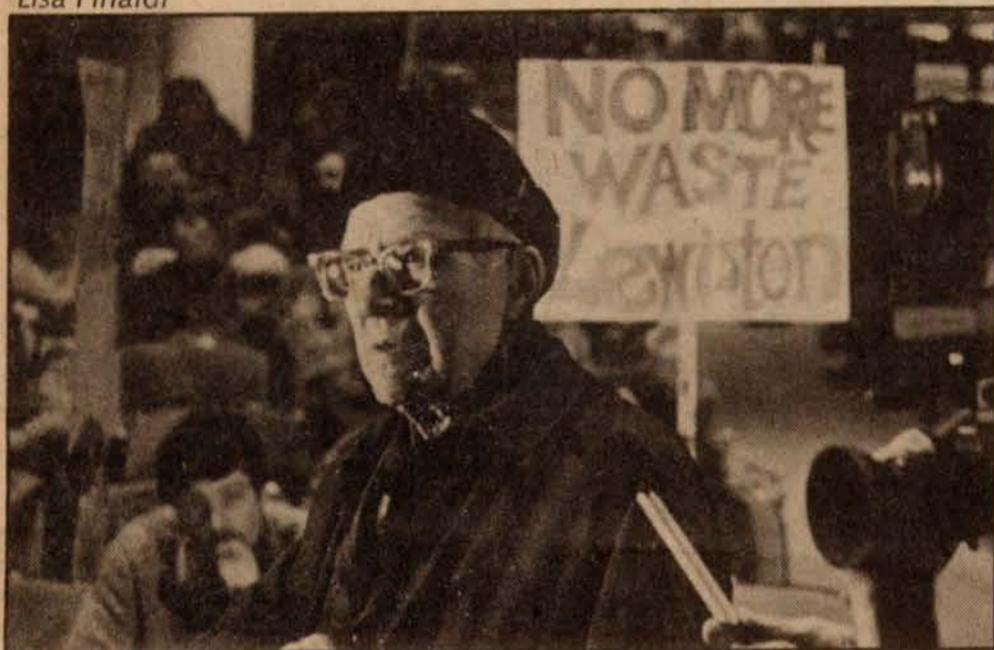


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# the Waste Paper

Volume 5 Number 1

Lisa Finaldi



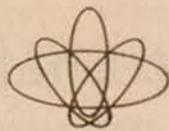
Lisa Finaldi



Jerry McGuire

*Citizens at a hearing on a nuclear waste dump in Lewiston, N.Y. urge the Department of Energy and the contractor, Bechtel, to clean up the site and halt a proposal to bring additional waste in. Lewiston, north of Niagara Falls, was formerly used to process uranium for the first atomic bomb. A K-12 school is less than 1 mile from the site.*

**Radioactive Smoke Detectors, page 5 ... Inside Brookhaven, Long Island, page 1 ... Referendum victory in Mass., page 1**



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## Inside Brookhaven

### Long Island Lab Pollutes Peconic River

"Long Island has no reservoirs. We are dependent solely on wells for drinking water. What Brookhaven dumps into the groundwater, we end up drinking. Drop by drop eventually all our water will be contaminated." This is Simon Perchick speaking. Now a private lawyer, in 1975-1980, Perchick was Assistant District Attorney of Suffolk County.

He is talking about Brookhaven National Laboratory, located in central Long Island, 10 miles from where the island splits into north and south forks (see map). The laboratory is currently dumping "low-level" radioactive waste into Long Island's groundwater and the nearby Peconic River. (*The Waste Paper* uses the term "low-level" nuclear waste in quotation marks because this type of waste has not been defined. It often contains high-level material like cesium-137 and strontium-90.) Besides seepage from an old landfill and accidental spillage into an on-site well, the lab deposits a large amount of tritium directly into the Peconic River. As a result, the Peconic has the highest level of tritium of any river in New York State - except for Buttermilk and Cattaraugus Creeks, outside of West Valley, 35 miles south of Buffalo, right after periodic pumping of the West Valley nuclear waste burial trenches.

**The Best and the Brightest?** Brookhaven was established shortly after World War II to continue "the teamwork of government and science that had proven effective in wartime to ensure the continued progress of nuclear energy." It is one of the youngest of the national laboratories: most of the others including Oak Ridge, Argonne and Los Alamos, were opened during World War II specifically to participate in the atomic bomb project. On its 5,265-acre site, the lab is technically not a federal facility, but a non-profit research management corporation run by an advisory board of northeastern universities. It is funded largely by the U.S. Department of Energy (DOE). Although Brookhaven publicizes its application of basic research, which ranges from studies of protein structure and complex crystals to transporting energy on superconducting power lines, its main business is research and development support for the nuclear industry. The laboratory spent about 30 percent of its \$154.5 million budget in 1981 on energy technology (the largest single category), and 20 percent on basic energy sciences, a category which also includes nuclear energy-related research.

Most of Brookhaven's radioactive waste is generated by two high energy accelerators, the Alternating Gradient Synchrotron and the Tandem Van de Graaff, and by two nuclear reactors, a 5-megawatt medical reactor, and a 60-megawatt high flux beam reactor.

**Waste Management.** Brookhaven has various methods for disposing of this waste. Some "low-level" waste, such as animal carcasses which have been injected with radioactive tracers, and scintillation fluids, is incinerated. The hot ash is then used for filler in concrete casks used for shipping other "low-level" waste off-site. Other "low-level" waste passes through the sanitary sewage treatment plant and is piped into the Peconic River. More toxic "low-level" waste, miscellaneous equipment, as well as material generated by the reactor (including cesium, strontium, barium, phosphorous and tritium) is stored in concrete casks in waste management buildings, until enough has accumulated to ship off-site.

Irradiated fuel rods from the high flux beam reactor are removed at the rate of seven of the 28 fuel assemblies every two weeks. These rods have a burn-up of 3,300 megawatt days per metric tons of uranium. These were shipped to Savannah River, South Carolina, until New York city passed a ban on transporting irradiated fuel through its city streets in 1976. They are now being kept on-site in an un-



This is one of the two nuclear reactors on site at Brookhaven National Labs on Long Island. Brookhaven's work is research and development for the advancement of nuclear technologies. *Karl Grossman*

derwater storage pool. Brookhaven claims there is enough storage capacity to last until February 1984.

The legacy of past waste disposal still poses a threat to Long Island's water. In 1960, five curies of radioactive slurry, containing strontium-90, were accidentally poured into an on-site well, instead of into a storage tank nearby. Brookhaven acknowledges there was "resulting groundwater contamination, and its general movement is south," but claims that in 12 years, the material has only traveled 500 feet. Len Emma, assistant to the Director at Brookhaven, admitted to this author, however that groundwater travels at a rate of six inches per day. Although some migration is slowed down, due to the fact that certain radio-nuclides will cling to soil, Emma's 500-ft. migration claim seems highly questionable. There has been no independent assessment of the movement of the radioactive material.

**Landfill Ban.** Some of Brookhaven's "low-level" waste was dumped in a landfill area until 1977. Then New York State used the federal Clean Water Act to pressure Brookhaven to close the landfill. According to Emma, fission products, such as strontium, barium, tritium, carbon-14 and phosphorous were deposited in the landfill, where they still remain. Asbestos is still being added to the dump, according to Emma. He admits that "there's contamination between the landfill and the groundwater that's clearly defined," but also claims that "we haven't seen anything in terms of movement of radionuclides within several hundred feet from the landfill."

According to Emma, Brookhaven applied to the DOE two years ago for permission to *reopen* the landfill for radioactive waste. "The state and federal

*Continued on page 7*

## Mass. Votes for Citizen Control on Nuclear Waste Dump Siting

Despite a slick, well-funded, campaign to kill Proposition #3 on November 2, 1982, Massachusetts residents voted overwhelmingly (67% to 33%) to support the first low-level nuclear waste dump site referendum in the country. Proposition #3 establishes a law requiring the state legislature to determine that a proposed low-level waste facility involves the best available technology in terms of overall cost, reliability and environmental impacts. Furthermore, the legislature must approve any site for a proposed waste facility. Finally, the location and type of a proposed low-level waste facility must be approved by the voters in a state-wide general election. Proposition #3 specifically exempted medical and bio-research waste from the Act.

A Boston Edison and Yankee Atomic backed Committee for Responsible Policy on Low-Level Nuclear Waste launched a scurrilous propaganda blitz just before the election. The Committee, which was quickly dubbed the Committee for an "Irresponsible" Policy by Proposition #3 supporters, papered Massachusetts with pamphlets stating that patients would lose life-saving cancer treatments, if the law passed. In addition, voters were warned medical re-

search would come to a halt. These claims, which *deliberately* ignored the fact that the proposed law would *exempt* medical and bio-research applications, apparently backfired.

The victory of Proposition #3 attests to the amazing strength and vitality of an understaffed and minimally financed grassroots campaign. The victory was even the more notable since most newspapers in the state came out against the referendum - arguing that nuclear waste issues were too technical to be solved by citizens. Furthermore, many groups such as the Union of Concerned Scientists, Physicians for Social Responsibility, and even Mass. Public Interest Research Group sat on the fence during the debate. The Sierra Club, however, supported the referendum as did just about every politician in the state.

Citizens wishing a copy of the Massachusetts Act called the "Nuclear Power and Waste Disposal Voter Approval and Legislature Certification Act" should send \$1.00 and a self-addressed, stamped envelope to *the Radioactive Waste Campaign, 78 Elmwood, Buffalo, N.Y. 14201.*



# Radscope

## Navy, DOE Still Eye Ocean for Waste

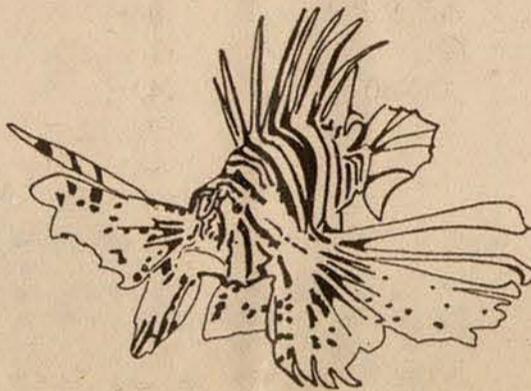
Radioactive waste from a Middlesex, N.J., Manhattan Project dump may end up in the Atlantic Ocean if citizens do not take prompt action. By December of 1982, the Environmental Protection Agency (EPA) expects the Department of Energy (DOE) to request a permit for ocean dumping of over *one million cubic feet* of contaminated soil from Middlesex. Waste from Lewiston, N.Y., could also become part of this plan for ocean dumping. EPA claims that this permit would *not* require any changes in current regulations.

The Navy also sees the ocean as a graveyard for old Poseidon radioactive submarines. As the new Trident submarines are launched, the U.S. is required to dispose of old subs so as to meet quotas of current international arms treaty agreements.

Two prospective areas for dumping are in northern California, off the Pacific coast of Cape

Medocino and Cape Hatteras, off the Atlantic coast of North Carolina. The California Coastal Commission has already notified the federal government that it will block any dumping of radioactive waste in the ocean. For more information on ocean dumping, order "Silent Ocean," in Vol. 4, No. 3 of *the Waste Paper* which details the sites where radioactive waste was dumped in the ocean in the 1950's.

Citizens should write their Congressional representative in Washington, urging support for HR 6113 and the Anderson amendment to the bill in the Nov.-Dec. lame-duck session. Anderson's amendment to HR 6113 would allow *either* House of Congress to veto *any* permit for ocean dumping of radioactive waste.



by Brian H. Starkey

## Who's to Pay?

Chemical Bank has filed a suit to force ratepayers in 88 public utility systems in the Pacific Northwest to pay \$7 billion for electricity they will never receive. The bank is acting as a trustee for bondholders who want payment on bonds floated to finance two nuclear power plants which were cancelled last year. A group called Irate Ratepayers wants the bondholders themselves to absorb the debt on the cancelled nukes.

## More on Chalk River Shipments

Nuclear Assurance Corporation (NAC) has requested the U.S. Department of Transportation (DOT) to find bans and restrictions in Michigan, Vermont and New York invalid.

The request made October 28, 1982, pertains to shipments of irradiated fuel due to travel from the Chalk River research reactor in Ontario to Savannah River, South Carolina. NAC's request will be the first test case of how the DOT is going to interpret the New York city court decision regarding the new federal regulations that would overturn many local ordinances. The New York city court decision stated the regulations would not apply to densely populated areas and requested DOT to complete an environmental impact statement.

If NAC gets its way, shipments will start rolling again in Spring 1983. The proposed N.Y. route via the Northway, Route 87, would have utilized state highways in urban areas of Albany-Schenectady-Troy and Binghamton, N.Y. On Oct. 7, 1982, Governor Carey of N.Y. sent a telegram to the Secretary of

Transportation at the DOT. Carey asked that *no shipments* be made because using state highways through urban areas is in direct conflict with the federal regulations.

It is unclear what action Michigan, New York and Vermont are going to take. The New York Attorney General may sue to prevent any further shipments until an environmental impact statement has been filed and alternative modes of transport studied.

For more on Chalk River, read Vol. 4, No. 4, of *the Waste Paper*, "Atoms for Peace Come Home." For more information on DOT regulations order our new fact sheet on this issue for 50¢ from the Buffalo office.

## GE Cask Shown Inadequate

A railroad cask for shipping irradiated fuel has been suspended from transporting fuel from a boiling water reactor since September, 1982. The weight of the basket which holds fuel in the General Electric IF-300 cask was found to be heavier than previously analyzed.

The heavier weight effects the 70-ton cask's stability and the fuel could reach criticality following a drop of 30 feet. This ban immediately effects the shipping of irradiated fuel from the Cooper boiling water reactor near Lincoln, Nebraska. The Nebraska Public Power District has plans to ship 1,056 irradiated fuel rods from the Cooper reactor to a storage site in Morris, Ill.

## 700 Citizens Fight Back

Seven hundred (700) citizens in the tiny town of Wilsonville have forced one of the biggest chemical waste firms in the U.S. to start exhuming about 100,000 drums of toxic chemicals. It took five years of pickets, letter-writing, testifying at hearings, and a law suit that was eventually joined by the Illinois Attorney General. But as of September, 1982, SCA Services of Boston has started the unprecedented exhumation project.

For more information about the precedents for exhuming both radioactive and toxic chemical waste, order our new Resource Paper "Insecure Landfills: The Exhumation Option," from the Buffalo office for \$5. The report is a 30-page study of several exhumation projects across the U.S.

## Dig Up Sheffield?

Tritium has moved *another 300 feet* from the Sheffield, Illinois, nuclear waste dump site. This is the second reported off-site migration in 1982. In February, tritium was found 150 feet from the site. The Sheffield waste commercial dump, located 50 miles north of Peoria, was closed in 1978.

Illinois Attorney General Tyrone Fahner will seek a court ruling ordering U.S. Ecology Inc., the former manager of the site, to take emergency steps to remedy the problem. Fahner also stated that if U.S. Ecology could not prove in court that the site can be made safe, "they will have to *remove* all or part of the radioactive materials at their own costs." (Emphasis is *the Waste Paper's*.)

## Uranium Trail

*The Waste Paper* reported on shipments of fresh uranium which is being illegally exported from Namibia, (Southwest Africa) to the U.S. through Canada and Baltimore, Maryland. (See *Spring, 1982 edition, Vol. 4, No. 2*). Namibia is a United Nations trust territory and South Africa has been violating this agreement since 1947.

Mary Davis, of the Kentucky Sierra Club, did some follow-up fact finding of her own and here is what she discovered. Davis spoke with Gene Sparks from the Nuclear Regulatory Commission (NRC).

In June of 1982, Sparks said the U.S. imports about 123,000 lbs. of yellowcake per year for enrichment from Namibia. According to the NRC, Namibian yellowcake amounts to 3% of our annual imports. Of this, 77% is exported and the remaining 23% is kept for use in the U.S.

The destination of the imports vary according to contracts, some of the material is just converted into uranium hexafluoride and exported, but some is converted, enriched and fabricated into fuel pellets. This is a confusing nuclear trail to say the least.

Sparks also noted that uranium entering the U.S. as yellowcake would be shipped to Metropolis, Ill. (Allied Chemical) or Gore, Okla. (Kerr-McGee) for conversion to uranium hexafluoride. This material goes on to Paducah, KY. or Oak Ridge, Tenn. for enrichment.

Fuel fabrication is done in Wilmington, N.C. (General Electric), Columbia, S.C. (Westinghouse), Richland, Wash., Lynchburg, Va. or Windsor, Conn. Sparks also mentioned that the uranium hexafluoride from Canada usually enters through the Port of Huron in Michigan.

Thanks to Mary Davis, Nuclear Fuel Chair, from the Kentucky Sierra Club for the information.

Neither Nebraska nor Illinois citizens are willing to allow this hazardous material to move through their communities. In both states, citizens are working to pass ordinances restricting the shipment of irradiated fuel. Cooper has enough room in its fuel pool to store irradiated fuel until 1990. Citizens should begin pushing for phase out of reactors that cannot accommodate the irradiated fuel in the available on-site pool.

## Watch Those Casks

### Tri-State suffers two accidents

If local officials are telling you "don't worry, there is no hazard in shipping 'low level' nuclear waste," ask them why Tri-State had *two* nuclear waste shipping accidents in the month of November.

On November 3, a Tri-State truck collided with a car near the community of Hilda, several miles from the Barnwell, South Carolina, burial ground. The truck ran off the road and flipped upside down. The driver was killed. The cables holding the waste canisters onto the truck snapped and the containers fell to the road. The containers were empty at the time and no radioactive material was released.

The second accident occurred on November 18. As a Tri-State waste truck pulled out of a motel where the driver had spent the night, the truck cab separated from the trailer. None of the 59 drums filled with "low level" nuclear waste fell off and no radioactive material was released in this accident. The company had no explanation as to how the truck trailer and cab got unhooked.

## the Waste Paper

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Thanks to all of our guest writers and artists for their terrific work on this issue. Special thanks to Accu-type and our proofreaders for their time and patience.

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Winter, 1982

## Calculating Your IFP

by Jim Norton

Over 106 million curies of radioactivity are sitting in the irradiated fuel pool (IFP) at Ginna. That's a whopping amount of poison to have in your backyard. Guest author Jim Norton provides you with a valuable guide on how to calculate the amount of radioactivity at your friendly neighborhood reactor.

Citizens are becoming concerned about the build-up of poisonous irradiated\* fuel in irradiated fuel pools at reactor sites. Enormous inventories of dangerous radioactive materials are sitting in these storage pools. The pools' water is regularly recirculated and cooled to prevent a build-up of heat in the pools. Originally, nuclear utilities planned to ship this fuel to a "permanent" underground dump site or to an AFR — an away-from-reactor — centralized storage pool which would store the toxic fuel "temporarily" until it was moved to a permanent site. But citizen opposition and changing regulations have kept the fuel on site.

In the case of pressurized water reactors (PWRs), this hazard is particularly alarming, because the irradiated fuel is stored *outside* the massive containment building that contains the nuclear reactor core. The fuel is stored in an auxiliary building which has not been designed to meet the same strict seismic or tornado criteria as the containment building. The reason the fuel is stored outside the containment building is that in a pressurized water reactor the steam turbines take up so much space that there is no space left for the irradiated fuel

\* Irradiated fuel is sometimes called spent fuel. The Waste Paper prefers the term irradiated because spent implies something that is wasted, that is no longer toxic. Actually, irradiated fuel is about 1 million times more toxic than fresh uranium fuel when it is first placed in the reactor.

pool. In the case of a boiling water reactor (BWR), the irradiated fuel pool is often *inside* the containment structure.

**How Many Curies?** So you live near a reactor and want to calculate how many curies\*\* of radioactivity are in the irradiated fuel pool. You want to know if a tornado ripped off the roof of the fuel pool dropping steel girders down into the pool, if a crack de-

veloped in the pool and the cooling water drained off, if an accident in the reactor shuts off the cooling system, how serious an accident might result. The first step in answering this question is to figure out the number of curies present today in the fuel pool. Henceforth in this article the term irradiated fuel pool will be designated by the acronym IFP.

Now 240 different radionuclides are formed by

## Curie Content in Ginna Irradiated Fuel Pool (by year)

Graph B

Date Fuel Rod Assemblies Removed from Core	Curies	Metric Tons of Uranium	# of Assemblies
1/ 1/74	1,509,266	4.752	12
3/10/75	3,234,513	9.9	25
1/29/76	5,330,026	14.256	36
4/15/77	7,782,515	16.144	41
3/25/78	9,003,072	16.236	41
2/10/79	11,893,711	16.236	41
3/29/80	14,837,452	14.256	36
4/18/81	20,038,671	11.088	28
1/26/82	33,337,140	8.727	24
(as of 7/25/82)	106,966,366	111.595	284

\*\* A curie is a measure of radioactivity the way mph is a measure of speed. One curie equals 37 billion emissions of particles or waves per second. Government standards designated "permissible" levels of radioactivity in one-millionths and one-trillionths of one curie.

the fissioning process inside a reactor core. This complicates the radioactivity and half-life decay characteristics.

The purpose of this article is to show that by making certain simplifying assumptions and using tables that account for the major radioactivity a rela-

Continued on page 4

## More on NL Industries in NJ and NY

by Anne Rabe and Tom Ellis

NL Industries, formerly National Lead, is a multi-national energy company with sales of \$2.5 billion and profits well over \$100 million per year. During the last 10 years, NL has grown rapidly. President Ray Adam has rebuilt the fledgling conglomerate, using oil drilling services as the base. He earns \$800,000 per year.

NL sold off its not-so-profitable divisions and invested hundreds of millions in acquiring companies that manufacture drill bits, hydraulics, remote controls and well workovers. NL is now primarily an oil drilling services and equipment company. They are the world's largest manufacturer of baroid — a vital lubricant and flushing agent used in all oil drilling.

NL is notorious in New Jersey for their environmental destruction — no other company has been more heavily fined. In the last 10 years, they have paid \$1.29 million in penalties for 60 air and water violations. This September, NL shut down its Sayerville, N.J., plant, just south of Staten Island, which converted titanium ore into titanium oxide. Before the closing, NL had been dumping 1.9 million tons of toxic waste into the Atlantic Ocean annually and was cited by the *New York Times* as being America's largest ocean dumper of industrial wastes. NL's dumping was strongly protested by Greenpeace and other environmental groups.

In New York's Adirondacks, the D&H Railroad has leased tracks leading to an NL titanium mine. D&H is currently suing NL for \$500,000, citing negligent upkeep which led to a derailment.

NL also has a large nuclear division with plants in several states. At one time, they claimed to be the largest commercial supplier of depleted uranium in the U.S. NL is heavily involved in the transportation of irradiated nuclear fuel. It manufactures the casks which carry radioactive fuel. In New York, NL casks are used to transport irradiated fuel from the Chalk River nuclear research reactors in Ontario, Canada, to the Savannah River plant in South Carolina. More on NL in the Spring 1983, *Waste Paper*. ☸

## Waste Graces Wayne

Wayne, New Jersey, twenty-five miles west of New York City, is an unlikely place for a nuclear waste dump. With its well-kept lawns, clean neighborhoods and shopping centers, the town is a look-alike to suburban America. But there is one difference — Wayne is a dump for thorium wastes.

In 1948, Rare Earths, Inc., under contract with the Atomic Energy Commission (AEC), began extracting thorium from a special type of sand called monazite. Thorium is a long-lived radioactive substance, needed to create uranium-233 for atomic bombs. Uranium-233 has now been replaced by plutonium. Rare Earths was purchased by Grace & Co. in 1956. Grace & Co. is also the former owner of Nuclear Fuel Services, the shut-down reprocessing plant at West Valley, N.Y.

The radioactive residue from the chemical extraction process was piled in uncovered mounds on the Wayne property. During heavy rains, water ran off an adjacent hill, carrying the thorium residue into a local stream, Sheffield Brook. Residents say the brook turned white during some rainstorms. Former Grace workers claim thorium waste was purposefully dumped into Sheffield Brook during periods of heavy run-off. In 1959, the AEC expressed alarm at the growing piles of thorium waste and asked Grace to come up with a solution.

**Unlined Pits** The mounds were eventually buried illegally in unlined pits on the Grace site, sometime between 1960 and 1964. A recent radiation survey by helicopter of the entire Town of Wayne has located another large *unlicensed* dump in the northwest corner of the town, known as the Riverdale section. Former Grace workers identified the dump. A local group, Concerned Citizens of Wayne, pressured federal officials to do the air survey which revealed the exact location of the Riverdale dump.

Analysis of spotty AEC records (most Grace & Co. records were destroyed in a fire of mysterious origin in 1977) shows that 76 tons of thorium, in 1,300 tons of residue, were buried at the Grace & Co. dump, and an unknown amount at the Riverdale dump. Recent Nuclear Regulatory Commission (NRC) testing shows that additional off-site areas have become contaminated. Piles of thorium waste have been found along Sheffield Brook and nearby Sheffield Park where children play. The radioactivity is at 40 times background levels and exceed the

standards set by the Environmental Protection Agency for cleanup by a wide margin. The EPA standards are 5 pCi/g, whereas off-site locations have readings up to 562 pCi/g. Attempts by the mayor to re-open Sheffield Park were quickly withdrawn when Concerned Citizens collected 3,500 signatures on petitions in the period of one week, a tremendous response considering the Town of Wayne has only 55,000 residents.

The Grace & Co. site itself is expected to have radiation levels greatly exceeding off-site readings. An NRC survey report is due in December. A Department of Energy (DOE) report on the Riverdale dump is also in the pipeline. The full extent of radioactive contamination in Wayne will then be known. DOE intends to include the site in its program for remedial action at all Manhattan Project sites.

**Questionable Circumstances** Concerned Citizens want the illegal dumps cleaned up and have pressured the local Congressman Bob Roe for action. Other than performing measurements, no federal or state agency has come up with a clean-up plan. If Wayne follows the path of Canonsburg, Pa., Middlesex, N.J., and other Manhattan Project sites, tons of radioactive material which has moved off-site will be dug up and returned to the Grace & Co. site to be placed in a large, unstable, pile, all at federal expense. Though the Grace & Co. license was terminated in 1974, under questionable circumstances, (a former AEC inspector became consultant to the company), it is still owner of the Wayne site. The company may have some financial responsibility. Grace & Co., whose company motto reads, "one step ahead of the times," has maintained a low profile in the controversy.

The larger question of what to do with Manhattan Project waste dumps scattered about the country, has not been addressed by federal and state agencies. If no further action is taken, Manhattan Project sites such as Wayne, will join closed low-level waste dumps, such as West Valley, and mothballed nuclear reactors, as permanent reminders of this generation's nuclear folly. The brief period of operation of all these companies will bring thousands of years of monitoring and maintenance for future generations. ☸

## It Came in Through the Bathroom Window?

by Professor Zappo Teller, former A-bomb enthusiast

Bathrooms, one must admit, are not standard topics for journals like *the Waste Paper*. Yet, with the nuclear industry increasingly interfering with our personal lives, one must consider such seemingly irrelevant matters. Everything is connected. Safety precautions for reprocessing and transporting high level nuclear waste are said to threaten our civil liberties and rights to privacy; evacuation plans in the event of meltdowns force us to consider abandoning our homes and separating from loved ones. And now, we can not even feel safe walking into our bathrooms anymore!

I returned home one evening, after putting in a full day's work, to find an ionizing radiation smoke detector nailed to the ceiling, above my bathroom door. Coincidentally, I had just typed up the text of a new smoke detector fact sheet, so potential hazards from these safety devices were fresh in my mind. Were the detectors coming to haunt me? How many more were around? Were they breeding?

I am not what the nuclear industry is quick to dismiss as a hysterical radiation-phobic. I am fully aware that the ionizing detectors emit a very small amount of Americium-241 when operating properly. But was the detector installed properly? Surely the aluminum foil covering over the Americium could have been accidentally punctured. Was the whole detector defective? And how am I to dispose of this by-product of nuclear weapons production? Would I be exposing myself to leaking radioactive particles everytime I go to relieve myself or shower? Woe to me!

After the initial shock, I consoled myself: I could always brush my teeth in the kitchen sink, use the gas station toilet across the street (although I'd have to readjust my ingestion schedule), and I suppose with a few extra shots of BRUT I could get away without showering in between visits to my friends.

There must be an easier way out, I thought. The word was sent out to all of my scientific friends; how is one person supposed to handle such a crisis in an ever-alienating technological world? Fear not for long I was told, proper advice was indeed available; and so I pass it on to all of you. You can stay clean, comfortable, non-offending, and still safe from fire.

*Moving into a new house or apartment building? Before moving in be sure there is a non-radioactive, photo-electronic type of smoke detector installed. This is a reliable smoke detector which actually detects the type of fire most commonly occurring in residences more efficiently than the radioactive detectors.* ☸

## Hidden Legacy

79 slides, 15 minutes

Rental - one week \$20

Purchase - \$65

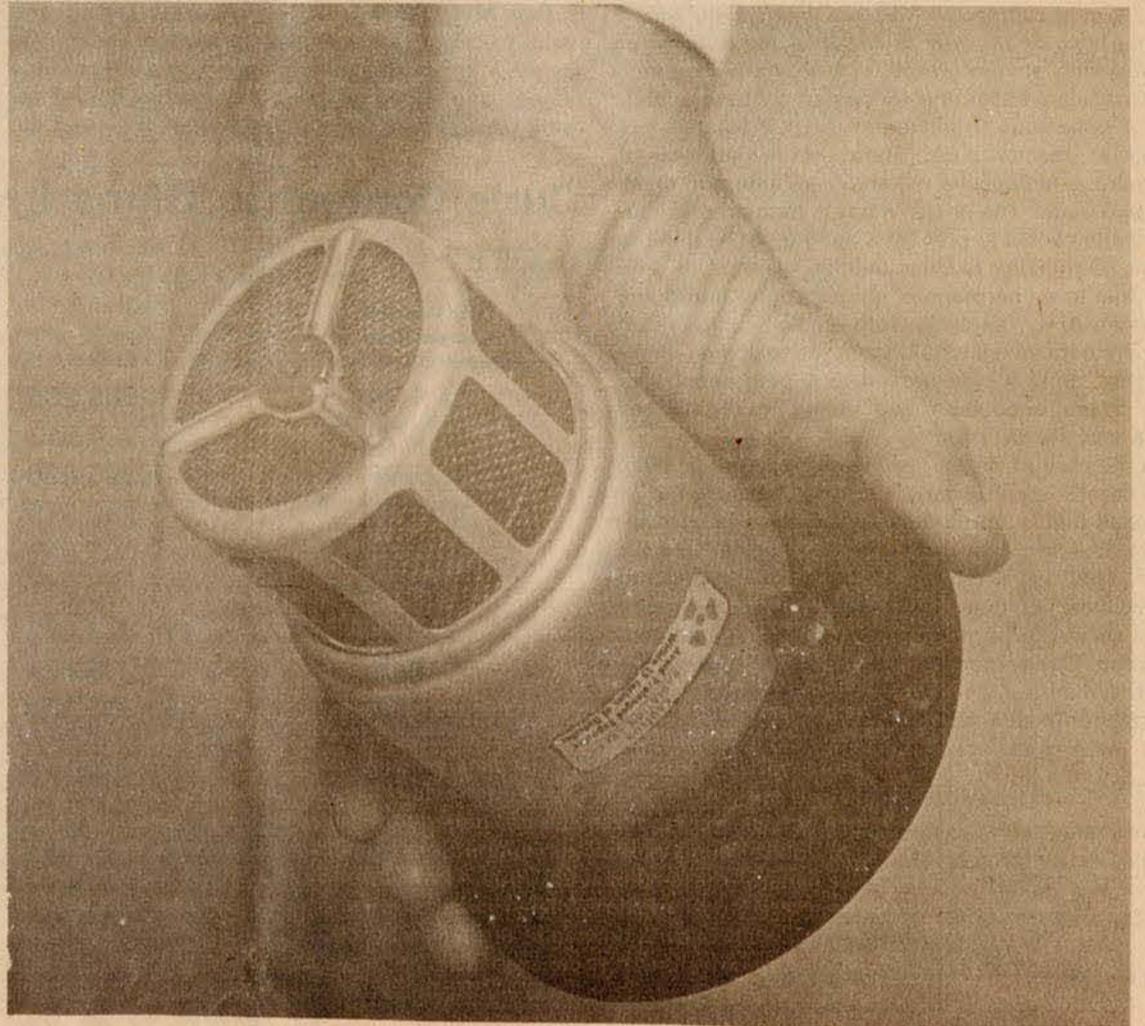
The Campaign's latest slide show on "low-level" nuclear waste is available to citizens and organizations concerned by a possible nuclear dump site. The program is a *must* for grassroots organizing on this issue.

Slides from Sheffield, Ill., Maxey Flats, KY. and West Valley, N.Y. depict the hazards associated with nuclear dumps. The program is accompanied by a written and taped script with maps, charts and vivid photos of trenches at West Valley, N.Y. Order through the Buffalo office.

## U-Mining Co. Pulling Out of Va.?

The Marline Corp., a uranium exploration company, has decided to terminate uranium exploration of 12,000 acres of land in central Virginia. This is an important victory for citizen activists in that state.

But, in the southern county of Pittsylvania, Marline still has 40,000 acres of land leased. Area citizens are opposed to this exploration and will continue to work to stop it. In "Virginia's Work Toward Uranium Mining Ban," Vol. 4, No. 4, *the Waste Paper* detailed the uranium mining issue in Virginia.



This is an old, electrically operated industrial type smoke detector. It contains high levels of radium-226; 1/100th of a microcurie is the lethal dose for 50% of the population for internal exposure. Although these detectors are no longer manufactured, they have not been banned from use.

courtesy of Sam Miller

## Quote of the Quarter

"For my own part, if I had to chose exclusively between the essentially Reaganite view of nuclear power and Ralph Nader's position that all nuclear power plants should be shut down, I would not hesitate to side with Nader."

*NRC Commissioner Peter A. Bradford, Remarks before the Groton School, Groton, Mass. Jan. 15, 1982. Bradford left the NRC in March of 1982 to become the Public Advocate in the Office of the Governor of Maine.*

## IFP...

Continued from page 3

tively accurate calculation (within 2%) of the IFP radioactivity can be made. The irradiated fuel pool of Rochester Gas & Electric's Ginna reactor in Ontario, N.Y., 18 miles northeast of Rochester, will be used as the example.

The factors that you need to know to make the IFP radioactivity calculation are:

1. How many fuel rod assemblies are in the irradiated fuel pool. (Ginna has 284 as of 7/25/82.)
2. How many metric tons of uranium (MTU) are contained in each fuel rod assembly. (Ginna has two types of fuel assembly: Westinghouse - .396 MTU; Exxon - .373 MTU)
3. What was the date that each fuel assembly was removed from the core?
4. What is the sum of the fission product and transuranic radioactivity per metric ton of uranium for the period of time since the fuel rod assembly was removed from the core?
5. What is each fuel rod assembly's "burnup" as a ratio of the recommended end of life "burnup" for the fuel. (The recommended end of life burnup for Ginna's fuel is 33,000 megawatt days per metric tons uranium (MWD/MTU).)

**On Burnup** The calculation for a single fuel rod assembly is demonstrated as follows:

Fuel rod assembly number 139 is a Westinghouse assembly that contains .396 MTU. It was first put into the core on June 24, 1972 and removed March 10, 1975. However, because the "burnup" was only 23,574 MWD/MTU (so there was still a good amount of fissionable uranium left), it was reinserted into the core on May 23, 1977 and finally removed March 25, 1978. The "burnup" at this time was 32,586 MWD/MTU. It is fairly common practice to shift assemblies into the irradiated fuel pool before they reach 33,000 MWD/MTU and then put them back into the core until more of the fuel has "burned up" or fissioned. The major fission product and transuranic activity can be found using tables 3-2 and 3-3 from "A Scoping Study of Spent Fuel Cask Transportation Accidents," NUREG/CR-0811, June 1979, by Science Applications, Inc.

In order to best interpolate (find values of cumulative radioactivity that are between the listed values in the tables) the information provided by these tables, it is easiest to graph the information as shown.

Now, since fuel rod assembly 139 was finally removed from the core on March 25, 1978 and today is July 25, 1982, that makes the time period (since removal from core) 4 years 4 months. Using the graph we find that the major fission product activity is 550,000 curies/MTU and major transuranic activity is 90,000 curies/MTU. The sum of these (640,000 curies/MTU) is applicable to the final calculation.

Continued on page 5

# Ionizing Smoke Detectors

## Weapons Waste Comes to Your Home

Like Prof. Zappo Teller, our former A-bomb enthusiast, you have just discovered that an ionizing smoke detector has been installed in your apartment. The Waste Paper realizes few of our readers will be able to relocate away from the detectors. You know the Americium-241 found in the detector with its half-life of 400 years will have to be isolated from the environment for thousands of years. Furthermore, you know the Americium is an alpha-emitter which can cause lung cancer if inhaled.

You are angry and want to do something. What should you do? Radioactive waste activists are proposing different strategies on this topic. Some would have us send our detectors to a government official. In the article below, Mina Hamilton of the Sierra Club opposes sending the detectors anywhere and supports work to prevent further installation.

The citizen confronted by the ionizing smoke detector problem will be tempted to remove the offending item and send it somewhere – to the manufacturer, to a state or federal bureaucrat, to the Department of Defense. What will the recipient do with the detector? It is safe to assume that she/he will not keep it in her/his office. Probably, they will dispose of it in accordance with current government practices.

**Insecure Landfills** The current approach to disposal of "low-level" radioactive materials like ionizing smoke detectors is to dump them into shallow landfills or soil burial sites. Many of the existing landfills have already leaked radioactivity into the environment. (At Maxey Flats, KY., plutonium has been found 3/4 of a mile from the burial site. At Sheffield, Ill. tritium has been detected 300 feet from the landfill. At West Valley, N.Y., plutonium, strontium-90, and cesium-137 has been found 2 1/2 miles downstream from the dump.) All of the existing landfills can be expected to leak radioactivity over the next 100-1,000 years. This means that the tiny particles of alpha radiation from ionizing smoke detectors will gradually move off of the burial site.

The mechanism for migration into the human environment will differ in each case. One route might be migration via underground permeable strata into a nearby stream, deposition in sediment along the stream banks, transport by wind when the stream sediment is exposed to air during times of drought, deposition on the ground in nearby parks, housing developments, or workplaces, transport by air into the lungs of children playing in the park.

The individual who sends an ionizing smoke detector to the Nuclear Regulatory Commission, Department of Energy or local or state health officials is basically saying that their own welfare is more important than the person who might receive the particle of alpha radiation when it gets into the environment. The individual is saying, "Since I am frightened of having this minimal amount of radiation in my apartment, I am willing to send it to the lung of an unknown animal or individual. Since I will never know the identity of the animal or person that inhales this particle, there is no reason to concern myself further with the problem." A person might argue that the chance of the Americium-241 being released in a fire (that rages out-of-control despite the presence of smoke detectors) is greater than the chance of it being released from a burial site. And therefore, the smoke detector is safer dumped in the ground than sitting in a residence. But this argument cannot be sustained except by unreliable estimates on statistical probabilities.

**Not My Backyard** The what-to-do-with-my-ionizing smoke detector dilemma is typical of the waste controversy. Tell someone that there is a radioactive waste dump has just been located in their backyard, and the immediate response will be send it *somewhere!* Get it out of my backyard. This phenomena has been aptly described as "not-in-my-backyardism" by Warren Liebold of the Sierra Club. Actually, this means send it to *somebody else's backyard* which in turn, implies I (we) are superior to you (they) living in that other backyard. Our lives are more precious, more deserving of being protected from noxious substances than yours. This viewpoint also implies that my life is more important than my children's or grandchildren's. Just as long as I do not suffer the affects of the material, I don't care who else *does* suffer at some future time.

This approach is of questionable morality. It is also based on the erroneous, short-sighted, assumption that sending radioactive waste to another county or state means the sender will cease to suffer the harmful effects of the radioactivity. This position ignores the fact that the radioactivity may return to the sender via a fish caught off a coast polluted by a leaking radioactive waste dump or via a

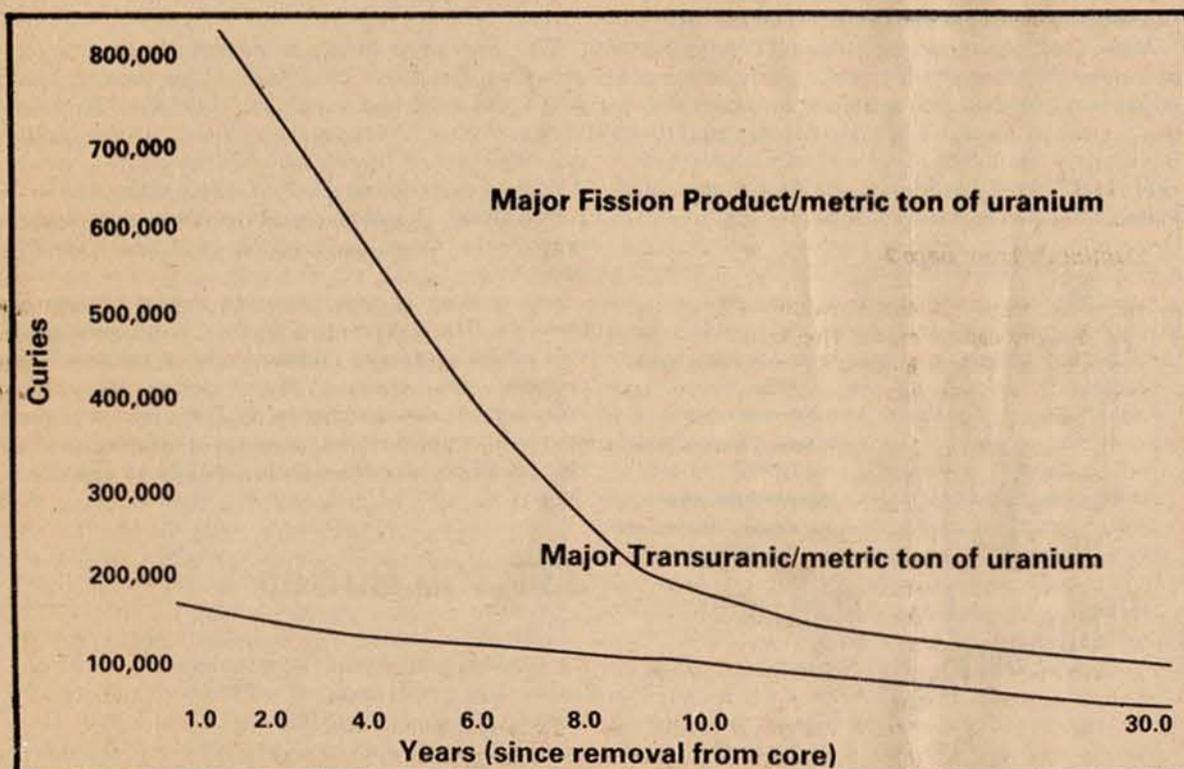
duck that landed in a nearby contaminated swamp. Such a position also gives support to the misleading notion that safe disposal of radioactive material is possible (just as long as I don't live next door).

It is true that eventually the already installed detectors will have to be removed, as they wear out. But this will not occur for, at least, 10 years. Hopefully, by then citizen agitation will have forced the development of safer disposal options.

It can be argued that the disadvantages of sending a detector to a agency, which will improperly dispose of the item, is compensated for by the advantage that the arrival of all these Americium-contaminated packages will cause the federal or state agency personnel to realize the high degree of citizen opposition to the detectors, and re-evaluate the problem. If anything, the pile up of packages in an office will probably antagonize, not reform the bureaucrats. A more likely route for reform is a plethora of letters plus smoke detector bans passed by city councils and town municipalities.

Another frequent argument is that it's not our responsibility to solve this problem – ergo let the bureaucrats solve it. It should be abundantly clear by now that the bureaucrats, be they federal or state, have not been able to solve the radioactive waste problem for the past 30 years. There is absolutely no indication that the bureaucrats are any more ready to solve the problem today. Until the rest of us start working to solve the radioactive waste problem, the bureaucrats will continue to look the other way and mouth "no health hazard" inanities.

The radioactive waste problem is *our* problem. Each and every one of us who pays taxes which go to support nuclear weapons manufacturing help to create Americium – a by-product of weapons production. Each and every one of us has a responsibility to agitate in our free time, with our donations, with letters, and at the ballot box to move towards the responsible decommissioning of a nuclear world. In the meantime, those already installed ionizing smoke detectors can act as a daily reminder to us all that the nuclear economy will continue to invade and disrupt our lives until we put an end to it.



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## IFP...

Continued from page 4

This completes all the required information for the calculation and for fuel rod assembly 139 it appears as follows:

$$\text{Radioactivity 139} = (.396 \text{ MTU}) \left( \frac{640,000 \text{ curies}}{\text{MTU}} \right) (32586) = 250,260.5 \text{ curies}$$

(as of 7/25/82)

To determine the total amount of radioactivity in the IFP you calculate each fuel assembly separately and add them together to achieve the total. For Ginna this on page 3.

\* Note that the first three years of fuel ('71-'73) (121 assemblies) are not included here since they are presently stored at the closed down reprocessing plant in West Valley, N.Y. Of those 121 assemblies 81 belong to Ginna. These may eventually be returned to the irradiated fuel pool at Ginna or be shifted to an AFR or a permanent repository.

The remaining question surrounding this calculation is where does one get the data for the fuel rod assemblies. The answer is that the best way to acquire the information is to request it from your local utility (the information is not available in public documents).

Special thanks to Howard Rowley, Robert Mccredy and John Cook of Rochester Gas & Electric Corp. for meeting with me and discussing issues concerning the IFP at Ginna, verifying the correctness of this approach for calculating the IFP radioactivity and providing the detailed information on each fuel rod assembly.

Jim Norton is a mechanical engineer who lives nine miles from the Ginna nuclear power plant near Rochester, N.Y. He is a member of Action for a Non-Nuclear Future of Wayne County.

# More Waste for Lewiston?

by Fred Swed, Jr.

It may seem ironic, but just as remedial containment work is being performed at the Lake Ontario Ordnance Works nuclear waste site in Lewiston, N.Y., 10 miles north of Niagara Falls, the Department of Energy (DOE) is considering a proposal to reactivate the site as a dump for additional "low-level" nuclear wastes.

At present, the 191-acre site is the repository for over 16,000 tons of radioactive process residues and spoils material generated during the federal government's World War II Manhattan Project to build the first atomic bomb. A large volume of this material is owned by African Metals Corp. This is a subsidiary of a Belgian firm which was the supplier of raw uranium ore to the United States during the early 1940's. (See *Spring 1979, the Waste Paper "Legacy of a Bomb."*) The radioactive material is stored in a concrete water tower plus two concrete buildings. It is stored under a 25-year lease agreement negotiated between the United States and African Metals and due to expire on July 1, 1983. The water tower contains one of the largest supplies of radium in the U.S. — about 2 lbs. and nearly 11,000 lbs. of high-grade pitch blended (35-65%  $U_{308}$ ).

**Ditches Remain Contaminated.** Additional DOE-owned "low-level" wastes and spoils material which were dumped on site during the 1940's and 1950's have led to the contamination of at least 8,000 tons of adjacent soils. In testimony before a House Subcommittee in 1981, DOE's consultant for site remedial work, Bechtel National Corp., indicated that this material has eroded into two drain-

age ditches traversing the site. Runoff through these ditches has led to the transport of sediments contaminated with Radium-226 up to three miles from the site.

This contamination should have come as no surprise to the government as exactly the same ditch reported by Bechtel as contaminated, was also found to be contaminated back in 1972. The ditch was scraped clean of radioactivity at that time but only nine years later it is contaminated again.

Further, total radiation at the site boundary ranges from 2-76 times normal background radiation. Annual average levels of radon gas, a product of the radioactive decay of radium, at the site boundary exceed state and federal standards, and by Bechtel's own admission "contribute to off-site exposures (to radiation)." (author's parentheses) (For more on Bechtel read "The Bechtel Administration," Vol. 3 No. 2 of the *Waste Paper*.)

Under these conditions, Bechtel commenced its remedial work at the site in May 1982. This work, aimed at stabilizing rather than cleaning up the site consists of 1) minimal repair of the buildings containing the "low-level wastes" (broken windows in one storage building were replaced) and sealing their contents with layers of sand, clay and vinyl to prevent further releases of radon, and 2) collecting contaminated soils and containing them under an impervious fabric to prevent further erosion of the material into the drainage ditches. How long the "impervious" fabric will last before it is degraded by air and water is not yet known. It seems unlikely

that the remedial action work would prevent continued migration to on-site ditches, which lead to off-site ditches.

As a result of recent negotiations, it appears that African Metals will abandon the radium-rich wastes contained in the water silo when its lease expires in July of 1983, and the DOE and the U.S. taxpayer will be saddled with handling the disposition of that material as well. Toxic radon gas continues to vent from the top of the tower. DOE has claimed that natural dispersion is rendering these releases harmless, but the exact impact on off-site areas has yet to be adequately addressed.

**Band-Aid Approach.** Thus, despite unanswered questions regarding the hazards to public health posed by existing Lewiston wastes and the band-aid approach to stabilizing these wastes, DOE has announced that it is considering a proposal to reopen the site as a dump for Manhattan Project wastes from sites like Middlesex, N.J., and Canonsburg, Pa.

Wastes would also come in from Fernald, Ohio, where African Metals has another cache of radioactive waste. Such a plan could mean transporting at least 140,000 cubic yards of waste to the site over a four-year period for burial. The associated costs for developing and monitoring the site range from \$93 to \$144 million. A decision may take up to a year, nevertheless, given the chronic problems of erosion and leakage at the site, it is *incomprehensible* that this problem be compounded by additional waste.

Continued on page 7

## Resources

### Nukespeak: The Selling of Nuclear Technology in America

by Stephen Hilgartner, Richard C. Bell and Rory O'Connor  
\$14.95, 233 pp., hardcover.  
Sierra Club Books, 1982.

*Nukespeak* is an intensive history of the development of nuclear technology and the nuclear mentality. The book is appropriately dedicated to George Orwell who perceived that language can be and is used to direct people's thinking and discourage the questioning of authority.

The nuclear mindset is traced from the discovery of radium and its abuses in medicine, industry and even theater, (dancers' dresses were dipped in radium for that glowing affect.) Then *Nukespeak* looks at the rush-job development of the atomic bomb, to the present-day pressure to build more bombs and reactors, and continuing neglect of the real questions about health effects of radiation.

The authors outline the way in which information pertaining to nuclear material and technology was and still is "compartmentalized" and classified in the interest of national security. Only the informa-

tion deemed necessary to the fulfillment of a specific task, and nothing more, is given to scientists and regulatory agencies. Even less information is available to the public. Such secrecy prevents the public debate necessary for democratic decision-making.

Information that cannot be twisted to a pro-nuclear stance is either not accepted or classified in the interest of national security. The language of "nukespeak" is used to explain away any possible danger and to numb us into accepting an uncontrollable technology that could destroy the entire planet. The final message of the gloomy prologue is that there is a choice, if the nuclear mindset, which has long been our national policy, is challenged.

*Nukespeak*, reviewed by Diane D'Arrigo, is a painstakingly-researched, meticulously-documented resource readable for everyone on either side of the nuclear struggle. It will make readers start thinking hard the next time they use phrases like "political fallout." Available from Sierra Club Books, 2034 Fillmore St., San Francisco, CA 94115. 

### Don't Waste America

80 slides, 20 minutes  
Rental — three weeks \$15  
Purchase — \$45

Nuclear Information and Resource Service has released a slide show, *Don't Waste America*, which describes the nuclear waste problem at all stages of the fuel cycle from mining to reprocessing. Radioactive waste from weapons, nuclear reactors, and medical institutions are all discussed.

Both the health effects and political complexities of the nuclear waste problem are shown. Medical experts like Dr. John Gofman and Dr. Gordon Thompson discuss the long range health implications of radiation exposures through our land, air and water.

Narrated by John Houseman, the program is a great primer for educating folks on nuclear waste issues. The slide show is available from Nuclear Information and Resource Service (NIRS) at 1346 Connecticut Ave. NW, 4th floor, Washington, D.C. 20036.



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### Just Off the Press

Do you live near a leaky radioactive waste dump?

Are you a taxpayer that may have to pay maintenance costs on an abandoned "low-level" nuclear waste dump for several hundred years?

Is your state entering a regional compact that may encourage the siting of a nuclear dump in your community?

If so, you need two new, important educational aids from the Sierra Club Radioactive Waste Campaign. Our new fact sheet, "A 'Low-Level' Nuclear Waste Primer," answers the most often asked questions about "low-level" nuclear waste — what it is, how reactor and medical waste differ, the experiences at closed-down burial sites and much, much more. Available for \$1.00, or 20¢ each for 25 or more.

Also a new 30-page Resource Paper, "Insecure Landfills: The Exhumation Option" — an examination of the costs and methodology of exhumation projects at Idaho Falls, Idaho; Hanford, Washington; and Middlesex, N.J. It's an excellent resource for local, county, and state officials, available for \$5.00 to individuals and \$25.00 to corporations.

### 337,355 Curies

"Low-level" nuclear waste activists should order the "1980 State-by-State Assessment of Low-Level Radioactive Waste Shipped to Commercial Disposal Sites," LLWMP-IIT, prepared by EG&G, Idaho. The book lists volume and curie content of waste generated by different activities in each state, plus percentages of waste being sent to each of the currently open commercial sites. In 1980, the report tells us that there were a total of 337,355 curies of "low-level" nuclear waste sent to burial grounds. Unfortunately, the study does not break this figure down by isotopes, so the reader cannot determine the half-lives of the material being dumped. This is a useful resource available from EG&G Idaho, Inc., P.O. Box 1625, Idaho Falls, Idaho 83415.

## Brookhaven . . .

Continued from page 1

governments have always been responsive to our concerns," he said. Since the closing of the landfill, materials previously dumped here have been incinerated or shipped to a commercial burial ground.

There is evidence that the landfill seepage and/or the on-site well contamination may have already affected some drinking wells. In 1979, the wells of four families near Manorville, N.Y., were found to contain levels of strontium-90 elevated to one to two picoCuries per liter of water. Andrew Hull, supervisor of environmental monitoring at Brookhaven and a staunch nuclear energy booster, traced the increase at the time to the accidental release into the on-site well in 1960. The Suffolk County Department of Health refused to release the names of the four families at the time to "protect their privacy," and did not recommend that the families not drink their water, according to Simon Perchick. Perchick was Suffolk County assistant district attorney at the time.

Nor has the Suffolk Health Department followed up on the problem consistently. Jack Fingerhut, administrative head of radiation control for the Health Department, was unaware of the well contamination incident and referred the author to Brookhaven for information. Martin Trent, an engineer in charge of water quality, confirmed that the wells had last been monitored in April 1981. Detectable levels of strontium-90 were found in 10 out of 20 wells sampled. He claimed that the highest levels found were now .86 picoCuries per liter compared to 1.8 picoCuries per liter in 1979. Trent did not discuss whether the strontium had simply migrated south to another location. He blamed Chinese weapons testing for the increased strontium-90, but admitted that levels were highest closest to Brookhaven's boundaries.

**Peconic Takes the Waste.** Brookhaven's greatest release of radioactive material at present comes from tritium dumped into the Peconic River, which begins on Brookhaven's grounds and flows for about six miles to the Town of Riverhead, (see map) and out into the Great Peconic Bay.

Out of one million gallons of liquid sewage waste that Brookhaven dumps into the river daily, 1,000 gallons a day is contaminated with tritium oxide,

adding 22 curies a year. The tritium evaporator and condenser run one month at a time every two or three months, so that 1,000 gallons of tritium oxide contaminated water is released continuously about four months of the year. It is important to remember when measuring tritium levels in the water, that low readings may be misleading, because levels vary according to when the tritium is released.

Most of the tritium is produced as a by-product of the high flux beam reactor, which generates intense neutron beams in order to study neutrons and how they react with other matter. The reactor is cooled by heavy water or deuterium, an isotope of hydrogen with one extra neutron. When the deuterium collides with the neutron beam, it picks up an extra neutron, and the radioactive isotope tritium results.



The map shows where the Brookhaven National Lab is located in Long Island. The Peconic River and Bay and the town of Riverhead are also noted.

At any one time, according to Andrew Hull, the supervisor of environmental monitoring, the reactor contains 20,000 curies of tritium, one-fourth of which is shipped out and exchanged for new deuterium every year. Brookhaven disposes of the 22 curies a year that are dumped on-site. It is interesting to note that during the sand bed filtering process, 12-25% of the tritium oxide never reaches the Peconic; rather during filtering, it is lost to the ground and eventually the groundwater.

**Tritium Hazards.** How dangerous is tritium? Since it emits a relatively low-energy beta ray, its hazards have been minimized. But, since tritium oxide behaves chemically in the body like water, it can become part of all the body's cells, including the lungs and DNA. Once in DNA, it can cause genetic defects and cancer. A study published in the *International Journal of Radiation Biology* in 1981 shows that pregnant rats given low doses of tritiated water continuously, suffered decreased hormone activity in the liver and brain; another study showed decreases in brain protein and DNA.

How does the dumping of 22 curies of tritium a year into the river affect the health of Long Islanders? Andrew Hull minimizes the danger, "It's not used for consumer drinking purposes. The exposure to anybody is zilch, except maybe anybody who catches a few fish."

But, according to Karl Grossman, a Long Island reporter who has investigated Brookhaven, 20% of the population of Riverhead, which is about 7,600, who are primarily black migrant workers, rely on the fish from the Peconic for a substantial portion of their diet. The citizens of Riverhead have never been warned by the local Health Department of dangers of eating fish from the river.

There are other ways for the tritium to move into the environment. The river water is absorbed into surrounding vegetation. It is also possible that the tritium produces a synergistic effect along with PCB's and other chemicals already in Long Island's groundwater.

What is being done to regulate or even monitor Brookhaven's effect on its immediate environment? New York state conducts some monitoring but it has not been watchdogged by local environmental groups. These groups have focused their energy on the imminent opening of the Shoreham nuclear power plant, and have devoted little attention to Brookhaven. Brookhaven's ties to academia and research on solar energy have made safe energy activists reluctant to attack it. Citizens need to start monitoring Brookhaven's performance and watchdog plans to re-open the burial ground.

*Phyllis Stern is a freelance writer and poet living in New York city. She is active in New Yorkers Against Uranium Mining and has also worked as a researcher for Forbes magazine.*

## Lewiston...

Continued from page 6

Fortunately, public outcry is already being heard. Local citizens are actively mobilizing, and U.S. senators Daniel P. Moynihan and Alfonse M. D'Amato and Representative John J. LaFalce have spoken out against the proposal. Moynihan has been particularly vocal: "I am of the opinion that Western New York, and in particular Niagara County, has more than its share of hazardous and nuclear waste disposal sites."

Isn't it the truth?

### NEWS BREAK

As we go to press, we have discovered two important developments at Lewiston. First, Bechtel National released 700,000 gallons of radioactively contaminated water from the remedial action work into Four-Mile Creek, which drains into Lake Ontario, on November 11, 1982. Bechtel released the water without a state permit to do so. It claimed that storage lagoons would have overflowed before the permit was issued and this overflow could have picked up on-site contamination and carried it off-site. Although Bechtel claims contamination levels in the water were "of adequate quality and in the federal and state discharge standards," DOE men were monitoring the creek and had considered dredging the stream bed in front of a resident's home.

Secondly, DOE is apparently trying the "shock them, lull them and sock-it-to-them" theory, according to Lewiston Councilwoman Joan Gipp. Recently, Congressperson John LaFalce received a letter from the DOE assuring him that it had instructed Bechtel to terminate further study of the use of the site as a regional repository. In a second letter to this editor, DOE only stated that "no decision has been made concerning long-range plans for the site. . ." This is not as reassuring as Representative LaFalce's letter.

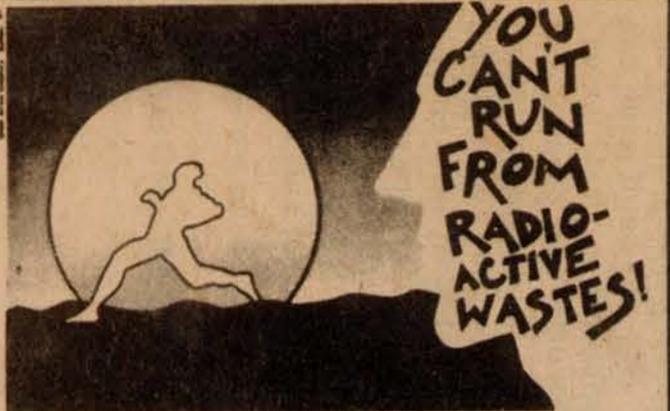
Residents and local officials in Lewiston feel the LaFalce letter was vague. They are still wary and not convinced that their community is no longer in jeopardy.

*Fred Swed is a Buffalo resident and Sierra Club volunteer. He is an engineer by trade.*

## Perpetually Topical Comix presents: One Night at a Party

Erik Hahn and Brian Starkey





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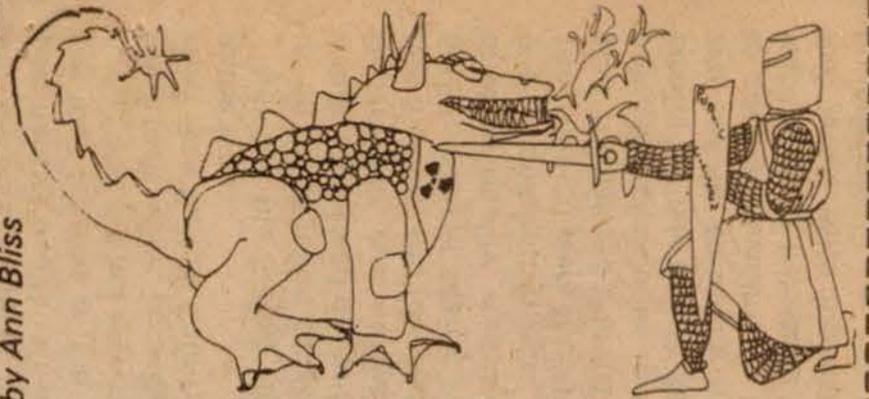
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by Ann Bliss



How can YOU begin to slay the atomic waste dragon? Being informed is the first step. And it's all right here in *the Waste Paper*, the world's first newspaper on nuclear waste. In the past we've brought you articles about the Manhattan Project dumps, Gulf Oil's exploration for uranium in downstate New York and the Reagan Administration's close ties to the Bechtel Corporation. We've got the facts and the figures - all for you! Only \$8 for this important quarterly.

Please make checks payable to the Atlantic Chapter Radioactive Waste Campaign. Send to: Sierra Club Radioactive Waste Campaign, 78 Elmwood Avenue, Buffalo, NY 14201.

- Enclosed is \$8 for a year's subscription to *the Waste Paper*.
- I would like to volunteer some time for the Radioactive Waste Campaign. I would like to help with research, clerical, organizing, public speaking, writing or visual art. (Please circle your interest.)
- I want to stop generating radioactive waste. Here is my contribution to the Campaign.

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City, State, Zip \_\_\_\_\_

## Cask-Naming Contest Winner

In the last issue of *the Waste Paper*, the seven winning entries to name the irradiated fuel shipping casks presently on the road were announced. Inadvertently, the originator of the name ICARUS (son of Daedalus who in escaping from prison fell into the sea when the wax of his wings melted as he flew too near the sun), was not credited. DORIS BURBRIDGE of Baltimore, Maryland, is the winner and she will receive a *Waste Paper* t-shirt. Congratulations Doris!

## New Resource List Available

Look! Our resource sheet has just been updated with much new literature. Available free with self-addressed, stamped envelope. Also, we have published a cumulative index for *the Waste Paper* which is available for \$2 from the Buffalo office. Use this to order back issues of *the Waste Paper*.

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