010171

Dr. Jane R. Summerson,
EIS Document Manager M/S 010
U.S. Dept. of Energy
Office of Civilian Radioactive
Waste Management,
Yucca Mountain Site Characterization
Office,
P.O. Box 30307
North Las Vegas, NV 89036-0307

RECEIVED
JUL 02 2001

June 26,2001

Dear Dr. Summerson,

**re: Public comment extension supplement to the EIS for Yucca Mountain.**

1 Please find enclosed printed material about the Roy Process invention for transmuting high level nuclear waste into non-radioactive elements. It can be done with existing infrastructure, commercially available machinery and current supporting technology. With repeated treatment, plutonium 239 can be transmuted into non-radioactive lead producing heat which can be used to make steam and power the electric generators at each nuclear power plant, where nuclear waste is now stored in cooling ponds.

The Roy Process is the only transmutation method that transmutes 100% of each isotope. The Los Alamos (neutron) transmutation method only partially reduces half-life and creates more nuclear waste. The Roy Process (photon) method is the most cost effective way to neutralize nuclear waste.

The Roy Process is in the form of a patent application with completed quantum electrodynamic calculations for Pu239, Sr90 and Cs137. Others treated by same method.

The Roy Process is a private, independent invention. It is available to a company capable of realization who contracts with us. The late Dr. Roy estimated costs in 1979 at $80 million dollars to construct the pilot Roy Process treatment facilities and should take about three years to complete. There remains about a years work calculating engineering parameters for the pilot plant. Portable units can also be constructed.

Sincerely Yours,
Dennis F. Nester

Dennis F. Nester
Agent for the Roy Process,
4510 E. Willow Ave
Phoenix, AZ 85032
(602) 494-9361
theroyprocess@home.com
http://members.home.net/theroyprocess

1

010171

**From:** Dennis F. Nester <theroyprocess@home.com>
**To:** theroyprocess@home.com <theroyprocess@home.com>
**Date:** Wednesday, April 11, 2001 5:38 PM
**Subject:** The Roy Process for neutralizing (transmuting) all nuclear waste.

# THE ROY PROCESS FOR NEUTRALIZING NUCLEAR WASTE

Dennis F. Nester
Agent for the Roy Process
4510 E. Willow Ave
Phoenix, AZ 85032
(602) 494-9361
theroyprocess@home.com
http://members.home.net/theroyprocess

April 11, 2001

Dear Concerned Citizens,

Regardless of the future of nuclear power worldwide, we must do something now about the nuclear waste disposal problem. The U.S. nuclear industry is pushing hard to open the proposed high level nuclear waste dump at Yucca Mountain, Nevada and looking at Skull Valley, Utah as a temporary storage site. Both are on native American land. But studies have shown Yucca Mountain can not pass muster as a stable dump site and it is a scientific impossibility to securely bury high level nuclear waste for 486,000 years, 20 half-lives of plutonium 239. Yet in only the first 55 years of the atomic age, nuclear waste has already leaked out of its containment into our precious ground waters and is irretrievable.

Nuclear power was forced on utility companies, federally subsidized, to make electric rate payers, pay for the high cost of plutonium production. Plutonium is the element needed for atom bombs of which we now have more than enough for national security issues. The slogan was 'Nuclear Power...too cheap to meter' in other words free electricity! But it turned out to be the most expensive and dangerous form of electric generation. There is no rational need for nuclear power today and IS NOT the solution for global warming.
See: http://www.geocities.com/mothersalert/globalwarming2.html

Solidifying high level waste, after the plutonium is chemically separated out, is known as vitrification for the proposed 'dry cask' underground storage. Russia was first to try solid medium burial at their Ural Mountain nuclear dump. It exploded in the 1950's heavily contaminating the area. France also found 'dry cask' burial a failed technology and is now trying to ship France's nuclear waste to Germany for burial under massive citizen

protests. Dry cask storage is planned for Yucca Mountain.
See: http://headlines.igc.apc.org:8080/enheadlines/975378903/index_html

In 1979, after the Three Mile Island reactor partial meltdown in Pennsylvania, the late Dr. Radha R. Roy spent the summer school break proving quantum electrodynamic calculations which showed that all nuclear waste can be rendered into non-radioactive elements using existing infrastructure, commercially available machinery and current supporting technology. Dr. Roy released this to the press which became a worldwide news story. See top above web site for the original Arizona Republic newspaper story. Dr. Roy estimated cost then at $80 Million dollars to build the Roy Process pilot treatment facilities and should take about three years to construct. In addition, nuclear waste treated with the Roy Process rapidly decays into a stable element producing heat which can be used to make steam and power the existing electric generators at each nuclear power plant where the waste is now stored in cooling ponds. So moving and burying nuclear waste would be a colossal mistake.

In 1982, the U.S. Congress passed a new nuclear waste policy act making {burial} government policy for nuclear waste disposal, putting viable alternatives in scientific limbo! But burial IS NOT a safe solution for nuclear waste which will threaten the gene pool of thousands of future generations.

Solving the nuclear waste disposal problem DOES NOT make nuclear power a 'clean' technology, far from it. See: www.radiation.org Dr. Jay Gould cites rising breast cancer rates from the first atom bomb atmospheric test in 1945 prior to which breast cancer rates were going down, from his book: THE ENEMY WITHIN. Also rising cancer rates near operating nuclear power plants.

Sincerely Yours,
Dennis F. Nester

010171

**From:** Steve Wagner <hanforddownwinder@yahoo.com>
**To:** downwinders@egroups.com <downwinders@egroups.com>; NucNews@egroups.com <NucNews@egroups.com>
**Cc:** hanford@egroups.com <hanford@egroups.com>
**Date:** Saturday, December 02, 2000 12:26 AM
**Subject:** [NucNews] DOE Squandered Billions on Useless Nuke Waste Technologies

---

http://headlines.igc.apc.org:8080/enheadlines/975378903/index_html

DOE Squandered Billions on Useless
Nuke Waste Technologies
By Brian Hansen

WASHINGTON, DC, November 13, 2000 (ENS) - The U.S. Department of Energy has "squandered hundreds of millions of dollars" since the end of the Cold War trying to develop innovative technologies for cleaning up the nation's contaminated nuclear weapons sites, concludes a Congressional report unveiled last week.

The report, "Incinerating Cash," was authored by staff members of the House Commerce Committee's Republican majority. The committee's Democratic members
did not participate in drafting the report.

The report charges that the Department of Energy (DOE) has wasted much of the $3.4 billion that it has spent over the last decade on efforts to develop new technologies for cleaning up nuclear weapons wastes. Congress ordered the DOE in 1989 to initiate the program to address the environmental issues resulting from decades of nuclear weapons production.

The committee's report concludes that the DOE has spent hundreds of millions of dollars on technologies that "have not proved useful" in the clean up mission. Moreover, the "useful" clean up technologies that the DOE has produced have not been used effectively by the agency or its private contractors, the report found.

Of the 918 technologies that the DOE has funded, just 31 - less than 4 percent - have been deployed more than three times at contaminated nuclear weapons sites, the report notes. Of the technologies that have been deployed, more than half have been used only once,
the report adds.

The report attributes the failure of the program to an "ongoing pattern of mismanagement and lack of focus" within the DOE's Office of Science and Technology, which is implementing the initiative.

Carolyn Huntoon, the DOE's assistant secretary for environmental management, was quick to dispute the findings of the Commerce Committee's report. In a written statement, Huntoon rejected claims that the technology program has not produced results.

"One out of every five research and development projects have resulted in a viable technology being used by the department," Huntoon said.

The DOE's nuclear waste complex consists of 113 geographic waste sites located throughout the country. The DOE recently estimated that it will cost between $151 and $195 billion over the next 70 years to clean up the complex, not including the $51 billion already spent between 1990 and 1999.

The Commerce Committee's report cited a number of case studies in concluding that those costs will not be appreciably reduced by the application of technologies developed by the DOE's Office of Science and Technology (OST).

Those case studies were based in large part on a survey conducted earlier this year, in which several large DOE site contractors were asked to describe their use of commercially available OST funded technologies.

One DOE site analyzed in the committee's survey was the Rocky Flats facility near Denver, Colorado, where large quantities of wastes containing plutonium and other radioactive constituents must be characterized, stabilized, packaged and moved off site. The DOE's environmental management program has to date spent some $4.9 billion at Rocky Flats, and the agency plans to spend another $4.5 billion over the next five years to complete environmental cleanup activities by the year 2006.

However, the Kaiser-Hill Company, the DOE's contractor at the site, has so far found use for just seven commercially available clean up technologies, the Commerce Committee's report found. The company will likely deploy no more than three of the DOE's

technologies in the year 2000, the committee's survey found.

"Thus, after 10 years and $3.4 billion spent to develop technologies to reduce costs and speed cleanup, few [DOE] funded technologies have been used for cleanup at Rocky Flats, and few will likely be used in the future," the report declares.

The report also notes how DOE funded technologies have been ineffective in advancing remediation activities at the Hanford nuclear reservation in Washington state, where the cleanup of 177 underground tanks containing radioactive wastes is one of the most expensive and significant long term waste management projects within the DOE complex.

The report notes that Hanford's radioactive tank wastes represent a huge potential impact to human health and the environment. Hanford's Office of River Protection (ORP) spends more than $300 million each year for characterization, interim stabilization, and resolution of tank safety issues to control the approximately 200 million curies of cesium, strontium and other radioactive constituents stored in rapidly degrading underground tanks.

Some 30 tanks are known to have leaked in the past.

Since 1990, the DOE has spent $4 billion on this project, and the agency plans to spend $13 billion over the next 70 years on tank farm operations. To date, the DOE has funded 80 technologies and has spent hundreds of millions of dollars at Hanford.

But the committee's report finds that the commercially available technologies funded by the DOE have provided "no significant use" for characterizing or stabilizing the Hanford tank wastes, nor will they do so in the future. According to the CH2M Hill Hanford
Group, the DOE's contractor at the site, none of the commercially available technologies have been deployed at the Hanford tank farms.

The report is also critical of the DOE's use of taxpayer funded technologies to improve operations at the Waste Isolation Pilot Plant in New Mexico, where radioactive waste is interned in casks hundreds of feet below the surface of the desert.

The full text of the Commerce Committee's report is available on line at:
http://www.house.gov/commerce.



=====
"We're all downwinders!"
Check-out http://www.downwinders.org

THE ARIZONA REPUBLIC

Sunday, November 4, 1979

# Process may kill radiation threat

By CLARENCE W. BAILEY



TEMPE — An internationally recognized Arizona State University physicist disclosed Saturday that he has discovered a method for treating nuclear reactor and other highly dangerous radioactive wastes so they will be harmless.

The procedure was conceived by Dr. Radha R. Roy, professor of nuclear physics, who is the designer and former director of nuclear-physics research facilities at the University of Brussels in Belgium, and at Pennsylvania State University.

Roy said the process "very roughly can be described in part as a reversal of phenomena that occur during a nuclear fission chain reaction."

The scientist said the process is the culmination of many years' research.

"Theoretical analysis and mathematical calculations confirm that the process is highly effective and that any level of radioactivity, from weak to strong, can be reduced to a harmless state in a short period of time," Roy said.

"The thing that is so encouraging is that the method can cancel radioactivity rapidly enough for it to be of real, practical value in disposing of dangerous wastes in storage and as they are being produced," Roy said.

One treatment-plant design which Roy has devised could reduce the radioactivity of even the most dangerous wastes with half-lives of 15,000 to 40,000 years to a level where they would be essentially harmless in about 20 days.

A half-life is the time required for a quantity of radioactive material to lose one-half of its radioactive strength.

Roy, who left his native Calcutta, India, to do advanced nuclear-physics research at the University of London during World War II, said all the necessary theoretical and quantum electrodynamical work on the process has been completed.

"There remains perhaps as much as a year's work in calculating parameters and preparing data that will be needed for the engineering design of a pilot radioactive waste-treatment plant," he said.

Roy is known internationally among scientists for his many advanced research contributions in the field of nuclear fission fragments and as the author of definitive graduate and post-doctoral textbooks used in universities all over the world.

## Radiation

*Continued from A1*

"During the 37 years since the first fission chain reaction, there has been no progress whatever toward the development of a method of deactivating radioactive waste or even for storing it safely," he said.

"The collections of dangerous nuclear wastes in this country alone have now reached a total of at least 75 million gallons, and it is growing daily."

He estimated an operational nuclear waste-treatment plant could cost $40 million or more.

By contrast, he noted, Congress last summer appropriated $88 million just to build more concrete storage bunkers to hold only a part of the growing accumulation of nuclear wastes.

"Since it is so very dangerous to ship strongly radioactive materials it would certainly be sensible to build a treatment plant for each reactor so radioactivity could be killed out before the waste is transported anywhere," the scientist said.

Roy said that the national danger from nuclear wastes is "extremely serious," and urged the federal government to build treatment plants near established nuclear waste-storage areas.

Other treatment plants should be constructed to kill out the radioactivity in the wastes from the nation's weapons programs and from its educational, industrial, medical and experimental research facilities, he said.

Roy warned that waste containing plutonium 239 is "critically dangerous" because of its extremely high radioactivity and also because it is the essential ingredient in an atomic bomb.

The treatment process not only will render plutonium 239 harmless in a remarkably short time, he said, but also will keep deactivated plutonium from ever being reprocessed to make an illegal atomic weapon.

Roy further warned that the United States not only is exporting nuclear energy when it sells reactor technology to foreign nations, but also is sending overseas the potential for making illegal bombs out of plutonium from reprocessed nuclear wastes.

The treatment method will guarantee to foreign countries that use nuclear fission energy that they can maintain an environment free from radioactivity, and it also could guarantee to the world that there will be no reuse of plutonium in an unauthorized weapon, he said.

Careful theoretical and mathematical analyses have assured him that the nuclear waste-treatment process will function reliably and with rapidity and high efficiency, he said.

"But the existence of this promising nuclear waste-treatment procedure should not be construed in any sense to mean that nuclear fission power reactors are safe," Roy said.

"The contractor who built Three Mile Island's reactor — like those who built the other 71 reactors now operational in the United States — expected that plant to function normally for 30 years in total safety without event.

"But the fact is that it went out of control and nearly created a meltdown which could have destroyed a large part of the human habitat of east-central Pennsylvania," Roy said.

8

010171

SCOTTSDALE PROGRESS NOV. 9, 1979.

Developer says

# *Waste plant wouldn't enhance safety*

By KEITH BAGWELL
Progress Staff Writer

A pilot radioactive waste neutralization plant could be in operation within three years, but it would do nothing to enhance the safety of nuclear power plant operations, an Arizona State University professor says.

Radha R. Roy, a professor of nuclear physics and a Scottsdale resident, said he developed calculations that will enable man to render dangerously radioactive nuclear reactor waste harmless within days and at a reasonable cost.

Roy, 58, who has had three critically acclaimed books published and has two more in the works, said he did the work on his own time over the last two years without the benefit of private or public funding.

He said he couldn't discuss details of his yet-untested process because his attorney is obtaining a patent for it.

But he said he doesn't seek to turn his discovery into personal wealth and is open to suggestions for funding its further development.

"For private industry, there is no return on its investment. The proper people to finalize this are in the federal government. They know my situation; they can contact me. I'm open to any reasonable alternative for financing," the professor said.

Roy estimated that waste treatment plant using his principles would add about $40 million to the cost of each nuclear reactor, which now require nearly $3 billion each to build.

Roy estimated it will take a year of work with a nuclear engineer to develop plans for a pilot facility and two more years to build it.

He said that his aim is not to encourage the development of more nuclear power plants.

"There are many inherent problems in the operation of nuclear reactors: they are very sophisticated and many unknown things are involved."

Roy

His purpose, instead, is to solve an existing problem for posterity: "We already have 75 million gallons of highly radioactive waste in this country. I don't feel we have a moral right to leave this waste to future generations," he said.

Roy, who has been at ASU for 16 years, developed ASU's graduate physics and nuclear physics programs after directing similar programs for the University of Brussels and Pennsylvania State University.

He charged that the bulk of the scientific community has looked at the nuclear waste problem only in terms of storage.

"Scientists are working in other areas; they don't want to think radioactive waste is a problem. Their perspective is different from what mine was: they're stuck on the same old storage way of thinking."

He said that storage has been the method of dealing with radioactive waste since the nuclear era began and it has been a consistent failure.

"First they dumped it in the oceans — the containers corroded and leaked. Then they began burying it underground and it leaked into underground water supplies. Most recently, they have been storing it above ground — but it still leaks out and nobody wants it around. There is no metal that can last 10,000 years anyway, and we have no right to leave this problem to posterity," Roy said.

The scientist said that he envisons a waste treatment facility for each operating nuclear reactor — whether for industrial, medical, educational or weapons uses — because "the stuff is far too dangerous to be transporting it all over the country."

Roy said his process involves bringing energy into the nuclei of atoms of radioactive materials from an outside source, changing their composition.

Atoms of stable elements have a certain number of protons, neutrons and electrons in each of their nuclei. Those of radioactive elements have an imbalance in those particles and Roy's plans call for restoring them to a balanced state.

"The theories involved are all well-proven. I'm very hopeful indeed that this is a method other than storage for dealing with radioactive waste," he said.

Additional uses of the Roy Process also might include but not necessarily be limited to:

a) treatment of tritium ($_1H^3$)

b) treatment of "low level" medical and industrial waste

c) decommissioning nuclear reactors, power plants, submarines, etc.

d) decontamination of reactor site or "nuclear accident" site

e) defusing nuclear warheads by converting the plutonium structure within, then using Roy Process irradiation

f) International Security - by treating reactor wastes "on site" with the Roy Process, total prevention of loss or theft of bomb-grade plutonium can be acheived.

We are currently entertaining bids from interested parties for funding of the proof of process and patent legal work phase. A share of licensing and royalties would be available to the investor.

THE ROY PROCESS
Radioactive Waste Neutralization
http://members.home.net/theroyprocess

Agent: DENNIS F. NESTER
(602) 494-9361
4510 E. Willow Ave
Phoenix, AZ 85032
Email: theroyprocess@home.com

R. R. ROY
A Brief Resume'

010171

| | |
|---|---|
| Nationality: | U.S. Citizen |
| Highest Degree: | Ph.D. University of London; M.S. University of Calcutta. |
| Membership: | Fellow American Physical Society |
| Present and Past Employment Records: | Professor of Physics, Arizona State University. Professor and Director of Nuclear Physics Laboratory, Pennsylvania State University. Professor and Director of Nuclear Physics Laboratory, University of Brussels, Belgium. Visiting Professor University of Strassbourg, France. |
| Consulting Experience: | Nuclear and Semiconductor Industries I Industrial Metallurgy. Writing and Evaluation of Proposals. Evaluation of Manuscripts. |
| Specialty: | Experimental nuclear physics with emphasis on ionization of electron and positron, scattering of electron and positron. Interactions of photons with matter involving photoelectric effect, compton effect, pair, triplet, and multiplet production. Nuclear reactions and energy levels of nuclei. Fission of uranium and Californium. Nuclear instrumentation. |
| Books: | Published three graduate level textbooks, one of which has been translated in a foreign language. A manuscript of another book has been completed. Nuclear Physics: Theory and Experiement. (John Wiley and Sons, Inc.) Translated in Japanese. Interactions of Photons and Leptons with Matter. (Academic Press). Statistical Physics. (Intext Educational Publishers) Physics: The Basic Science. Manuscript has been completed. |
| Encyclopedia: | Contributed a series of invited articles for an encyclopedia. |
| Research Publications: | Published numerous original research papers in various aspects of nuclear physics in refereed professional journals. |
| Thesis: | Supervised thesis of twenty-eight Ph.D. students, 20 M.S. students. |
| Courses Taught: | Special topic courses, Graduate and Undergraduate nuclear Physics; Modern Physics, Physics for non-Science major, and others. |
| Foreign Lanugage: | Speak and write several foreign languages including French. |
| Referee: | Canadian Journal of Physics |
| Cited in: | America Men and Women of Science; Who's Who in America; Who's Who in the World; International Biographical Centre, England; and half a dozen others. |

11

010171

# ASU scientist 1st to identify fission parts

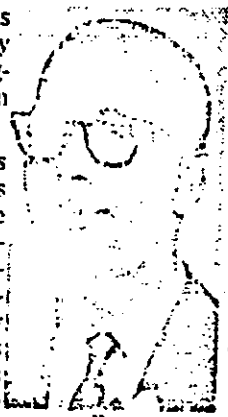
THE (Section B) Page 1
ARIZONA REPUBLIC
☒
Sunday, Nov. 29, 1970

By CLARENCE W. BAILEY
Republic Science Writer

*More about*

## Identifies atom fragment

TEMPE — A nuclear physicist here, Dr. Radha R. Roy, has solved a problem that has baffled researchers ever since the first atom bomb was being developed nearly 30 years ago.



Roy

The problem was simply to identify the first fission fragments formed when an atom splits.

Dr. Roy, who is professor of physics at Arizona State University, explained that these primary fission products exist for only 50 to 100 billiionths of a second. this means that these fragments — atoms of about half the atomic weight of the parent atom — are born and die so fast that previous measuring techniques could not recognize them.

The Calcutta-born scientist, who was the founding director of the nuclear research laboratories at both the University of Brussels, Belgium, and Pennsylvania State University, now has devised a method to detect and identify these first, fleeting fragments before they give up

Continued on Page B-8

Continued from Page B-1

energy (by beta radiation) and decay into other more stable elements.

His method, he said, makes it possible to measure the "K" X-ray energy of various primary elements with great accuracy, within one billionth of a second after fission occurs. In addition, the method is the only one ever developed that measures the activity of a single, indentifiable primary atom.

Dr. Roy's technique depends first upon the fact that a radioactive atom radiates "K" X-rays, the energy of which is unique and characteristic for each type of atom — a kind of "X-ray fingerprint." The "K" X-rays originate in the so-called "K-shell," which is the electron orbit closest to the nucleus.

But this alone isn't enough for identification, because when the nucleus splits the resulting shower of fragments and radiation (alpha, beta, gamma and X-ray) jams the measuring instruments.

To block out this interference and allow the radiation from a particular atom to come through distinctly, Dr. Roy uses a sensitive X-ray detector to fingerprint the atom and a synchronized "gating" or "coincidence" circuit that allows a second detector to measure gamma rays only at the precise moment when the atom emits its identifying "K" X-rays. Thus, the narrow sliver of time contains the exact data desired and vitually nothing else. A computer analyzes the results.

This approach now makes it possible for the first time to conduct orderly investigations into the emission of gamma radiations from primary fission fragments. In Dr. Roy's laboratory these products are formed when the radioactive element Californium-252 undergoes spontaneous fission or splitting of its nucleus.

Gamma rays from fission fragments are of keen interest. The principal reason is that the interpretation of gamma radiation behavior in terms of known theoretical principles is giving Dr. Roy and other investigators a deeper insight into the structure inside the little-known world of the atomic nucleus itself.

Dr. Roy came to ASU from Penn State in 1953 and began his attack on the primary fragment identification problem five years ago. Helping him at the start were N. W. Eddy and D. R. Ruegsegger, Jr., who have since earned their Ph.D. degrees under Dr. Roy.

As though this research wasn't enough to do, Dr. Roy has written and published a number of research papers and two advanced nuclear physics texts which are widely used in universities in this country and abroad. He will publish a third text on statistical physics next March, and in January a Roy text will be published in the Japanese language.

SOME HIGHLIGHTS OF THE PROFESSIONAL CAREER 010171

OF DR. RADHA R. ROY

AT UNIVERSITIES IN EUROPE AND THE UNITED STATES

* Mounted Nuclear Physics Laboratories from the very beginning at the University of Brussels, Belgium, Pennsylvania State University, and Arizona State University. Quality of these laboratories can be ascertained from letters of well known scientists such as Professor Bates, Professor Sauer, and Professor Henriot, to cite a few who visited the laboratories. Professor Henriot's letter states that Dr. Roy was the best nuclear physicist in the whole of Belgium, and and Dr. Roy is without equal in Belgium.

* Directed doctoral theses of students from five continents who saught to work for him. Unsolicited letters from undergraduate and graduate students are evidence of the popularity of his lectures.

* Organized the Science Palace as a representative of Belgium in the 1958 Brussels World Exhibition.

* Authored several doctorate and post doctorate level text books in nuclear physics which were used in universities world wide. One text was translated into Japanese, and another was well reviewed in Nature by Professor George Bishop of Oxford University, a distinguished nuclear physicist.

* Invited by the Chinese Physical Society to serve as a delegate in the Citizen Ambassador Program, to visit China to study the state of physics and physicist in China.

* Developed The Roy Process, a method of neutralizing nuclear wastes.

Enclosed are a few articles published in papers which describe some of these activities. I also contributed invited articles on nuclear physics in prestigious Academic American Encyclopedia.

ARIZONA STATE
UNIVERSITY TEMPE, ARIZONA 85281

OFFICE OF GRANTS AND CONTRACTS (602) 965-3101

010171

MEMORANDUM

June 9, 1980

TO: Professor R.R. Roy
Department of Physics

FROM: H. B. Humnicutt
Assistant Provost for Research

In compliance to the Patents Policy of the Arizona Board of Regents as adopted April 16, 1977, a careful study was conducted of your disclosure that relates to the processing of nuclear waste. It was found that the material in the disclosure is quite consistent with your claim that the work was carried out independently of the facilities of Arizona State University during the Summer of 1979, at which time you were not an employee or in any way acting as an employee of the University.

Therefore, the discovery is released to you as the inventor to do with as you see fit.

cc: Dean Weigend
Dr. Richard Work
Provost Mulhollan

HBH:klh

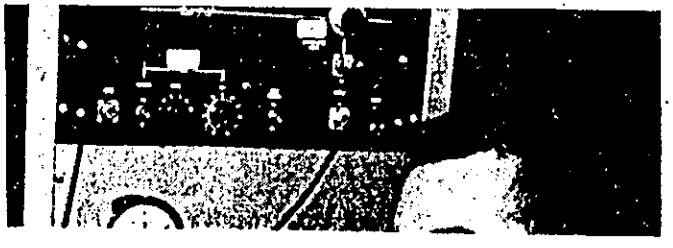
14

010171

CENTRE DAILY TIMES

FRIDAY, NOVEMBER 30, 1962 PAGE ELEVEN

RADHA R. ROY, professor of physics, directs the nuclear physics program, which, although less than four years in operation, has made remarkable progress. His bachelor of science and master of science degrees were conferred by the University of Calcutta and the doctor of philosophy degree by the University of London. He came to Penn State from the University of Brussels in Belgium where he organized and placed into operation a nuclear physics laboratory.



FORMER PRESIDENT DWIGHT D. EISENHOWER visited the Penn State reactor on June 11, 1955, and at that time revealed the plan "to offer research reactors to the people of free nations who can use them effectively for the acquisition of the skills and understanding essential to peaceful atomic progress." With him are his brother, Milton S. Eisenhower, (center), then president of Penn State; and Eric A. Walker, then dean of the College of Engineering and Architecture and now Penn State president.

was purch
aid of fu
Inghouse
will be pla
the compl
next year.

With th
the Univer
ed a depa
neering, h
ladino, a
graduate
engineerin
ter of s
engineerin
important
ment of a

JAMES
and Lt.
Navy, a
Universi

15


From Zohl dé Ishtar's *Daughters of the Pacific*, published in Australia:

I saw a child from Rongelap. Its feet are like clubs. And another child whose hands are like nothing at all. It is mentally retarded. Some of the children suffer growth retardation. Now we have this problem, what we call "jellyfish babies." These babies are born like jellyfish.... They have no heads. They have no arms.... They do not shape like human-beings at all. But they are being born on the labour table.... Some of them have hairs on them. And they breathe. This ugly thing only lives for a few hours.... They do not allow the mother to see this kind of baby because she will go crazy.

**"Nuclear power produces no $CO_2$"**

Slogan of German electricity producers