



UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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In the Matter of

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.)	Docket Nos.
(Indian Point, Unit No. 2))	50-247 SP
)	50-286 SP
POWER AUTHORITY OF THE STATE OF THE STATE OF NEW)	
(Indian Point, Unit No. 3))	

AMENDMENT TO UCS' PETITION FOR LEAVE TO INTERVENE, AND
RESPONSE TO NRC STAFF, CONSOLIDATED EDISON, AND
PASNY CHALLENGES TO UCS STANDING TO INTERVENE

The NRC Staff, Consolidated Edison (Con Ed), and the Power Authority of the State of New York (PASNY) have challenged the standing of the Union of Concerned Scientists (UCS) on several grounds.^{1/} Most of their arguments, although not convincing, at least bear some relationship to the law of standing and are consistent with good faith participation in the adversary process. Those arguments are:

1. Failure to demonstrate particularized injury in fact or authorization from members represented by UCS.
2. Lack of organizational standing.
3. Lack of derivative standing due to representation of "sponsors," rather than "members."
4. Inadequate specification of issues.

Regretfully, it cannot be said that PASNY's remaining arguments are consistent with good faith participation in this proceeding. PASNY suggests that UCS and other

^{1/} Since UCS and NY PIRG are challenged on separate grounds, we are responding separately.

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petitioners should be excluded from the proceeding because they are allegedly unalterably opposed to nuclear power and engaged in "scaremongering." Not only are PASNY's factual allegations in this regard inaccurate, its arguments have absolutely no legal basis. Rather, as we said in our pre-hearing memorandum, PASNY's filing is an unseemly polemic whose apparent purpose is to prejudice the proceeding and to divert the Board's attention from the serious issues of reactor safety entrusted to it by the Commission.

Before reaching the specific arguments, however, we emphasize that the unique investigatory nature of this proceeding precludes the strict application of traditional standing requirements. The fundamental goal of the Board here is to assure a thorough investigation of the questions raised by the Commission, which the Commission believed could best be achieved through the use of an adjudicatory format. There is no question that the Commission expected and intended UCS to participate since it was UCS' petition that led to the initiation of this proceeding, and since UCS is both strongly interested in the outcome and well qualified to assist the Board. Indeed, the Commission, without knowing whether UCS could achieve standing with respect to Indian Point, went so far as to direct that contentions related to the issues raised in UCS' petition should be admitted even if they did not respond to the Commission's questions. There is absolutely no indication that the Commission intended

that UCS or any other petitioner that might be able to provide useful information should be denied the right to participate based on the standing doctrines applicable to judicial proceedings. While it is true that the Commission directed that 10 C.F.R. Part 2 should control, nowhere did it state that the standing requirements relating to licensing proceedings under Part 2 should control an investigatory hearing of an utterly different purpose and character. There also is nothing whatsoever in the language of Part 2 to require the application of these doctrines in this proceeding. Accordingly, we urge the Board to eschew such artificial obstructions and admit UCS and other petitioners on the basis of the criteria contained in 10 C.F.R. § 2.714, taking into account the unique investigatory nature of this proceeding and the need for full and useful public participation regardless of technical standing considerations.

I. UCS DEMONSTRATES PARTICULARIZED INJURY AND
AUTHORIZATION TO REPRESENT ITS SPONSORS.

Several assertions concerning the standing of UCS were based on the fact that we did not provide the affidavits of individual sponsors who wish to be represented, but simply identified those persons and reflected their authorization in an affidavit of a UCS staff member who had spoken to the sponsors in question. Although there is no legal requirement to do so, we are amending our Petition by providing the affidavit of Elizabeth Czoniczer in order to simplify the Board's consideration of these matters.^{2/}

^{2/} We are providing an unsigned copy pending receipt of a notarized original from Ms. Czoniczer.

The affidavit demonstrates that the sponsor lives within 50 miles of the reactors, is specifically concerned about the hazards of the plant to her personal health and safety, and specifically authorizes UCS to represent her interests in this proceeding. With the exception of the controversy concerning the standing of sponsors, as opposed to members, this affidavit is more than sufficient to establish derivative standing in NRC proceedings.

In addition to the above, the NRC Staff argues that UCS and NYPIRG must designate a single spokesperson pursuant to 10 C.F.R. § 2.713. Nothing in that section requires that we designate a single spokesperson, just as nothing requires that any party designate a single lead attorney. The Notices of Appearance of William S. Jordan, III, and Jeffrey Blum, on behalf of UCS, comply with the requirement for written appearances.

II. UCS HAS DEMONSTRATED STANDING TO INTERVENE AS AN AFFECTED ORGANIZATION.

UCS has standing to intervene as an organization independent of the standing it derives from its sponsors. Its organizational standing is based on its fundamental interest in carrying out its longstanding goal of assuring the safe operation of individual reactors, and on its financial stake in the protection of its New York sponsors from harm caused by a nuclear accident.

UCS has devoted years of research to the monitoring of nuclear power plant safety and the development of safety measures for nuclear facilities. The organization has been

an active participant in NRC rulemakings and proceedings throughout its existence, with the knowledge and support of its sponsors.

The issues raised in UCS petition to intervene are more than a matter of interest -- they are fundamental to UCS' goal of promoting the safe use of nuclear energy. An organization's interest in pursuing the goals upon which it was founded has been deemed sufficient to confer standing. In Coles v. Havens Realty Corp., 633 F.2d 384 (4th Cir. 1980), cert. granted, 101 S.Ct. 1972 (1981), HOME, a housing organization, was found to have standing to sue a real estate agency for racial steering. Noting that the organization had "devoted significant resources" to identifying and counteracting the defendant's steering practices, the court found HOME had more than a "mere abstract concern about a problem of general interest." Id., at 390.

Although HOME's goals cannot be equated with bricks and mortar, they are functional, requiring identifiable action and the expenditure of efforts and funds which may result in the success or failure in achieving its objectives. Its "projects" therefore provides [sic] that "essential dimension of specificity that informs judicial decisionmaking."

Id. at 391, quoting Village of Arlington Heights v. Metropolitan Housing Development Corp., 429 U.S. 252, 97 S.Ct. 555 (1977)

Like HOME, UCS has made a considerable investment in achieving its objective of affecting the technologies and practices of nuclear power plant operation, both on a generic

and a plant by-plant basis. UCS' goal of promoting safe nuclear technology for individual plants can only be achieved through the NRC licensing process. To deny UCS permission to intervene in the above proceedings would close off the only forum in which it can make a meaningful contribution to the determination of safety qualifications at the Indian Point facility, thereby thwarting one of the fundamental purposes of the organization.^{3/}

^{3/} Furthermore, UCS has a financial interest in assuring the safety of the Indian Point facility. As in Hunt v. Washington Apple Advertising Commission, 432 U.S. 333, 345 (1977), where standing was sustained based on the fact that the financial welfare of plaintiff apple commission depended upon the apple sales of its member growers, so the Union of Concerned Scientists is dependent upon its sponsorship contributions for its survival. A nuclear accident in the New York metropolitan area could result in the loss of over \$200,000 in revenues to UCS. A financial stake in agency proceedings was found to establish standing in Pacific Legal Foundation v. Goyan, 500 F. Supp. 770 (D. Md. 1980), where an FDA rulemaking allowing reimbursement of witnesses in FDA proceedings would impose greater costs on the plaintiff organization for participating in lengthier proceedings. See, also, Mountain States Legal Foundation v. Costle, 630 F.2d 754 (10th Cir. 1980), where MSLF was found to lack standing to challenge a state air quality implementation plan. "There is no contention that Mountain States will suffer loss of membership, sustain financial loss or any other impairment as a result of the actions of the EPA..." Id. at 767. In contrast to MSLF, UCS stands to be directly and severely affected in its financial health and vitality if safety defects at Indian Point contribute to a nuclear accident that contaminates the New York metropolitan area. For this reason UCS has the requisite "personal stake" in the litigation of safety issues at the facility. Id. at 767.

III. UCS HAS DEMONSTRATED STANDING TO INTERVENE
ON BEHALF OF ITS SPONSORS.

The NRC Staff, Con Ed, and PASNY all challenge the standing of UCS to represent named individuals on the ground that those individuals are not voting members, but sponsors, who provide financial support to the organization and guide UCS' actions through their communications. The challenge is based solely on a single District Court decision, Health Research Group v. Kennedy, 82 F.R.D. 21 (D.D.C. 1979). None of the cited NRC decisions or any other authorities speaks to the question of whether sponsorship is sufficient to support derivative standing, and none of the cited authorities, including Health Research Group, addresses a factual situation comparable to UCS' representation of its sponsors.

In Health Research Group v. Kennedy, supra, the Court denied standing to two plaintiff organizations, Public Citizen and the Health Research Group. The former was an organization of wide ranging interests that purported to represent the public and those who contributed to the organization on virtually the entire range of public issues. It was controlled by an appointed Board of Directors and had no voting membership. In addition, there was no indication that its contributors were particularly concerned with the health issues raised in that case or that they supported Public Citizen because of its activities in that area. Health Research Group was a subsidiary organization of Public Citizen whose role was to address health-related

issues. However, it had no members or contributors of its own, and it relied entirely upon Public Citizen for support. The Court held that this degree of relationship was not sufficient to assure that when the organization came before the court,

it can reasonably be presumed that, in effect, it is the injured party who is himself seeking review.

Id. at 26-27 (Emphasis in original).

The reasoning that precluded standing in that case establishes it with respect to UCS here. As all of the cases reflect, the fundamental concern is that the organizational plaintiff have a sufficient direct stake in the proceeding to assure that it will be litigated to the same degree as if the affected members had brought suit on their own behalfs. It should be noted, however, that the organization's stake in the proceeding need only be direct, not substantial.

This view is confirmed by the Supreme Court's post-Sierra Club holding that the stake in the proceeding which must be demonstrated to acquire standing need only be a slight stake. United States v. Students Challenging Regulatory Agency Procedures, (SCRAP), 412 U.S. 669 (1973). In specifically eschewing a "significance" test, the Court there stated... an identifiable trifle is enough for standing to fight out a question of principle; the trifle is the basis for standing and the principle supplies the motivation." Id. at 689, fn. 14.

Houston Lighting and Power Co., supra, 9 NRC at 448.

In the Court's words in Health Reserach Group,

some very substantial nexus between the organization and the parties it purports

to represent will be required where those parties are not actually members.

Id. at 26.

That nexus exists in the case of UCS and the sponsors whom it is authorized to represent in this proceeding. Unlike Public Citizen in Health Research Group, UCS is widely recognized as an organization of substantial expertise and involvement in nuclear issues, to the degree that UCS may be presumed to represent the interests of its supporters on these issues. Virginia Electric and Power Co. (North Anna Nuclear Power Station, Units 1 and 2), ALAB 536, 9 NRC 402, 404 n. 2 (1979).

Unlike the Health Research Group, UCS is directly supported by its sponsors and does not rely on donations to another, more broadly based organization. The attached UCS materials, which are sent to prospective UCS sponsors, establish that anyone who becomes a sponsor of UCS does so with the specific understanding that he is supporting precisely the type of involvement in nuclear issues that is represented by UCS' intervention in this proceeding. Indeed, any UCS sponsor would reasonably expect the organization to represent his interests in NRC proceedings. The nexus of simple sponsorship alone, therefore, is substantially greater than was the case in Health Research Group. Even in the absence of membership-type control, sponsors join UCS specifically to assure that their voices are heard in NRC proceedings that may affect them. There is no question that they are, in effect, before the court through this mechanism.

However, the Board need not address the sponsorship-membership argument in the abstract. Again unlike the organizations in Health Research Group, UCS' sponsors here have specifically authorized the organization to represent their interests in this proceeding. Since they can withdraw that authorization at any time, they exercise a considerable degree of control, far more than mere voting membership in a large organization. Such authorization would be sufficient to establish UCS' standing in NRC practice even in the absence of the sponsorship relationship. Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), LBP-77-11, 5 NRC 481, 483 (1977). Accordingly, UCS is entitled to standing by virtue of its representation of those sponsors providing specific authorization to assure that their interests are taken into account in this proceeding.

IV. UCS' STATEMENT OF ISSUES ON WHICH IT WISHES TO PARTICIPATE IS SUFFICIENT

Consolidated Edison suggests that the petitions of various parties, including UCS, are inadequate for failure to set forth "the specific aspect or aspects of the subject matter of the proceeding" as to which they wish to intervene. Con Ed argues that the Commission's admonition that the Board be careful in formulating contentions requires that prospective intervenors be very specific in their statement of issues even before contentions are filed. There is no basis for this assertion. UCS identified five specific

issues with respect to which it wishes to participate. The Commission's concern with focusing the proceeding relates to contentions, and since the adequacy of contentions will determine whether parties will be admitted as intervenors, there is no need for further specificity in identifying aspects of interest.

V. PASNY SHOULD BE CHASTIZED FOR ITS ATTEMPTS TO
DISRUPT THE INVESTIGATION THROUGH UNFOUNDED AND
IRRELEVANT POLEMIC.

The most unfortunate aspect of this proceeding to date is PASNY's apparent decision to attempt to avoid the serious substantive safety issues by casting unfounded and irrelevant aspersions upon potential intervenors, including UCS, in a blatant attempt to prejudice the Board and disrupt the proceeding. We respond but briefly, and we have no doubt that the Board will summarily dispense with PASNY's arguments.

Citing various newspaper articles, testimony to Congress, and other sources, PASNY argues that UCS, among others, should be denied the right to intervene because it is unalterably opposed to nuclear power, contrary to Congressional mandate, and because it has engaged in "scaremongering." Not surprisingly, PASNY cites no authorities that support this remarkable proposition. Even assuming that all of PASNY's characterizations were true, there would still be absolutely no legal basis for denying intervention on those grounds. Since UCS has met all of the requirements related to this proceeding and has cooperated fully with the Board's efforts,

our opinions as expressed elsewhere cannot form the basis for denying our participation. To do so would be to deny our fundamental First Amendment rights and would be flatly unconstitutional. It is, indeed, ironic that PASNY complains that UCS is before the wrong forum in this proceeding, which was initiated pursuant to a petition filed by UCS, and then cites congressional testimony for the proposition that we should be elsewhere. Apparently PASNY believes that an organization's participation in legal proceedings can be restricted by the exercise of that organization's First Amendment rights to petition Congress. Clearly PASNY is wrong.

Since PASNY's legal argument is frivolous on this point, it is clear that it has another motive, which appears to be to cast aspersions on several intervenors in order to prejudice the Board's view of their contributions. However, a brief examination of PASNY's major assertions concerning UCS establishes that its attention to the truth is no greater than its attention to the law.

PASNY twice quotes Robert Pollard of UCS for the proposition that "A nuclear plant license is nothing more or less than a murder license." PASNY Answer at 4, 39. This quotation is taken from the Boston Globe of May 7, 1979 at 1, col. 4. Mr. Pollard did not make that statement. Dr. John Gofman has confirmed to us by telephone that he made the statement, and Mr. Pollard was misquoted. In fact,


had PASNY had the slightest interest in presenting truth rather than polemic, it would have noticed that Mary McGrory's column in the Globe of the same day, while not quoting the sentence at issue, attributed the sentence that followed it to Dr. Gofman. PASNY failed to notice a conflict within the very source on which it relied. PASNY also ignored the UCS Petition that led to this proceeding, in which UCS clearly indicated that it believed that Indian Point Units 1 and 2 should be shut down only until they are rendered safe, and UCS' basic position on nuclear power, which is to the same effect, and which is precisely consistent with the Congressional mandate to license nuclear reactors only if they do not threaten the public health and safety.

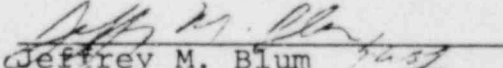
Regretfully, but realistically, we expect the same from PASNY throughout this proceeding. We urge the Board to dismiss these arguments forthwith and to make it quite clear to PASNY that PASNY will be expected to participate in good faith, to provide the information necessary for this investigation, and to refrain from pursuing such dilatory tactics in the future.

CONCLUSION

For the reasons stated above, UCS urges that it be admitted as an intervenor in this proceeding upon the adoption of at least one of its contentions.

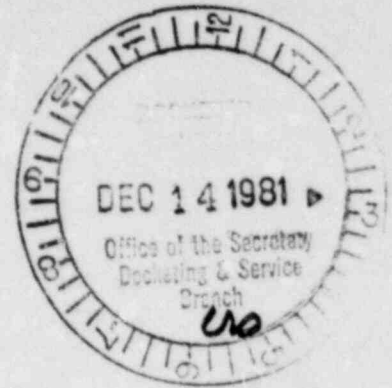
Respectfully submitted,


William S. Jordan, III
Harmon & Weiss
1725 I Street, N.W. Suite 506
Washington, D.C. 20006
(202) 833-9070


Jeffrey M. Blum
New York University Law
School
423 Vanderbilt Hall
40 Washington Square, South
New York, New York 10012
(212) 598-3454

DATED: December 10, 1981

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION



BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
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CONSOLIDATED EDISON COMPANY OF NEW YORK)	Docket Nos.
(Indian Point Unit 2))	
)	50-247
POWER AUTHORITY OF THE STATE OF NEW YORK)	50-286
(Indian Point Unit 3))	

NOTICE OF APPEARANCE ON BEHALF OF UCS

Notice is hereby given that the undersigned will appear
in this matter on behalf of the Union of Concerned Scientists:

Name: William S. Jordan, III

Address: Harmon & Weiss
1725 I St., N.W.
Suite 506
Washington, D.C. 20006

Telephone: (202) 833-9070

Admissions: Supreme Court of the State of Michigan
District of Columbia Court of Appeals
U.S. District Court for the District
of Columbia
U.S. Court of Appeals for the District
of Columbia Circuit


William S. Jordan, III

Dated: December 10, 1981

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

SECRETARY
SERVICE

In the Matter of)	
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CONSOLIDATED EDISON COMPANY OF NEW YORK)	Docket Nos. 50-247
(Indian Point, Unit 2))	50-286
)	
POWER AUTHORITY OF THE STATE OF NEW YORK)	
(Indian Point, Unit 3))	
)	

AFFIDAVIT OF ELIZABETH CZONICZER

1. My name is Elizabeth Czoniczer. I live at 25 H Springvale Road, Croton-on-Hudson, New York, 10520, which is approximately three to four miles south-southeast of the site of the Indian Point reactors.
2. I am deeply concerned about the potential hazards of the Indian Point reactors to my health and safety in the event of an accident.
3. I am a sponsor of the Union of Concerned Scientists because I am concerned about the health and safety hazards posed by nuclear power in general and by the Indian Point reactors in particular, and because the Union of Concerned Scientists is an organization of substantial expertise and credibility whose interests

are substantially the same as mine in these matters.

4. I authorize the Union of Concerned Scientists to represent my interests in the investigatory proceeding recently referred to an Atomic Safety and Licensing Board by the Nuclear Regulatory Commission.

Elizabeth Czoniczer

Sworn and subscribed to before me this _____ day of _____, 1981.

Notary Public

My commission expires _____

Scientists' Declaration on Nuclear Power

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OR

OFF SECRETARY
INSG & SERVICE
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From the Declaration presented to Congress and the President of the United States on the 30th anniversary of the atomic bombing of Hiroshima and signed by more than 2,000 biologists, chemists, engineers and other scientists . . .

"... the country must recognize that it now appears imprudent to move forward with a rapidly expanding nuclear power plant construction program. The risks of doing so are altogether too great. We, therefore, urge a drastic reduction in new nuclear power plant construction starts before major progress is achieved in the required research and in resolving present controversies about safety, waste disposal, and plutonium safeguards. For similar reasons, we urge the nation to suspend its program of exporting nuclear plants to other countries pending resolution of the national security questions associated with the use by these countries of the by-product plutonium from United States nuclear reactors."

Some of the signers of the declaration on nuclear power*:

BRUCE M. ALBERTS — Professor of Biochemical Sciences, Princeton University;

HANNES ALFVEN — Professor of Physics, University of California at San Diego; Nobel Laureate;

CHRISTIAN B. ANFINSEN — Chief, Laboratory for Chemical Biology, United States National Institutes of Health; Nobel Laureate;

DAVID BALTIMORE — American Cancer Society Professor of Microbiology, Massachusetts Institute of Technology;

I. HARRY BARRINGTON — Executive Staff Director and Study Director, National Research Council/National Academy of Sciences;

CARLOS G. BELL, JR. — Celanese Professor of Civil Engineering, University of North Carolina at Charlotte;

HARRIET BERNHEIMER, M.D. — State University of New York, Downstate Medical Center;

NINA BYERS — Professor of Physics, U.C.L.A.;

FRED CALLEN — Professor of Physics, American University;

RICHARD L. CASPERSON — Associate Scientist, Thermal Reactor Safety Division, Idaho National Engineering Laboratory (formerly known as Atomic Energy Commission National Reactor Testing Site);

BRITTON CHANCE — Director, Johnson Research Foundation; Professor of Biophysics, University of Pennsylvania; National Medal of Science Winner (1975);

SAUL COHEN — Professor and Head of Department of Chemistry, Brandeis University;

JAMES BRYANT CONANT — President Emeritus of Harvard University; Chairman, National Defense Research Committee during World War II; Member of Manhattan Project Steering Committee; United States High Commissioner in Germany; General Advisory Committee of the AEC; "Atomic Pioneer's Award" from President Nixon, among other honors;

BRUNO COPPI — Professor of Physics, Massachusetts Institute of Technology;

CARL F. CORI — Visiting Professor of Biological Chemistry, Harvard Medical School; Nobel Laureate;

FRANK S. CRAWFORD — Professor of Physics, University of California at Berkeley;

MURRAY EDEN — Professor of Electrical Engineering, Massachusetts Institute of Technology;

JOHN T. EDSALL — Professor of Biochemistry Emeritus, Harvard University; Member, National Academy of Sciences; President, VI International Congress of Biochemistry;

ANNE EHRLICH — Senior Resident Associate of Biology, Stanford University;

PAUL EHRLICH — Professor of Biology, Stanford University;

HERMAN N. EISEN — Professor of Immunology, Center for Cancer Research, Massachusetts Institute of Technology;

JAMES A. FAY — Professor of Mechanical Engineering, Massachusetts Institute of Technology; Chairman, Massachusetts Port Authority;

MARION FAY — President Emerita, The Medical College of Pennsylvania;

C. D. HAAGENSEN, M.D. — Professor Emeritus of Clinical Surgery, College of Physicians and Surgeons, Columbia University;

A. CARL HELMHOLTZ — Professor of Physics, University of California at Berkeley;

EDWIN C. KEMBLE — Professor of Physics Emeritus, Harvard University;

HENRY W. KENDALL — Professor of Physics, Massachusetts Institute of Technology;

KATE KIRBY-DOCKEN, PhD — Physicist, Harvard Smithsonian Observatory;

PAUL KIRKPATRICK — Professor of Physics Emeritus, Stanford University;

GEORGE B. KISTIAKOWSKY — Professor of Chemistry Emeritus, Harvard University; Head of the Explosives Division of the Manhattan Project; Former Vice-President of the National Academy of Sciences; Science Advisor to President Eisenhower;

VERA KISTIAKOWSKY — Professor of Physics, M.I.T.;

WILLIAM N. LIPSCOMB — Abbott and James Lawrence Professor of Chemistry, Harvard University;

SALVATORE LURIA — Professor of Biology, Massachusetts Institute of Technology; Nobel Laureate;

BORIS MAGASANIK — Professor and Chairman of the Biology Department, Massachusetts Institute of Technology;

KIRTLEY F. MATHER — Professor of Geology Emeritus, Harvard University; Former President of the American Academy of Arts and Sciences;

EDWIN E. MOISE — Distinguished Professor of Mathematics, Queens College, City University of New York;

PHILIP MORSE — Professor of Physics Emeritus, Massachusetts Institute of Technology; Past President of the American Physical Society;

STANLEY J. PICKART — Professor and Chairman of the Physics Department, University of Rhode Island;

EMERIT O. POHL — Professor of Physics, Cornell University;

RICHARD E. POST — Deputy Associate Director, Controlled Fusion Division of Lawrence Livermore Laboratory and Professor in Residence, University of California at Davis;

BURTON RICHTER — Research Group Leader, Stanford Linear Accelerator Center;

JULIAN SCHWINGER — Professor of Physics, University of California at Los Angeles; Nobel Laureate;

IRVING L. SELIKOFF — Director, Environmental Science Laboratory, Mount Sinai School of Medicine of the City University of New York;

ROBERT T. SINSHIMER — Chairman of the Biological Division, California Institute of Technology;

HEROME STEFFENS — Chairperson, Technology and Society Division, American Society of Mechanical Engineers;

WALTER H. STOCKMAYER — Professor of Chemistry, Dartmouth College;

ALBERT SZENT-GYORGYI — Research Biologist, Woods Hole Marine Biological Laboratory; Nobel Laureate;

HAROLD C. UREY — Professor of Chemistry Emeritus, University of California at San Diego; Manhattan Project; Nobel Laureate;

GEORGE WALD — Professor of Biology, Harvard University; Nobel Laureate;

JAMES D. WATSON — Professor of Biology, Harvard University; Director of Cold Spring Harbor Laboratory; Nobel Laureate;

RALPH WEYMOUTH — Vice Admiral (Ret.), United States Navy, Former Director of Research, Development, Test and Evaluation, Office of the Chief of Naval Operations;

ARTHUR S. WIGHTMAN — Professor of Mathematical Physics, Princeton University;

HULEN B. WILLIAMS — Professor of Chemistry and Dean of the College of Chemistry and Physics, Louisiana State University;

NORMAN D. ZINDER — Professor of Molecular Genetics, Rockefeller University.

* Organizational affiliation is for identification only.



UNION OF CONCERNED SCIENTISTS

1208 Massachusetts Avenue • Cambridge, Massachusetts 02138

About the UNION OF CONCERNED SCIENTISTS

The Union of Concerned Scientists (UCS) is an independent, nonprofit group of scientists, engineers and other professionals who have spent a decade conducting research into nuclear power safety questions. Because we are not directly employed by the power industry, we are in a position to speak freely and address the dangers of the U.S. nuclear program. The nuclear power industry, together with the Federal government, has committed so much time and money toward a future American reliance on nuclear power that they are exceedingly reluctant to admit that serious safety problems are not at all imminent. UCS is joined by many other independent groups and individuals, expert in the field of nuclear safety, who maintain that the danger in continuing the present program of nuclear power plant construction is very great.

UCS — In addition to its unique role in independent technical research on nuclear power problems — carries on a large variety of public advocacy projects. UCS works with the national news media to help bring the facts about nuclear power to public attention; UCS aids Congressional committees, foreign governments, governmental committees, and other decision-makers in their work on nuclear power issues. UCS itself takes legal actions to force basic changes in the Federal government's nuclear power policies and to compel public disclosure of government data on nuclear power hazards. In addition to work on nuclear safety, the UCS program focuses also on nuclear arms non-proliferation, alternative energy sources and other issues concerning the public policy applications of advanced technology.

Much of this work is made possible by support from individual citizens. If you wish to become a UCS Sponsor, or if you wish more information or publications from UCS, please write to

Union of
**CONCERNED
SCIENTISTS**

1364 Massachusetts Avenue
Cambridge, Massachusetts 02238
(617) 547-5552

Your contribution to UCS is tax-deductible.

THE NUCLEAR POWER CONTROVERSY



UNION OF CONCERNED SCIENTISTS

The Controversy

The debate over nuclear power in America continues to rage, although for many it seems to be a question only for experts. But it is not a question just for experts — each citizen must make an informed choice. The nuclear decision will profoundly affect all Americans as energy users, taxpayers, and as individuals who care to live in a safe environment. The United States has already embarked on a major nuclear program. If it continues as the nuclear industry has planned, it will be of unprecedented magnitude: will cost over a billion dollars and shape our future well into the twenty-first century. But, research conducted by the Union of Concerned Scientists (UCS) and others indicates that this course may be disastrous, and that major uncertainties and risks must be addressed and resolved now, before heavy reliance on nuclear power becomes a fact.

Dangers

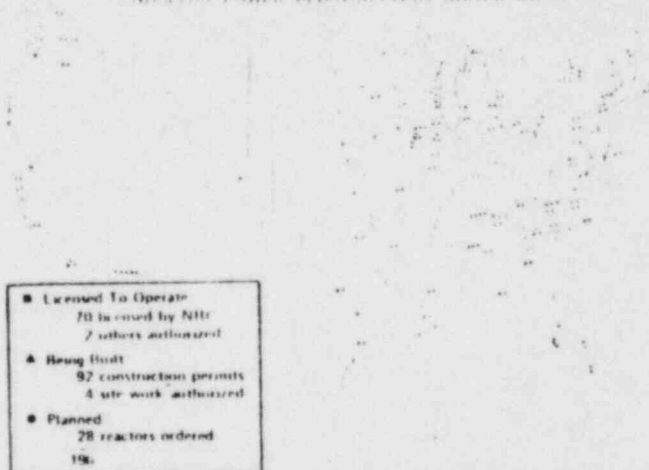
The safety problems affecting nuclear plants are very serious. Nuclear plants can have truly catastrophic accidents. The danger is not a nuclear explosion, but the sudden release of lethal, radioactive material to the environment.

This is how the accident risk arises. A nuclear reactor produces power with the energy released by splitting nuclei of radioactive uranium located in the reactor core. The danger lies in the fact that in the event of a serious mishap, the nuclear reactions — which generate an appreciable amount of heat even after the power-producing chain reactors are shut down — can lead to destruction of the reactor and the release of large quantities of toxic material. If a pipe carrying water to the reactor should break, within seconds the temperature of the core could begin to rise to a point at which it would melt through its steel container and discharge large amounts of radiation. Such a "meltdown" is the most feared nuclear accident. A typical large power plant contains 100 tons of radioactive material in solid, liquid and gaseous forms, much of which if released could be borne away by the wind or could find its way into food and water supplies. It is estimated that death and birth defects could occur for people exposed over 100 miles from the plant. One study by the Atomic Energy Commission concluded that a major accident

could affect "an area of disaster... equal to that of the State of Pennsylvania."

The emergency core cooling systems (ECCS) is intended to prevent such a catastrophe by restoring cooling water to the hot core, thus arresting the core meltdown. The ECCS is absolutely basic to the safety of a reactor, and yet the number of questions about its efficacy is staggering. It has never been adequately tested. In open testimony, many senior AEC and NRC research scientists have expressed misgivings about this cooling system. Internal government documents, suppressed by Federal officials but obtained by UCS investigations, catalog numerous defects in current ECCS equipment. And yet

NUCLEAR POWER REACTORS in the UNITED STATES



this is the pivotal safety system installed in all U. S. nuclear plants. Doubts about the safety of nuclear plants were reflected in the refusal of power companies to develop nuclear energy until Congress passed the Price-Anderson Act and released them from full financial responsibility to the victims of any accidents.

It is true that so far there have been no calamitous accidents in the country's limited commercial nuclear power program. But only 72 of the hundreds of reactors planned have been built, and already there have been a number of very sobering near-misses, many pointing to inadequate designs and poor supervision. The 1979 accident at Three Mile Island destroyed much of the core and came within an hour of a meltdown, according to accident reports. In

1975, many of the safety systems, including the entire ECCS, were knocked out for over 7 hours at one of the country's largest operating plants in Browns Ferry, Alabama by a fire started by a workman's candle. One TVA official told investigators that a catastrophe was avoided by "sheer luck." The nuclear industry and government claims that the risk from the nuclear program is negligible are called into serious question by events such as this.

And it is not just accidents that are cause for concern. Reactors can be sabotaged with catastrophic consequences. Repeated studies by government and other reviewers have concluded that safeguards against sabotage are presently inadequate.

"The technologists claim that if everything works according to their blueprints, atomic energy will be a safe and very attractive solution to the energy needs of the world. This may be correct. However, the real issue is whether their blueprints will work in the real world and not only in a 'technological paradise'."

Hannes Alfvén, Nobel Laureate in Physics

Nuclear Waste

Another danger of the nuclear power program lies in the highly toxic radioactive waste generated by nuclear reactors. Scientists have described these as a grim legacy to future generations. This waste, although relatively small in volume, will continue to be deadly for tens of thousands of years. Unlike chemical pollutants, there is no way to render them harmless; they must be stored and guarded until the natural radioactive decay has run its course. If prehistoric cave-men had generated nuclear wastes, our society would still be confronted with containing its lethal potency.

Currently, the radioactive waste is stored in several facilities throughout the country, and much of it sits in temporary installations at reactor sites. The inadequacy of the facilities has been well demonstrated. In 1973, it was discovered that 115,000 gallons of high level radioactive waste had leaked from a tank at the AEC's facility in Hanford, Washington. The official investigation indicated that the tank had been leaking for weeks, that no automatic alarm system alerted anyone, that the management in charge did not review monitoring reports which should have alerted them, and they had no formal training for these responsibilities. Additional leaks of radioactive waste have occurred at Hanford and at facilities in New York, Kentucky, Idaho, and from ocean dumping off California and Delaware.

There are newer plans for waste storage involving deep burial in theoretically stable geological formations. Such programs sound promising, but are yet to be demonstrated. The first attempt at burial had to be abandoned when it appeared that ground water could unexpectedly leak in. We are over 30 years into the "nuclear age" and, in spite of many claims and promises, there is still no satisfactory, demonstrated technology for dealing with nuclear waste in a confident and satisfactory manner.

Terrorism and Nuclear Proliferation

Accidental release of radioactive material or waste is not the only kind of danger surrounding nuclear power. Another danger involves the production of atomic bomb materials. A typical plant produces 500 pounds of plutonium a year, and it takes only 20 pounds to make a bomb. If, as the nuclear industry wishes, this material is separated out and so becomes available for theft, the possibility of terrorist acquisition will be vastly increased. To demonstrate the possibility of terrorists building homemade bombs with stolen plutonium, a public television station commissioned a college student to design a nuclear explosive using only readily available technical information. His design, according to one reviewing expert, would probably have worked. The possession of plutonium means power, tremendous power, so this material from nuclear reactors will require very extensive and costly guarding and control.

An additional and frightening dimension of nuclear power comes from export sales of reactors. Nations not having nuclear weapons can buy reactors and use their nuclear program as a stepping stone to nuclear explosives. India demonstrated this when she surprised the world by detonating a nuclear explosive built with material from a reactor furnished by Canada. Thus, the number of countries having nuclear weapons can grow, leading to a riskier and more dangerous world. Control over the reactors that we and other major countries sell abroad is inadequate and so the proliferation of nuclear weapons can continue much too easily.

Beyond Danger to Economics

The dream of cheap abundant power from nuclear reactors has continued to fade as the economic realities emerge. Nuclear plants are extremely expensive to build, and costs are increasing at the rate of over 20 percent annually. Further, these plants are very complex to run, and have many inefficiencies. Commercial U.S. nuclear plants operate at about 59% of their capacity, far below industry and government projections of 70%-80%. Nuclear generated electricity now costs more than that generated by coal in some parts of the country, and almost as much as oil.

The American public is understandably concerned about energy independence and freedom from the threat of an OPEC oil embargo. Nuclear power in 1979 displaced the same amount of oil that could be saved by consuming 3% less gasoline. Nuclear power is less than a satisfactory answer to domestic energy needs. Our uranium supplies are highly uncertain and possibly no more abundant than the limited remaining oil supplies. One solution to this impending uranium fuel crisis is reliance on "breeder reactors," now under development, fueled by plutonium generated from uranium within the reactors. However, the efficient use of uranium resources in breeder reactors is more than offset by their greatly enhanced dangers. The fuel reprocessing procedure involves extracting plutonium from the wastes. Also, breeder reactors compared to present reactors would be far more dangerous in their concentration of plutonium, more lethal in case of accident, and possibly more attractive to sabotage.

What Should We Do?

UCS and many other concerned citizens are not denying the energy potential that nuclear power could offer the U.S. Our position simply recognizes that satisfactory safety precautions have to be taken before large scale nuclear power production can be allowed. The nuclear industry has failed so far to do this. A moratorium on the construction of new plants would allow an orderly assessment of the problems and the time to carry out research and development to decrease the risks. This would help avoid costly and possibly fatal mistakes. The history of indifference, carelessness, poor engineering, near accidents and suppression of information to the public about nuclear safety problems demonstrates the need for considerable tightening of controls.

Fortunately the country can afford the pause in nuclear construction since nuclear power is used only for electricity and our national electricity supply is abundant. Nationwide, our 1980 "reserve capacity" is 33% greater than peak demand. In an orderly energy program, the country could avoid a greatly expanded commitment to coal and nuclear fission power. This could be achieved by major reduction in energy waste through well planned energy efficiency measures, by wise utilization of domestic oil and gas resources, and by developing for practicable and timely application, renewable sources of energy from the sun, the wind, the oceans, bio-mass and from deep in the earth.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKETED
NRC

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BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

SECRETARY
OF LICENSING & SERVICE
BRANCH

In the Matter of)	
)	
CONSOLIDATED EDISON COMPANY OF NEW YORK)	Docket Nos.
(Indian Point Unit 2))	
)	50-247
POWER AUTHORITY OF THE STATE OF NEW YORK)	50-286
(Indian Point Unit 3))	

CERTIFICATE OF SERVICE

I hereby certify that copies of Amendment to UCS' Petition For Leave To Intervene Response To NRC Staff, Consolidated Edidson, And PASNY Challenges to UCS Standing To Intervene dated December 10, 1981, have been served on the following individuals by deposit in the United States mail, first class, postage prepaid on this 10th day of December 1981.

Louis J. Carter, Esq.
Atomic Safety and Licensing Board
United States Nuclear
Regulatory Commission
Washington, D.C. 20555

Jeffrey M. Blum, Esq.
New York University Law School
423 Vanderbilt Hall
40 Washington Square South
New York, New York 10012

Dr. Oscar H. Paris
Atomic Safety and Licensing Board
United States Nuclear
Regulatory Commission
Washington, D.C. 20555

Ms. Joan Holt
New York Public Interest Research
Group
5 Beekman Street
New York, New York 10038

Docketing & Service (2)
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. Frederick J. Shon
Atomic Safety and Licensing Board
United States Nuclear
Regulatory Commission
Washington, D.C. 20555

Brent L. Brandenburg, Esq.
Richard P. Remshaw
John D. O'Toole
Consolidated Edison Company
of New York, Inc.
4 Irving Place
New York, New York 10003

Janice Moore, Esq.
Office of the Executive
Legal Director
United States Nuclear
Regulatory Commission
Washington, D.C. 20555

Charles J. Mailkish, Esq.
General Counsel
The Port Authority of New York
and New Jersey
One World Trade Center, 665
New York, New York 10048

Mr. John Gilroy
Westchester Coordinator
Indian Point Project
New York Public Interest Research
Group
240 Central Avenue
White Plains, New York 10606

Zipporah S. Fleisher, Secretary
West Branch Conservation Association
443 Buena Vista Road
New City, New York, 10956

Charles A. Scheiner, Co-Chairperson
Westchester People's Action
Coalition, Inc.
P.O. Box 488
White Plains, New York 10602

Mayor George V. Begany
Village of Buchanan
236 Tate Avenue
Buchanan, New York 10511

Alan Latman, Esq.
Westchester People's Action
Coalition, Inc.
44 Sunset Drive
Croton-On-Hudson, New York 10520

Andrew S. Roffe, Esq.
New York State Assembly
Albany, New York 12248

Ezra I. Bialik, Esq.
Steve Leipzig, Esq.
Environmental Protection Bureau
New York State Attorney General's
Office
Two World Trade Center
New York, New York 10047

Ms. Pat Posner, Spokesperson
Parents Concerned About
Indian Point
P.O. Box 125
Croton-On-Hudson, New York 10520

Greater New York Council
on Energy
c/o Dean R. Corren
New York University
26 Stuyvesant Street
New York, New York 10003

Mr. Geoffrey Cobb Ryan
Conservation Committee Chairman
Director, New York City
Audubon Society
71 West 23rd Street, Suite 1828
New York, New York 10010

Stanley B. Klimberg, Esq.
General Counsel
New York State Energy Office
2 Rockefeller State Plaza
Albany, New York 12223

David H. Pikus, Esq.
Shea & Gould (P.A.S.N.Y.)
330 Madison Ave.
New York, New York 10017

Judith Kossler, Coordinator
Rockland Citizens for Safe Energy
300 New Hempstead Road
New City, New York 10956

Richard L. Brodsky
County Office Building
White Plains, New York 10601

Marc L. Parris, Esq.
County Attorney
Eric Ole Thorsem, Esq.
County of Rockland
11 New Hempstead Road
New City, New York 10956

Renee Schwartz, Esq.
Botein, Hays, Sklar and Herzberg
200 Park Avenue
New York, New York 10166


Honorable Ruth W. Messinger
Council Member
4th District, Manhattan
City Hall
New York, New York 10007

Ms. Lorna Salzman
Firends of the Earth
208 West 13th Street
New York, New York 10011

Mr. Alfred B. Del Bello
Westchester County Executive
Westchester County
148 Martine Avenue
New York, New York 10601

Morgan Associates, Esq.
Chartered (PASNY)
1899 L. St., N.W.
Washington, D.C. 20036

Thomas R. Frey, Esq.
Charles M. Pratt, Esq.
Office of the General Counsel
Power Authority of the State of New York
10 Columbus Circle
New York, New York 10019


William S. Jordan, III