ	[ ] SOUTH CAROLINA -SC	[ ] WYOMING -WY		
[ ] ALASKA -AK	[ ] HAWAII -HI	[ ] MASSACHUSETTS -MA	[ ] NEW MEXICO -NM	[ ] SOUTH DAKOTA -SD			
[ ] ARIZONA -AZ	[ ] IDAHO -ID	[ ] MICHIGAN -MI	[ ] NEW YORK -NY	[ ] TENNESSEE -TN	[ ] AMERICAN SAMOA -AS		
[ ] ARKANSAS -AR	[ ] ILLINOIS -IL	[ ] MINNESOTA -MN	[ ] NORTH CAROLINA -NC	[ ] TEXAS -TX	[ ] CANAL ZONE -CZ		
[ ] CALIFORNIA -CA	[ ] INDIANA -IN	[ ] MISSISSIPPI -MS	[ ] NORTH DAKOTA -ND	[ ] UTAH -UT	[ ] GUAM -GU		
[ ] COLORADO -CO	[ ] IOWA -IA	[ ] MISSOURI -MO	[ ] OHIO -OH	[ ] VERMONT -VT	[ ] PUERTO RICO -PR		
[ ] CONNECTICUT -CT	[ ] KANSAS -KS	[ ] MONTANA -MT	[ ] OKLAHOMA -OK	[ ] VIRGINIA -VA	[ ] VIRGIN ISLANDS -VI		
[ ] DELAWARE -DE	[ ] KENTUCKY -KY	[ ] NEBRASKA -NB	[ ] OREGON -OR	[ ] WASHINGTON -WA			
[ ] WASHINGTON DC -DC	[ ] LOUISIANA -LA	[ ] NEVADA -NV	[ ] PENNSYLVANIA -PA	[ ] WEST VIRGINIA -WV	[ ] CANADA -CN		
[ ] FLORIDA -FL	[ ] MAINE -ME	[ ] NEW HAMPSHIRE -NH	[ ] RHODE ISLAND -RI	[ ] WISCONSIN -WI			

D. POSSESSION LIMITS OF SOURCE AND SPECIAL NUCLEAR MATERIALS AND TRITIUM

TYPE OF MATERIAL	AMOUNT AUTHORIZED	UNIT OF MEASUREMENT	SEALED/UNSEALED CONFIGURATION	MAXIMUM ENRICHMENT
✓ U235	0000349.0	[X] GRAMS [ ] KILOGRAMS	[ ] SEALED [X] UNSEALED	9 3 5
U233		[ ] GRAMS [ ] KILOGRAMS	[ ] SEALED [ ] UNSEALED	'X' HERE IF FOR POWER REACTOR [ ]
PU		[ ] GRAMS [ ] KILOGRAMS	[ ] SEALED [ ] UNSEALED	
✓ URANIUM	0000046.0	[ ] GRAMS [X] KILOGRAMS	[ ] SEALED [X] UNSEALED	
THORIUM		[ ] GRAMS [ ] KILOGRAMS	[ ] SEALED [ ] UNSEALED	RIS CODE
TRITIUM		[ ] MICRO-CURIES [ ] MILLI-CURIES [ ] CURIES		X G G

E. FEE CATEGORIES:

[ ] EX	[ ] 1A	[ ] 1B	[ ] 1C	[ ] 2A	[ ] 2B	[ ] 3A	[ ] 3B	[ ] 3C	[ ] 3D	[ ] 3E	
[ ] 4A	[ ] 5A										

NRC FORM 785 (7-77)

U.S. NUCLEAR REGULATORY COMMISSION
MATERIALS DATA INPUT INDUSTRIAL

FC 24 17041 4

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A. TYPE OF ACTION AND IDENTIFICATION CODES

1 [ ] NEW LICENSE [XXX] AMENDMENT TO RENEW LICENSE [ ] AMENDMENT TO TERMINATE [ ] VOID

[ ] NEW LICENSE AND NEW LICENSEE [ ] OTHER AMENDMENT [ ] CLERICAL CHANGE NO AMENDMENT 3

DOCKET NUMBER	MAIL CONTROL NUMBER	CHANGE NAME/ ADDRESS
070-01489	11616	[ ]

B. INDICATIVE INFORMATION:

INDIVIDUAL LICENSEES

NAME (LAST, FIRST, MIDDLE)	NAME (LAST, FIRST, MIDDLE)
NAME (LAST, FIRST, MIDDLE)	NAME (LAST, FIRST, MIDDLE)
NAME (LAST, FIRST, MIDDLE)	NAME (LAST, FIRST, MIDDLE)

ORGANIZATION LICENSEES

ORGANIZATION NAME (ALPHABETIC SEQUENCE)

3 Goodyear Aerospace Corporation

DEPARTMENT OR BUREAU

5 ADDRESS

BUILDING, STREET	CITY	STATE	ZIP CODE
1210 Massillon Road	Akron	OH	44315

6

TYPE OF APPLICANT	DATE REQUEST RECEIVED	INSTITUTION CODE	PENDING PROG. CODE	ACTUAL PROG. CODE
[ ] U.S. GOVERNMENT AGENCY [ ] INDIVIDUAL LICENSEE [ ] ORGANIZATIONAL LICENSEE 333	12/26/78	01140		

SECONDARY PROGRAM CODES AS REQUIRED:

#1	#2	#3	#4	#5

7

LICENSE NUMBER	DATE LICENSE ISSUED OR ACTION COMPLETED	EXPIRATION DATE	
SNM-1448	6-2-79	8-31-84	

C. STATISTICAL INFORMATION:

MEDICAL CATEGORY:

[ ] FOR HUMAN USE ONLY [ ] FOR HUMAN AND NONHUMAN USE [ ] FOR NONHUMAN USE ONLY

POSSESSION OF THE MATERIAL IS AUTHORIZED IN ONE OF THE FOLLOWING AREAS:

[ ] SAME AS "STATE" IN ADDRESS [ ] ALL STATES [ ] ALL NON-AGREEMENT STATES

AND/OR IN THE STATE(S), TERRITORY(S), COUNTRY CHECKED BELOW:

[ ] ALABAMA	-AL	[ ] GEORGIA	-GA	[ ] MARYLAND	-MD	[ ] NEW JERSEY	-NJ	[ ] SOUTH CAROLINA	-SC	[ ] WYOMING	-WY
[ ] ALASKA	-AK	[ ] HAWAII	-HI	[ ] MASSACHUSETTS	-MA	[ ] NEW MEXICO	-NM	[ ] SOUTH DAKOTA	-SD		
[ ] ARIZONA	-AZ	[ ] IDAHO	-ID	[ ] MICHIGAN	-MI	[ ] NEW YORK	-NY	[ ] TENNESSEE	-TN	[ ] AMERICAN SAMOA	-AS
[ ] ARKANSAS	-AR	[ ] ILLINOIS	-IL	[ ] MINNESOTA	-MN	[ ] NORTH CAROLINA	-NC	[ ] TEXAS	-TX	[ ] CANAL ZONE	-CZ
[ ] CALIFORNIA	-CA	[ ] INDIANA	-IN	[ ] MISSISSIPPI	-MS	[ ] NORTH DAKOTA	-ND	[ ] UTAH	-UT	[ ] GUAM	-GU
[ ] COLORADO	-CO	[ ] IOWA	-IA	[ ] MISSOURI	-MO	[ ] OHIO	-OH	[ ] VERMONT	-VT	[ ] PUERTO RICO	-PR
[ ] CONNECTICUT	-CT	[ ] KANSAS	-KS	[ ] MONTANA	-MT	[ ] OKLAHOMA	-OK	[ ] VIRGINIA	-VA	[ ] VIRGIN ISLANDS	-VI
[ ] DELAWARE	-DE	[ ] KENTUCKY	-KY	[ ] NEBRASKA	-NB	[ ] OREGON	-OR	[ ] WASHINGTON	-WA		
[ ] WASHINGTON, DC	-DC	[ ] LOUISIANA	-LA	[ ] NEVADA	-NV	[ ] PENNSYLVANIA	-PA	[ ] WEST VIRGINIA	-WV	[ ] CANADA	-CN
[ ] FLORIDA	-FL	[ ] MAINE	-ME	[ ] NEW HAMPSHIRE	-NH	[ ] RHODE ISLAND	-RI	[ ] WISCONSIN	-WI		

D. POSSESSION LIMITS OF SOURCE AND SPECIAL NUCLEAR MATERIALS AND TRITIUM

SOURCE MATERIAL CEILING ____ [ ] GRAMS [ ] KILOGRAMS

SNM CEILING ____ [ ] GRAMS [ ] KILOGRAMS

[ ] "X" HERE IF FOR POWER REACTOR

	AMOUNT	UNIT	CONFIG.	ENRICH.	MAT.	AMOUNT	UNIT	CONFIG.	ENRICH.
U5		[ ] G [ ] KG	[ ] S [ ] UNS				[ ] G [ ] KG	[ ] S [ ] UNS	
U3		[ ] G [ ] KG	[ ] S [ ] UNS				[ ] G [ ] KG	[ ] S [ ] UNS	
PU		[ ] G [ ] KG	[ ] S [ ] UNS				[ ] G [ ] KG	[ ] S [ ] UNS	
UR		[ ] G [ ] KG	[ ] S [ ] UNS				[ ] G [ ] KG	[ ] S [ ] UNS	
TH		[ ] G [ ] KG	[ ] S [ ] UNS				[ ] G [ ] KG	[ ] S [ ] UNS	
		[ ] G [ ] KG	[ ] S [ ] UNS				[ ] G [ ] KG	[ ] S [ ] UNS	
		[ ] G [ ] KG	[ ] S [ ] UNS				[ ] G [ ] KG	[ ] S [ ] UNS	
H3		[ ] CURIES [ ] MICROCURIES [ ] MILLICURIES			RIS CODES				

U5=U235, U3=U233, PU=PLUTONIUM, UR=URANIUM, TH=THORIUM, H3=TRITIUM, G=GRAMS, KG=KILOGRAMS, S=SEALED, UNS=UNSEALED

AEC FORM 783 (4-71)

MATERIALS DATA INPUT

4 REFERENCE COPY

DOCKET NUMBER	MAIL CONTROL NO.	DATE REQUEST REC'D	PROGRAM CODE (PRIMARY)
070-01489	08227	10-30-73	22140

SECONDARY PROGRAM CODES:

#1	#2	#3	#4	#5

INDIVIDUAL LICENSEES

NAME	NAME
NAME	NAME
NAME	NAME

ORGANIZATION LICENSEE

ORGANIZATION NAME: Goodyear Aerospace Corporation

DEPARTMENT OR BUREAU:

TYPE OF ORGANIZATION: U. S. GOVERNMENT AGENCY | EDUCATIONAL INSTITUTION | MEDICAL INSTITUTION | X INDUST | OTHER

ADDRESS: BUILDING, STREET: 1210 Massillon Road | CITY: Akron | STATE: OH | ZIP CODE: 44315

APPLICANT'S COMMUNICATION DATED:	CLASSIFICATION	ASSIGNED TO:	RESULTING AMD. NO.
Oct. 23, 1973	U		

ENCLOSURES:

Normal Source Material and Special Nuclear Material License Part I Oc tober 1973

(6 cys rec'd.) In reports Folder

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Ltr. trans. the above for a new special nuclear material license,.....

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PDR

OTHER REFERRALS NAME	DATE	NAME	DATE
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