UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

June 25, 1986

TO ALL NON-POWER REACTOR LICENSEES

Gentlemen:

SUBJECT: DISTRIBUTION OF PRODUCTS IRRADIATED IN RESEARCH REACTORS (GENERIC LETTER 86-11)

We have recently received several inquiries regarding products which are irradiated in research reactors and subsequently distributed to unlicensed persons. The inquiries were related to irradiations of gems and silicon chips, but other products may also be involved.

We are concerned that research reactor licensees may be irradiating and redistributing products containing induced radioactivity to unlicensed receivers who utilize or redistribute these irradiated products. Information provided to NRC in specific cases indicates that gems, silicon chips, and many other materials usually acquire relatively long-lived induced radioactivity when irradiated in a reactor. Although irradiation of products in a reactor is not of itself prohibited, 10 CFR Section 30.14 prohibits introduction of byproduct material into a product for distribution to an unlicensed person, unless the distributor has a specific license issued pursuant to 10 CFR Section 32.11 which permits such distribution.

The purpose of this Generic Letter is to correct any misunderstanding concerning the distribution of irradiated products to unlicensed persons. In accordance with 10 CFR 30.14, the distribution of irradiated materials, even with low levels of induced radioactivity, to unlicensed persons is prohibited unless the distributor of such materials is licensed by the NRC to do so. Furthermore, to measure these low levels of induced radioactivity very sensitive low background instruments are required, such as shielded sodium iodide or germanium-lithium detection systems.

In addition, we call your attention to subsection 3 of the enclosed NRC Policy Statement in the Federal Register notice of March 16, 1965 (30 FR 3462) regarding products which are toys, novelties or adornments. The staff considers gems to be adornments and has not granted licenses for distribution of irradiated gems or similar materials.

You are responsible for assuring that the distributors of any products you have irradiated in your reactor, and which have acquired induced radioactivity, are licensed to distribute these products in accordance with 10 CFR 30.14(c) and 30.31. If you directly distribute the irradiated products to unlicensed persons, you must obtain a new license to reflect this activity.

IDAC-5
INFO CTR

If you wish to irradiate licenseable products (other than gems or other adornments) for transfer to unlicensed persons, you and/or the distributor should apply to the NRC for a distribution license, pursuant to 10 CFR 32.11, at the following address:

U.S. Nuclear Regulatory Commission
Director, Office of Nuclear Material
Safety and Safeguards
Division of Fuel Cycle and Material Safety
Washington, D. C. 20555

Please note that the NRC has exclusive jurisdiction over reactors and distribution of radioactive consumer products. Agreement States do not issue this type of license.

This letter is for information only and does not require any response. Should you have any questions concerning this matter, please contact Harold Bernard at (301) 492-8529.

Frank J. Miraglia, Director
Division of PWR Licensing-B
Office of Nuclear Reactor Regulation

Enclosure:
As stated

DISTRIBUTION:
Central File
SSPD Reading
PNoonan
HBernard
DTondi
HBerkow
JHickey
JMetzger
RFonner
FMiraglia

DPWRL-B:SSPD	DPWRL-B:SSPD	DPWRL-B:SSPD	DPWRL-B:SSPD	NMSS	I&E
PNoonan:ac	HBernard	DTondi	HBerkow	JHickey	JMetzger
04/10/86	04/10/86	04/15/86	04/24/86	04/15/86	04/14/86

ELD	DPWRL-B:SSPD
RFonner	FMiraglia
04/14/86	04/ /86

Applications should be addressed as follows:

U.S. Nuclear Regulatory Commission
Director, Office of Nuclear Material
Safety and Safeguards
Division of Fuel Cycle and Material Safety
Washington, D. C. 20555

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This letter is for information only and does not require any response. Should you have any questions concerning this matter, please contact Harold Bernard at (301) 492-8529.

Sincerely,

Original Signed by
Frank J. Miraglia

Frank J. Miraglia, Director
Division of PWR Licensing-B
Office of Nuclear Reactor Regulation

Enclosure:
As stated

DISTRIBUTION:
Central File
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*SEE PREVIOUS CONCURRENCE SHEET

DPWRL-B:SSPD*	DPWRL-B:SSPD*	DPWRL-B:SSPD*	DPWRL-B:SSPD*	NMSS*	I&E*
PNoonan:ac	HBernard	DTondi	HBerkow	JHickey	JMetzger
04/10/86	04/10/86	04/15/86	04/24/86	04/15/86	04/14/86

ELD*	DPWRL-B:SSPD	
RFonner	FMiraglia	
04/14/86	06/10/86	

RICHARD V. FORD

Statement of Changes in Financial Interests

In accordance with the requirements of section 710(b)(6) of the Defense Production Act of 1950, as amended, and Executive Order 10647 of November 28, 1955, the following changes have taken place in my financial interests as reported in the FEDERAL REGISTER during the past six months:

A. Deletions: Smith, Kline, and French.
B. Additions: None.

This statement is made as of February 24, 1965.

RICHARD V. FORD.

FEBRUARY 24, 1965.

[F.R. Doc. 65-2630; Filed, Mar. 15, 1965; 8:45 a.m.]

RICHARD P. STEINER

Statement of Changes in Financial Interests

In accordance with the requirements of section 710(b)(6) of the Defense Production Act of 1950, as amended, and Executive Order 10647 of November 28, 1955, the following changes have taken place in my financial interests as reported in the FEDERAL REGISTER during the past six months:

A. Deletions: No change.
B. Additions: No change.

This statement is made as of February 21, 1965.

RICHARD P. STEINER.

FEBRUARY 21, 1965.

[F.R. Doc. 65-2629; Filed, Mar. 15, 1965; 8:45 a.m.]

ATOMIC ENERGY COMMISSION

USE OF BYPRODUCT MATERIAL AND SOURCE MATERIAL

Products Intended for Use by General Public (Consumer Products)

Criteria for the approval of products intended for use by the general public containing byproduct material and source material. This notice sets forth the essential terms of the Commission's policy with respect to approval of the use of byproduct material and source material in products intended for use by the general public (consumer products) without the imposition of regulatory controls on the consumer-user. This is accomplished by the exemption, on a case-by-case basis, of the possession and use of the approved items from the licensing requirements for byproduct and source material of the Atomic Energy Act of 1954, as amended, and of the Commission's regulations "Licensing of Byproduct Material", 10 CFR Part 30 and "Licensing of Source Material", 10 CFR Part 40.

1. At the present time it appears unlikely that the total contribution to the exposure of the general public to radiation from the use of radioactivity in consumer products will exceed small fractions of limits recommended for exposure to radiation from all sources. Information as to total quantities of radioactive materials being used in such products and the number of items being distributed will be obtained through record-keeping and reporting requirements applicable to the manufacture and distribution of such products. If radioactive materials are used in sufficient quantities in products reaching the public so as to raise any question of population exposure becoming a significant fraction of the permissible dose to the gonads, the Commission will, at that time, reconsider its policy on the use of radioactive materials in consumer products.

2. Approval of a proposed consumer product will depend upon both associated exposures of persons to radiation and the apparent usefulness of the product. In general, risks of exposure to radiation will be considered to be acceptable if it is shown that in handling, use and disposal of the product it is unlikely that individuals in the population will receive more than a small fraction, less than a few hundredths, of individual dose limits recommended by such groups as the International Commission on Radiological Protection (ICRP), the National Council on Radiation Protection and Measurements (NCRP), and the Federal Radiation Council (FRC), and that the probability of individual doses approaching any of the specified limits is negligibly small. Otherwise, a decision will be more difficult and will require a careful weighing of all factors, including benefits that will accrue or be denied to the public as a result of the Commission's action. Factors that may be pertinent are listed in paragraphs 9 and 10, below.

3. It is considered that as a general rule products proposed for distribution will be useful to some degree. Normally the Commission will not attempt an extensive evaluation of the degree of benefit or usefulness of a product to the public. However, in cases where tangible benefits to the public are questionable and approval of such a product may result in widespread use of radioactive material, such as in common household items, the degree of usefulness and benefit that accrues to the public may be a deciding factor. In particular, the Commission considers that the use of radioactive material in toys, novelties, and adornments may be of marginal benefit.

4. Applications for approval of "off-the-shelf" items that are subject to mishandling especially by children will be approved only if they are found to combine an unusual degree of utility and safety.

5. The Commission has approved certain long standing uses of source material, most of which antedate the atomic energy program. These include:

(1) Use of uranium to color glass and glazes for certain decorative purposes;

(2) Thorium in various alloys and products (gas mantles, tungsten wire, welding rods, optical lenses, etc.) to impart desirable physical properties; and

(3) Uranium and thorium in photographic film and prints.

6. The Commission has also approved the use of tritium as a substitute luminous material for the long standing use of radium for this purpose on watch and clock dials and hands.

7. The Commission has approved additional uses of byproduct and source material in consumer products. These include the following:

(1) Tritium in automobile lock illuminators;

(2) Tritium in balances of precision;

(3) Uranium as shielding in shipping containers; and

(4) Uranium in fire detection units.

8. In approving uses of byproduct and source materials in consumer products, the Commission establishes limits on quantities or concentrations of radioactive materials and, if appropriate, on radiation emitted. In some cases other limitations, such as quality control and testing, considered important to health and safety are also specified.

PRINCIPAL CONSIDERATIONS WITH RESPECT TO EVALUATION OF PRODUCTS

9. In evaluating proposals for the use of radioactive materials in consumer products the principal considerations are:

(a) The potential external and internal exposure of individuals in the population to radiation from the handling, use and disposal of individual products;

(b) The potential total accumulative radiation dose to individuals in the population who may be exposed to radiation from a number of products;

(c) The long-term potential external and internal exposure of the general population from the uncontrolled disposal and dispersal into the environment of radioactive materials from products authorized by the Commission; and

(d) The benefit that will accrue to or be denied the public because of the utility of the product by approval or disapproval of a specific product.

10. The general criteria for approval of individual products are set forth in paragraph 2, above. Detailed evaluation of potential exposures would take into consideration the following factors together with other considerations which may appear pertinent in the particular case:

(a) The external radiation levels from the product.

(b) The proximity of the product to human tissue during use.

(c) The area of tissue exposed. A dose to the skin of the whole body would be considered more significant than a similar dose to a small portion of the skin of the body.

(d) Radiotoxicity of the radionuclides. The less toxic materials with a high permissible body burden, high concentration limit in air and water, would be considered more favorably than materials with a high radiotoxicity.

(e) The quantity of radioactive material per individual product. The smaller the quantity the more favorably would the product be considered.

(f) Form of material. Materials with a low solubility in body fluids will be considered more favorably than those with a high solubility.

(g) Containment of the material. Products which contain the material under very severe environmental conditions will be considered more favorably than those that will not contain the material under such conditions.

(h) Degree of access to product during normal handling and use. Products which are inaccessible to children and other persons during use will be considered more favorably than those that are accessible.

(Sec. 161, 68 Stat. 948; 42 U.S.C. 2201. Administrative Procedure Act, sec. 3, 60 Stat. 238; 5 U.S.C. 1002)

Dated at Washington, D.C., this 8th day of March 1965.

For the Atomic Energy Commission.

W. B. McCool,
Secretary.

[F.R. Doc. 65-2618; Filed, Mar. 15, 1965; 8:45 a.m.]

[Docket No. 50-56]

OKLAHOMA STATE UNIVERSITY

Notice of Issuance of Construction Permit

Please take notice that no request for a formal hearing having been filed following publication of the notice of proposed action in the FEDERAL REGISTER, the Atomic Energy Commission has issued Construction Permit No. CPRR-85 authorizing Oklahoma State University to move its Model AGN-201 nuclear reactor from its present location in the Chemical Engineering Building to the new Engineering Building on the University's campus in Stillwater, Okla.

The permit, as issued, is as set forth in the Notice of Proposed Issuance of Construction Permit and Facility License Amendment published in the FEDERAL REGISTER on February 17, 1965, 30 F.R. 2162.

Dated at Bethesda, Md., this 5th day of March 1965.

For the Atomic Energy Commission.

ROGER S. BOYD,
Chief, Research and Power Reactor Safety Branch, Division of Reactor Licensing.

[F.R. Doc. 65-2637; Filed, Mar. 15, 1965; 8:48 a.m.]

CIVIL AERONAUTICS BOARD

[Docket 15911]

AEROVIAS ECUATORIANAS, C.A.

Notice of Prehearing Conference

Application of Aerovias Ecuatorianas, C.A., in Docket 15911 for a foreign air permit to engage in the foreign air transportation of persons, property, and mail between any point or points in Ecuador and Miami, Fla., via Bogota, Colombia.

Notice is hereby given that a prehearing conference on the above-entitled application is assigned to be held on March 26, 1965, at 10 a.m., e.s.t., in Room 911, Universal Building, Connecticut and Florida Avenues NW., Washington, D.C., before Examiner Barron Fredericks.

Dated at Washington, D.C., March 18, 1965.

[SEAL] FRANCIS W. BROWN,
Chief Examiner.

[F.R. Doc. 65-2639; Filed, Mar. 15, 1965; 8:48 a.m.]

[Docket 15694]

CHICAGO HELICOPTER AIRWAYS, INC.

Notice of Prehearing Conference

Notice is hereby given that a prehearing conference in the above-entitled matter is assigned to be held on April 15, 1965, at 10 a.m., e.s.t., in Room 911, Universal Building, Connecticut and Florida Avenues NW., Washington, D.C., before Examiner William J. Madden.

In order to facilitate the conduct of the conference, interested parties are instructed to submit to the Examiner and other parties on or before March 24, 1965: (1) Formal motions with respect to the proceeding, including motions to consolidate or expand (such motions should be filed separately and comply with the Board's Rules of Practice, with 20 copies being filed with the Docket Section); (2) proposed statements of issues; (3) proposed stipulations, if any; (4) requests for information; (5) statements of positions of parties; and (6) proposed procedural dates.

Dated at Washington, D.C., March 11, 1965.

[SEAL] FRANCIS W. BROWN,
Chief Examiner.

[F.R. Doc. 65-2640; Filed, Mar. 15, 1965; 8:48 a.m.]

[Docket 15861]

COMPANIA PERUANA INTERNACIONAL DE AVIACION, S.A.

Notice of Hearing

Notice hereby is given, pursuant to the provisions of the Federal Aviation Act of 1958, as amended, that a hearing in the above-entitled proceeding will be held on April 5, 1965, at 10 a.m., e.s.t., in Room 925, Universal Building, 1825 Connecticut Avenue NW., Washington, D.C., before the undersigned Examiner.

For further information regarding the issues involved herein, interested persons may refer to the various orders of the Board, the prehearing conference report, and other documents, which are on file in the Docket Section of the Civil Aeronautics Board.

Dated at Washington, D.C., March 11, 1965.

[SEAL] HERBERT K. BRYAN,
Hearing Examiner.

[F.R. Doc. 65-2641; Filed, Mar. 15, 1965; 8:48 a.m.]

[Docket 15975]

DEUTSCHE LUFTHANSA AKTIENGESELLSCHAFT (LUFTHANSA GERMAN AIRLINES)

Notice of Hearing

Notice is hereby given, pursuant to the Federal Aviation Act of 1958, as amended, that a hearing in the above-entitled proceeding previously assigned to be held on June 17, 1964, has been reassigned to be held on April 12, 1965, at 10 a.m. (local time) in Room 726, Universal Building, 1825 Connecticut Avenue NW., Washington, D.C., before Examiner Ross I. Newmann.

For information concerning the issues involved and other details in this proceeding, interested persons are referred to the Prehearing Conference Report served on April 21, 1964, and other documents which are in the docket of this proceeding on file in the Docket Section of the Civil Aeronautics Board.

Dated at Washington, D.C., March 10, 1965.

[SEAL] ROSS I. NEWMANN,
Hearing Examiner.

[F.R. Doc. 65-2642; Filed, Mar. 15, 1965; 8:48 a.m.]

[Docket 15883]

LOS ANGELES AIRWAYS, INC.

Notice of Prehearing Conference

Notice is hereby given that a prehearing conference in the above-entitled matter is assigned to be held on April 13, 1965, at 10 a.m., e.s.t., in Room 911, Universal Building, Connecticut and Florida Avenues NW., Washington, D.C., before Examiner William J. Madden.

In order to facilitate the conduct of the conference, interested parties are instructed to submit to the Examiner and other parties on or before March 24, 1965: (1) Formal motions with respect to the proceeding, including motions to consolidate or expand (such motions should be filed separately and comply with the Board's Rules of Practice, with 20 copies being filed with the Docket Section); (2) proposed statements of issues; (3) proposed stipulations, if any; (4) requests for information; (5) statements of positions of parties; and (6) proposed procedural dates.

Dated at Washington, D.C., March 11, 1965.

[SEAL] FRANCIS W. BROWN,
Chief Examiner.

[F.R. Doc. 65-2643; Filed, Mar. 15, 1965; 8:48 a.m.]

[Docket 15861]

NEW YORK AIRWAYS, INC.

Notice of Prehearing Conference

Notice is hereby given that a prehearing conference in the above-entitled matter is assigned to be held on April 14, 1965, at 10 a.m., e.s.t., in Room 911,

Enclosure 2

List of Recently Issued Generic Letters

Generic Letter No.	Subject	Date of Issuance	Issued To
86-10	Implementation of Fire Protection Requirements	04/24/86	All Power Reactor Licensees and Applicants
86-09	Technical Resolution of Generic Issue No. B-59-(N-1) Loop Operation in BWRs and PWRs	03/31/86	All Licensees of Operating BWRs and PWRs and License Applicants
86-08	Availability of Supplement 4 to NUREG-0933 "A Prioritization of Generic Safety Issues"	03/25/86	All Licensees of Operating Reactors Applicants for OLs and Holders of CPs
86-07	Transmittal of NUREG-1190 Regarding the San Onofre Unit 1 Loss of Power and Water Hammer Event	03/20/86	All Reactor Licensees and Applicants
86-06	Implementation of TMI Action Item II.K.3.5 "Automatic Trip of Reactor Coolant Pumps"	05/29/86	All Applicants and Licensees with CE designed NSSS-except Maine Yankee
86-05	Implementation of TMI Action Item II.K.3.5, "Automatic Trip of Reactor Coolant Pumps	05/29/86	All Applicants and Licensees with B&W Designed Nuclear Steam Supply Systems
86-04	Policy Statement on Engineering Expertise on Shift	02/13/86	All Power Reactor Licensees and Applicants for Power Reactor Licenses
86-03	Applications for License Amendments	02/10/86	All Power Reactor Licensees and OL Applicants
86-02	Technical Resolution of Generic Issue B-19 Thermal Hydraulic Stability	01/23/86	All Licensees of Operating BWRs
86-01	Safety Concerns Associated with Pipe Breaks in the BWR Scram System	01/03/86	All BWR Applicants and Licensees

June 30, 1986

STANDARDIZATION & SPECIAL PROJECTS BRANCH CURRENT FACILITY ADDRESS LIST

Docket No.	License No.	Facility Name	Project Manager
50-228 (TRIGA)	R-98	Aerotest Operations, Inc. Mr. R. L. Newacheck, President Aerotest Operations, Inc. 3455 Fostoria Way San Ramon, California 93583 Manager of Reactor Operations: Irvine E. Lamb (415) 866-1212	J. Dosa OL
50-170 (TRIGA)	R-84	Armed Forces Radiobiology Research Institute Colonel James J. Conklin, Director Armed Forces Radiobiology Research Institute Naval Medical Command, National Capitol Region Bethesda, Maryland 20814 (301) 295-1210 Reactor Facility Director: Mark Moore (301) 295-1290	R. Carter OL
50-13 (Cr. Ex.)	CX-10	Babcock and Wilcox Mr. A. F. Olsen Senior Licensing Administrator Babock and Wilcox Research and Development Division Lynchburg Research Center P.O. Box 11165 Lynchburg, Virginia 24506-1165	H. Bernard Dismantling
50-6	R-4	Battelle Memorial Institute Battelle Memorial Institute Attention John M. Batch, Director 505 King Avenue Columbus, Ohio 43201-2693	H. Bernard Dismantling/ PO

50-262 (L-77)	R-109	Brigham Young University Dr. Robert K. Thomas Academic Vice President Brigham Young University Provo, Utah 84602 Facility Chief: Dwight R. Dixon (801) 378-1211	R. Carter OL
50-77 (AGN-201)	R-31	Catholic University Mr. Edward D. Jordan Reactor Administrator Department of Nuclear Science and Engineering The Catholic University of America 620 Michigan Avenue, N.E. Washington, D. C. 20064 (202) 635-5170	J. Dosa PO
50-54 (Pool)	R-81	Cintichem, Inc. Mr. Stuart J. Somerville Cintichem, Inc. Sterling Forest Research Center P. O. Box 324 Tuxedo, New York 10987 Technical Contact: Mr. William G. Ruzicka (914) 351-2131	H. Bernard OL
50-97 (ZPR)	R-89	Cornell University	H. Bernard OL
50-157 (TRIGA)	R-80	Dr. David D. Clark School of Applied and Engineering Physics Ward Laboratory Cornell University Ithaca, New York 14853 (607) 256-5224 Technical Contact: Howard Aderhold (607) 256-3481	OL

50-264 (TRIGA)	R-108	Dow Chemical Company Mr. Charles W. Kocher Reactor Manager H & E.S/I.H 1602 Building Chemical Research Center Dow Chemical Company Midland, Michigan 48674 (517) 636-0304	R. Carter OL
50-163 (TRIGA)	R-67	GA Technologies, Inc. - Mark F	R. Carter OL
50-89 (TRIGA)	R-38	GA Technologies, Inc. - Mark I Mr. Keith E. Asmussen Licensing Administrator GA Technologies, Inc. P. O. Box 85608 San Diego, California 92138 (619) 455-2823	OL
50-70 (GETR)	TR-1	General Electric Test Reactor	H. Bernard PO
50-73 (NTR)	R-33	General Electric Company Nuclear Test Reactor Mr. R. W. Darmitzel, Manager Irradiation Processing Product Section Vallecitos Nuclear Center General Electric Company P. O. Box 460 Pleasanton, California 94566 (415) 862-4344 Technical Director: G. E. Cunningham (415) 862-4330	OL
50-183	DR-10	General Electric - EVESR Same Address as above.	H. Bernard PO

50-160 (Research HW)	R-97	Georgia Institute of Technology Dr. Ratib A. Karam, Director Neely Nuclear Research Center Georgia Institute of Technology Atlanta, Georgia 30332 (404) 894-3600	R. Carter OL
50-284 (AGN-201)	R-110	Idaho State University Dr. Lawrence H. Rice Vice President of Academic Affairs Idaho State University Pocatello, Idaho 83201 Reactor Supervisor: Terry Smith (208) 236-2417	J. Dosa OL
50-116 (UTR-10 Pool)	R-59	Iowa State University Dr. Richard A. Hendrickson Nuclear Engineering Department Iowa State University 261 Sweeney Hall Ames, Iowa 50010 (515) 294-5840	J. Dosa OL
50-188 (TRIGA)	R-88	Kansas State University Dr. Richard E. Faw, Director Nuclear Reactor Facility Department of Nuclear Engineering Ward Hall Kansas State University Manhattan, Kansas 66506 (913) 532-5624 Reactor Supervisor: Jack Higginbotham	J. Dosa OL
50-199 (Tank-ZPR)	R-94	Manhattan College Dr. Robert E. Berlin Reactor Administrator Zero Power Reactor c/o Mechanical Engineering Dept. Manhattan College Riverdale, New York 10471 (212) 920-0100 or 920-0140	J. Dosa

50-20 (Research HW)	R-37	Massachusetts Institute of Technology Mr. Lincoln Clark, Jr., Director of Reactor Operations Nuclear Reactor Laboratory Massachusetts Institute of Technology 138 Albany Street Cambridge, Massachusetts 02139 (617) 253-4202	H. Bernard OL
50-538 (AGN-201)	R-127	Memphis State University Dr. Van N. Oliphant, Vice President Advancement and Continuing Education Memphis State University Memphis, Tennessee 38152 Project Manager: Robert Riley, Jr. (901) 454-2256	J. Dosa PO
50-294 (TRIGA)	R-114	Michigan State University Dr. R. E. Wilkinson Assistant Vice President for Business and Finance Administration Building Michigan State University East Lansing, Michigan 48824 Reactor Supervisor: Mark Mitchell (517) 353-9097	J. Dosa OL
50-241	CPRR-91	Mississippi State University Mr. Michael J. Hibbard P.O. Box NE Mississippi State, Mississippi 39762	R. Carter CP
50-30 50-185	TR-3 R-93	NASA Plumbrook (Test and Mock-up) Mr. Edward A. Richley Director of Administration Lewis Research Center National Aeronautics and Space Administration Cleveland, Ohio 44135	R. Carter PO-DO PO-DO

50-184 (Test)	TR-5	National Bureau of Standards (NBS) Dr. R. S. Carter, Chief Reactor Radiation Division National Bureau of Standards U. S. Department of Commerce Washington, D. C. 20234 Reactor Supervisor: Tawfik Raby (301) 921-2523	H. Bernard OL
50-297 (PULSTAR)	R-120	North Carolina State University Dr. Bruce R. Poulton, Chancellor Room A, Holladay Hall North Carolina State University P. O. Box 7001 Raleigh, North Carolina 27695-7001 Associate Director: Mr. Garry D. Miller Nuclear Reactor Program Department of Nuclear Engineering (919) 737-2191	R. Carter OL
50-187	R-90	Northrop Corporation Dr. Jack Benveniste, Chairman Corporate Radiation Committee Northrop Research & Technology Center Northrop Corporation One Research Park Palos Verdes, California 90274 (213) 377-4811 ext. 245	H. Bernard DO
50-238	NS-1	N.S. Savannah Mr. J. E. Guerry, Jr. Executive Director State of South Carolina Patriots Point Development Authority P.O. Box 986 Mount Pleasant, South Carolina 29464 Dr. Zelvin Levine Senior Advisor for Research and Development Maritime Administration MAR-700.2, Room 7330 400 7th Street, S.W. Washington, D. C. 20590	R. Carter PO

50-150 (Pool)	R-75	Ohio State University Mr. Robert F. Redmond Executive Director Engineering Experiment Station Ohio State University 142 Hitchcock Hall Columbus, Ohio 43210 (614) 422-2411 Reactor Operations Manager: Richard D. Myser (614) 422-6755	J. Dosa OL
50-243 (TRIGA)	R-106	Oregon State University Dr. Clifford V. Smith, Jr. Reactor Administrator and Director Radiation Center Oregon State University Corvallis, Oregon 97331 (503) 754-2341	R. Carter OL
50-5 (TRIGA)	R-2	Pennsylvania State University Dr. Charles L. Hosler Vice President for Research and Dean of the Graduate School Pennsylvania State University 207 Old Main Building University Park, Pennsylvania 16802 Technical Contact: Dr. S. Levine, Director Breazeale Nuclear Reactor College of Engineering (814) 865-3110	R. Carter OL
50-182 (Lockheed)	R-87	Purdue University Mr. Eldon R. Stansberry Reactor Supervisor Department of Nuclear Engineering Purdue University West Lafayette, Indiana 47907 (317) 494-5764	R. Carter OL

50-288 (TRIGA)	R-112	Reed College Dr. M. A. Kay, Director Reactor Facility Reed College 3203 SE Woodstock Blvd. Portland, Oregon 97202 (503) 771-1112 ext. 205	J. Dosa OL
50-225 (Cr. Ex.)	CX-22	Rensselaer Polytechnic Institute Dr. Donald R. Harris, Director Critical Facility Department of Nuclear Engineering and Science Rensselaer Polytechnic Institute Troy, New York 12181 (518) 393-4281 Technical Contact: Frank Wicks (518) 270-6401	J. Dosa OL
50-193 (Pool)	R-95	Rhode Island Atomic Energy Commission Mr. A. Francis DiMeglio, Director Nuclear Science Center Rhode Island Atomic Energy Commission South Ferry Road Narrangansett, Rhode Island 02882 (401) 792-6126	H. Bernard OL
50-375	R-118	Rockwell Dr. M. E. Remley, Director Rocketdyne Division Rockwell International Corporation 6633 Canoga Avenue, Mail Code LA 06 Canoga Park, California 91304 (818-700-4270)	H. Bernard DO
50-146	DPR-4	Saxton R. W. Heward, Jr. President General Public Utilities System Saxton Nuclear Experimental Corp. 100 Interpace Parkway Parsippany, N. J. 07054	R. Carter PO

50-57 (PULSTAR)	R-77	State University of New York (Buffalo) Mr. Louis G. Henry, Director Buffalo Materials Research Center State University of New York Rotary Road Buffalo, New York 14214 (716) 831-2826	R. Carter OL
50-59 (AGN-201)	R-23	Texas A&M University President Texas A&M University Coke Building Second Floor College Station, Texas 77843-1246 Technical Contact: Don Erdman (409) 845-7551	H. Bernard OL
50-128 (TRIGA)	R-83	Dr. H. H. Richardson, Interim Director Texas Engineering Experiment Station 301 Engineering Research Center Texas A&M University College Station, Texas 77843-3577 Technical Contact: Dr. Donald Feltz (713) 845-7551	OL
50-274 (TRIGA)	R-133	United States Geological Survey (USGS) Department of Interior Dr. Hugh T. Millard, Jr. Reactor Administrator Department of Interior United States Geological Survey Box 25046 - Mail Stop 424 Denver Federal Center Denver, Colorado 80225 Reactor Director: Donald Rusling (303) 234-2608	R. Carter OL
50-113 (TRIGA)	R-52	University of Arizona Dr. George W. Nelson, Director Nuclear Reactor Laboratory University of Arizona Tucson, Arizona 85721 (602) 626-2551	J. Dosa OL

50-224 (TRIGA)	R-101	University of California at Berkeley Prof. Thomas H. Pigford Reactor Administrator Department of Nuclear Engineering College of Engineering University of California, Berkeley Berkeley, California 94720 Reactor Supervisor: Tek Lim (415) 642-5213	R. Carter OL
50-142	R-71	University of California at Los Angeles Dr. Walter F. Wegst, Director Office of Environmental Health and Safety Center for Health Sciences University of California, Los Angeles Los Angeles, California 90024 Neil Ostrander (213) 825-2825	H. Bernard PO to Dismantle
50-326 (TRIGA)	R-116	University of California at Irvine Dr. George Miller - purely technical Reactor Supervisor Department of Chemistry University of California, Irvine Irvine, California 92717 (714) 856-6649 William J. Lillyman - formal licensing Vice Chancellor	H. Bernard OL
50-433 (L-77)	R-124	University of California at Santa Barbara Dr. A. E. Profio Nuclear Reactor Director Department of Chemical and Nuclear Engineering University of California, Santa Barbara Santa Barbara, California 93106 (805) 961-3412 or 3788	H. Bernard Decommissioning

50-83 (Argonaut)	R-56	University of Florida Mr. William Vernetzen Acting Director of Nuclear Facilities 102 Nuclear Reactor Building Department of Nuclear Engineering Sciences University of Florida Gainesville, Florida 32611 Lab (904) 392-1406, X1408 cc: Dr. A. M. Jacob, Department of Nuclear Engineering Sciences	H. Bernard OL
50-151 (TRIGA)	R-115	University of Illinois	R. Carter OL
50-356 (LOPRA)	R-117	Dr. George H. Miley, Chairman Nuclear Engineering Program University of Illinois 214 Nuclear Engineering Laboratory Urbana, Illinois 61801 Reactor Director: Gerald Beck (217) 586-4633	OL
50-148 (Lockheed)	R-78	University of Kansas Dr. Russell Mesler Department of Chemical and Petroleum Engineering 102 Nuclear Reactor Center University of Kansas Lawrence, Kansas 66044 (913) 864-3938	J. Dosa OL
50-223 (GE MTR)	R-125	University of Lowell Mr. Leon Beghian Director Nuclear Center University of Lowell One University Avenue Lowell, Massachusetts 01854 (617) 458-9081 Technical Contact: Tom Wallace SWB (617) 452-5000, X2232	H. Bernard OL

50-166 (TRIGA)	R-70	University of Maryland Dr. Frank Kerr, Provost MPSE Division Room 2300, Math Building University of Maryland College Park, Maryland 20742 Nuclear Reactor Director: Dr. Ralph Belcher (301) 454-2430	R. Carter OL
50-2 (Pool)	R-28	University of Michigan Dr. William F. Kerr, Director Phoenix Memorial Laboratory Ford Nuclear Reactor University of Michigan 2301 Bonisteel Boulevard Ann Arbor, Michigan 48109-2100 Technical Contact: R. Robert Burn (313) 764-6224	H. Bernard OL
50-123 (Pool)	R-79	University of Missouri - Rolla Dr. Albert E. Bolon, Director Nuclear Reactor Facility University of Missouri, Rolla Rolla, Missouri 65401 (314) 341-4720 Reactor Manager: Milan K. Straka	R. Carter OL
50-186 (Tank)	R-103	University of Missouri - Columbia Dr. Robert M. Brugger, Director Research Reactor Facility University of Missouri Columbia, Missouri 65211 (314) 882-4211	R. Carter OL
50-252 (AGN-201)	R-102	University of New Mexico Dr. David M. Woodall Chief Reactor Supervisor Nuclear and Chemical Engineering Department University of New Mexico Albuquerque, New Mexico 87131 (505) 277-5405 Reactor Administrator Prof. Frank L. Williams	J. Dosa OL

50-112 (AGN-211P)	R-53	University of Oklahoma Dr. Craig Jensen, Director of Nuclear Reactor School of Aerospace, Mechanical and Nuclear Engineering University of Oklahoma 865 Asp Avenue, Room 212 Norman, Oklahoma 73019 (405) 325-5011 Technical Contact: C. W. Terrell	H. Bernard OL
50-192 (TRIGA)	R-92	University of Texas	H. Bernard Decommissioning
50-602	CP	Dr. Dale E. Klein, Director Nuclear Reactor Laboratory University of Texas Austin, Texas 78712 Technical Contact: Thomas L. Bauer (512) 471-5136	J. Dosa CP
50-72 (AGN-201)	R-25	University of Utah	R. Carter OL
50-407 (TRIGA)	R-126	Mr. James J. Brophy, Vice President of Research University of Utah Salt Lake City, Utah 84112 Gary Sandquist, Director Nuclear Engineering Laboratory Reactor Administrator: Dr. K. L. DeVries Senior Reactor Engineer: Kevin Crawford (801) 581-7109	OL
50-62 (Pool)	R-66	University of Virginia	R. Carter OL
50-396 (Cavalier)	R-123	Dr. R. U. Mulder, Director UVA Reactor Facility Department of Engineering and Engineering Physics University of Virginia Charlottesville, Virginia 22901 Technical Contact: Preston Farrar (804) 924-7136	OL

50-139 (Argonaut)	R-73	University of Washington Dr. Maurice A. Robkin, Director Nuclear Engineering Laboratories University of Washington Seattle, Washington 98195 (206) 543-4170	H. Bernard OL
50-156 (TRIGA)	R-74	University of Wisconsin Mr. R. J. Cashwell Reactor Director Nuclear Engineering Dept. University of Wisconsin Madison, Wisconsin 53706 (608) 262-3392	J. Dosa OL
50-131 (TRIGA)	R-57	Veterans Administration Medical Center Mr. R. L. Turcotte, Director Veterans Administration Medical Center 4101 Woolworth Avenue Omaha, Nebraska 68105 Reactor Director: Mr. Alan Blotcky (404) 346-8800 ext. 432	R. Carter OL
50-124	R-62	Virginia Polytechnic Institute and State University Dr. Keith Furr, Director Nuclear Laboratory Virginia Polytechnic Institute and State University Room 108 Robeson Blacksburg, Virginia 24061 (703) 961-6510 Technical Contact: Donald R. Krause	H. Bernard PO
50-22	TR-2	Waltz Mill Mr. A. J. Nardi NES License Administrator Nuclear Energy Systems Westinghouse Electric Corporation P.O. Box 355 Pittsburgh, Pennsylvania 15230 (412) 374-4652	H. Bernard PO

50-27 (TRIGA)	R-76	Washington State University Mr. W. E. Wilson Associate Director Nuclear Radiation Center Washington State University Pullman, Washington 99164 (509) 335-8641	R. Carter OL
50-47	R-65	Watertown Mr. John Vining, Acting Director Safety Office Army Materials and Mechanics Research Center Department of the Army Watertown, Massachusetts 02172	R. Carter PO
50-87 (NTR)	R-119	Westinghouse Electric Corporation (Zion) Administrative Contact: Mr. A. J. Nardi NES License Administrator Nuclear Energy Systems Westinghouse Electric Corporation P. O. Box 355 Pittsburgh, Pennsylvania 15230 (412) 374-4652 Technical Contact: Ms.Karen Reuter 505 Shiloh Blvd. Zion, Illinois 60099 (312) 872-4585	H. Bernard OL
50-134 (Pool)	R-61	Worcester Polytechnic Institute Mr. Thomas H. Newton, Jr., Director Nuclear Reactor Facility Worcester Polytechnic Institute Worcester, Massachusetts 01609 (617) 793-5688	J.Dosa OL

SAFEGUARDS RESPONSIBILITY

Power Reactors - Jane Gibson A-L (45)
Gene McPeek M-Z (47)

Non-Power Reactors - Gene McPeek A-P (32)
Jane Gibson R-W (36)

Jane Gibson

1. IAEA
2. Standard Review Plan
3. DOE and NRC Classifications Guides
4. Foreign Visitors to Reactor Sites
5. Executive Team National Defense
6. Safety and Safeguards Research Program
7. Annual Regionalization Assessment Team

Gene McPeek

1. IAT
2. Regulatory Effectiveness Reviews
3. Generic Issue A-29 (Nuclear Power Plant Design for the Reduction of Vulnerability to Sabotage)
4. USIA-45 (Shutdown Decay Heat Removal Requirements)
5. Decommissioning Experience
6. Generic Issues (NRC Position re: Hostage Situation, etc.)
7. Insider Study
8. LANL Reports (Research)
9. Locking Systems
10. Pat Down Search Issue
11. Reportable Physical Security Events
12. Vital Area Guidelines
13. Human Factors in Safeguards
14. Annual Regionalization Assessment Team