



DEPARTMENT OF THE ARMY  
HEADQUARTERS, U. S. ARMY MATERIEL COMMAND  
5001 EISENHOWER AVENUE, ALEXANDRIA, VA 22333-0001

2 Aug 1985

US Nuclear Regulatory Commission  
Region I  
ATTN: Materials Licensing Branch  
631 Park Avenue  
King of Prussia, PA 19406

Reference: AMCSF-P/85-0120


Gentlemen:

Forwarded are six copies of the US Army Combat Systems Test Activity amendment request for US Nuclear Regulatory Commission Special Nuclear Material License Number SNM-1649 to:

1. Reflect changes in radiation protection personnel and reorganization.
2. Added information on instrument calibration.

Please acknowledge receipt of correspondence on enclosed DA Form 209, Mail Reply Card.

Sincerely,

  
Gerald R. Taras  
Chief, Health Physics,  
Safety Office

Enclosures

Copies Furnished:

HQDA(DASG-PSP-E) WASH DC, 20310 2 cys w/encl  
Director, AMC FSA, Charlestown, IN 47111 w/encl  
COMMANDER,  
TECOM, ATTN: AMSTE-ST, APG, MD, 21005 w/o encl  
CSTA, ATTN: STECS-SO-S, APG, MD, 21005 w/o encl

FEE EXEMPT

"OFFICIAL RECORD COPY"

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REG1 LIC70  
SNM-1649

PDR

04226

ML10

AUG 08 1985

AMSTE-ST (STECS-SO-S/25 Mar 85) 1st End PALMATEER/cjwh/AV 298-2270/5147  
SUBJECT: Application for Amendment of Special Nuclear Material License SNM-1649


Headquarters, U.S. Army Test and Evaluation Command, Aberdeen Proving Ground,  
MD 21005-5055 **8 MAY 1985**

TO: Commander, U.S. Army Materiel Command, ATTN: AMCSF-P, 5001 Eisenhower  
Avenue, Alexandria, VA 22333-0001

1. Reference letter, USACSTA, STECS-SO-S, 25 Mar 85, subject: Application for Amendment of Special Nuclear Material License, with 1st End, HQ TECOM, AMSTE-ST, 1 Apr 85, and 2d End, HQ AMC AMCSF-P, 17 Apr 85.
2. Second endorsement in reference 1 above returned basic letter and requested the specific license number stated and more information concerning the calibration services.
3. Basic letter is the same letter in reference 1 above. The license number of the application has been added. The license number covering the calibration agency, and description of calibration sources have also been included.
4. This headquarters has reviewed the additions to the license application. Request approval.
5. TECOM - Providing Leaders the Decisive Edge.

FOR THE COMMANDER:

2 Encls (8 copies)  
nc

  
ROGER J. LERWILL  
Chief, Safety Office

"OFFICIAL RECORD COPY"



DEPARTMENT OF THE ARMY  
U. S. ARMY COMBAT SYSTEMS TEST ACTIVITY  
ABERDEEN PROVING GROUND, MARYLAND 21006-5069

REPLY TO  
ATTENTION OF

STECs-SO-S

25 MAR 1985

SUBJECT: Application for Amendment of Special Nuclear Material License SNM-1649

THRU Commander  
US Army Test & Evaluation Command  
ATTN: AMSTE-ST

TO Commander  
US Army Materiel Command  
ATTN: AMCSF-P  
5001 Eisenhower Avenue  
Alexandria, VA 22333

1. Amendment is forwarded for review and approval. It is necessary to reflect the changes that have occurred as a result of the reorganization at Aberdeen Proving Ground. The amendment transfers the responsibility of the license from Commander, Aberdeen Proving Ground, to Commander, USA Combat Systems Test Activity.
2. Enclosure 1 includes the revised Annexes 1 and 2 to Supplement A which includes the appointments of the Radiation Protection Officer and alternates, as well as the appointments of the Radiation Protection Committee. Resumes are also included in these revised Annexes.
3. Enclosure 2 is a revised Supplement C for instrument calibration.
4. All other statements of the application for renewal dated 25 Mar 81 remain the same.

RONALD V. HITE  
Colonel, OD  
Commanding

2 Enc1  
as

04226



DEPARTMENT OF THE ARMY  
U.S. ARMY COMBAT SYSTEMS TEST ACTIVITY (PROV)  
ABERDEEN PROVING GROUND, MARYLAND 21005 9089

REPLY TO  
ATTENTION OF

23 AUG 1984

STECs-CO

SUBJECT: Appointment of the Radiation Protection Officer and Alternates

SEE DISTRIBUTION

1. Effective this date, the personnel listed at Enclosure 1 are appointed as Radiation Protection Officer and Alternate.

a. Authority: AR 40-14 and AR 385-11.

b. Purpose: In compliance with Title 10, Code of Federal Regulations, Part 33, AR 40-14, AR 385-11, and AMCR 385-25.

c. Period: Indefinite.

d. Special Instructions: None

2. Letter, STEAP-AD, dated 5 May 1983, SAB, is rescinded.

1 Encl  
as

RONALD V. HITE  
Colonel, OrdC  
Commanding

DISTRIBUTION:

2 Ea Individual

5 Civ Pers Ofc

45 Radiation Protection Officer, CSTA Safety Division

Encl 1

RADIATION PROTECTION OFFICER AND ALTERNATES

• CASOLE, Benjamin, F., III Health Physicist CSTA Safety  
Division (Radiation Protection Officer)

AASERUDE, Robert, A., Health Physicist CSTA Safety Division  
(APRD) (Alternate Radiation Protection Officer)

MISER, Denver, C., Health Physicist CSTA Safety Division  
(APRD) (Alternate Radiation Protection Officer)



DEPARTMENT OF THE ARMY  
U S ARMY COMBAT SYSTEMS TEST ACTIVITY  
ABERDEEN PROVING GROUND, MARYLAND 21006 5069

REPLY TO  
ATTENTION OF

4 MAR 1985

STECS-S

SUBJECT: Duty Appointment (Appointment of the Radiation Protection Committee)

SEE DISTRIBUTION

Effective this date, the personnel listed at Enclosure 1 are appointed as the Radiation Protection Committee.

- a. Authority: AR 40-14, AR 385-11, and AMCR 385-25.
- b. Purpose: In compliance with Title 10, Code of Federal Regulations, Part 33; AMCR 385-25, AR 40-14, and AR 385-11.
- c. Period: Indefinite.
- d. Letters, STECS-CO, 23 Aug 84, and STECS-CO, 21 Sep 84, SAB, are rescinded.

RONALD V. HITE  
Colonel, OD  
Commanding

1 Encl  
as

DISTRIBUTION:

- 2 Ea Indiv
- 1 Cdr, USAEHA
- 1 Cdr, USAAPGISA
- 1 Cdr, USAOC&S
- 1 Cdr, CRDC
- 1 Cdr, KUSAHC
- 1 Dir, BRL
- 2 CG, USATECOM, ATTN: AMSTE-ST

USACSTA  
RADIATION PROTECTION COMMITTEE

CASOLE, Benjamin F., III, Health Physicist, USACSTA Safety Office (Chairman/Radiation Protection Officer).

AASERUDE, Robert A., Health Physicist, USACSTA Safety Office (1st Vice Chairman/Alt Radiation Protection Officer, Member).

MISER, Denver C, Health Physicist, USACSTA Safety Office (Alt Radiation Protection Officer, Alternate Member).

SEARS, Timothy W., Mechanical Engineer, Non-Destructive Test Branch, USACSTA (Member)

FRAILER, Ronald L., Physicist, Non-Destructive Test Branch, USACSTA (Alternate Member)

RUFF, Kenneth I., Mechanical Engineering Technician, Tank Ammo Branch, USACSTA (Member)

REEVES, Joyce E., Physical Science Technician, USACSTA Safety Office (Member)

YOCKEY, Hubert P., PhD, Supv. Nuclear Engineer, Nucl Effects Directorate, USACSTA (Member)

ONDEK, Joseph P., Environmental Technician, Environmental Management Office, DEH, USAAPGISA (Member)

SCARBOROUGH, Thomas C, Fire Chief, USAAPGISA, DEH (Member)

GOTAY, Jose B. MD OHC, KAHC (Member)

KLUCK, David L, Preventive Medicine, KAHC (Alternate Member)

(TENANT ORGANIZATION/INFORMATIONAL MEMBERS-NON-VOTING)

MARKLAND, Richard A., Health Physicist, USA Ballistics Research Laboratory (Radiation Protection Officer)

EDWARDS, Phillip M., Health Physicist, Chemical Research and Development Center (Radiation Protection Officer)

TUCKER, Jonathan, CPT, MS, US Army Environmental Hygiene Agency (Radiation Protection Officer)

SOTO, Eddy, Safety Engineer, USAAPGISA Safety Office

FIELD, Grace L., USA Ordnance Center and School (Radiation Protection Officer)

# RADIOLOGICAL PERMIT APPLICATION SUPPLEMENT

NAME: CASOLE, III BENJAMIN FRANCIS  
(Last) (First) (Middle)

Health Physicist, APG Safety Office  
BS, 1974, The Pennsylvania State  
University

TENANT ACTIVITIES WILL SUBMIT THRU INTERNAL CHANNELS.

LIST BELOW YOUR TRAINING AND EXPERIENCE WITH RADIOISOTOPES AND OTHER SOURCES OF IONIZING RADIATION (use supplemental sheets if necessary)

## 1. TRAINING (To be completed by Responsible Investigator, Radiation Protection Supervisor)

|   | WHERE TRAINED                                     | DURATION OF TRAINING            | ON THE JOB<br>(Circle answer)   | FORMAL COURSE<br>(Circle answer)  |
|---|---|---------------------------------|---|---|
| a. Principles and practice of radiation protection.                                     | USAEHA and APG<br>Harvard Sch of Pub Hlth<br>ORAU | 8 years<br>40 hours<br>80 hours | <input checked="" type="radio"/> Yes <input type="radio"/> No<br><input checked="" type="radio"/> Yes <input type="radio"/> No<br><input checked="" type="radio"/> Yes <input type="radio"/> No | <input checked="" type="radio"/> Yes <input type="radio"/> No<br><input checked="" type="radio"/> Yes <input type="radio"/> No<br><input checked="" type="radio"/> Yes <input type="radio"/> No |
| b. Radioactivity measurement standardization and monitoring techniques and instruments. | USAEHA and APG<br>ORAU<br>USAEHA                  | 8 years<br>80 hours<br>30 hours | <input checked="" type="radio"/> Yes <input type="radio"/> No<br><input checked="" type="radio"/> Yes <input type="radio"/> No<br><input checked="" type="radio"/> Yes <input type="radio"/> No | <input checked="" type="radio"/> Yes <input type="radio"/> No<br><input checked="" type="radio"/> Yes <input type="radio"/> No<br><input checked="" type="radio"/> Yes <input type="radio"/> No |
| c. Mathematics and calculations basic to the use and measurement of radioactivity.      | USAEHA and APG<br>ORAU<br>USAEHA                  | 8 years<br>80 hours<br>30 hours | <input checked="" type="radio"/> Yes <input type="radio"/> No<br><input checked="" type="radio"/> Yes <input type="radio"/> No<br><input checked="" type="radio"/> Yes <input type="radio"/> No | <input checked="" type="radio"/> Yes <input type="radio"/> No<br><input checked="" type="radio"/> Yes <input type="radio"/> No<br><input checked="" type="radio"/> Yes <input type="radio"/> No |
| d. Biological effects of radiation.   | USAEHA and APG<br>Harvard Sch of Pub Hlth         | 8 years<br>40 hours             | <input checked="" type="radio"/> Yes <input type="radio"/> No<br><input checked="" type="radio"/> Yes <input type="radio"/> No  | <input checked="" type="radio"/> Yes <input type="radio"/> No<br><input checked="" type="radio"/> Yes <input type="radio"/> No  |

## 2. EXPERIENCE

| ISOTOPE OR OTHER SOURCE | MAXIMUM AMT OR DESCRIPTION OF SOURCE | LOCATION        | DURATION | TYPE OF USE    |
|-------------------------|--------------------------------------|-----------------|----------|----------------|
| Radium-226              | Microcurie Amt                       | USAEHA/RICD/RAB | 7 years  | lab procedures |
| Radium-228              | Microcurie Amt                       | USAEHA/RICD/RAB | 7 years  | lab procedures |
| Actinium-228            | Microcurie Amt                       | USAEHA/RICD/RAB | 7 years  | lab procedures |
| Thorium-232             | Microcurie Amt                       | USAEHA/RICD/RAB | 7 years  | lab procedures |
| Strontium-90            | Microcurie Amt                       | USAEHA/RICD/RAB | 7 years  | lab procedures |
| Nickel-63               | Microcurie Amt                       | USAEHA/RICD/RAB | 7 years  | lab procedures |
| Promethium-147          | Microcurie Amt                       | USAEHA/RICD/RAB | 7 years  | lab procedures |
| Plutonium-239           | Microcurie Amt                       | USAEHA/RICD/RAB | 7 years  | lab procedures |
| Uranium-238             | Microcurie Amt                       | USAEHA/RICD/RAB | 7 years  | lab procedures |
| Carbon-14               | Microcurie Amt                       | USAEHA/RICD/RAB | 7 years  | lab procedures |
| Cesium -137             | Microcurie Amt                       | USAEHA/RICD/RAB | 7 years  | lab procedures |
| Cobalt-60               | Microcurie Amt                       | USAEHA/RICD/RAB | 7 years  | lab procedures |



## RADIOLOGICAL PERMIT APPLICATION SUPPLEMENT

NAME: CASOLE, III BENJAMIN FRANCIS  
(Last) (First) (Middle)

TENANT ACTIVITIES WILL SUBMIT THRU INTERNAL CHANNELS

LIST BELOW YOUR TRAINING AND EXPERIENCE WITH RADIOISOTOPES AND OTHER SOURCES OF IONIZING RADIATION (use supplemental sheets if necessary)

I. TRAINING (To be completed by Responsible Investigator, Radiation Protection Supervisor)

| SEE PAGE 1  | WHERE TRAINED | DURATION OF TRAINING | ON THE JOB<br>(Circle answer) |    | FORMAL COURSE<br>(Circle answer) |    |
|---|---------------|----------------------|-------------------------------|----|----------------------------------|----|
| a. Principles and practice of radiation protection.                                     |               |                      | Yes                           | No | Yes                              | No |
| b. Radioactivity measurement standardization and monitoring techniques and instruments. |               |                      | Yes                           | No | Yes                              | No |
| c. Mathematics and calculations basic to the use and measurement of radioactivity.      |               |                      | Yes                           | No | Yes                              | No |
| d. Biological effects of radiation.   |               |                      | Yes                           | No | Yes                              | No |

## 2. EXPERIENCE (CONTINUED)

| ISOTOPE OR OTHER SOURCE | MAXIMUM AMT OR DESCRIPTION OF SOURCE | LOCATION        | DURATION | TYPE OF USE          |
|-------------------------|--------------------------------------|-----------------|----------|----------------------|
| Tritium                 | curie amts                           | USAEHA/RICB/RAB | 7 years  | lab procedures       |
| Tritium                 | curie amts                           | USAAPG          | 1 year   | rad surveys          |
| Uranium-238             | curie amts                           | USAAPG          | 1 year   | surveys & operations |
| X-Ray Producing Equip   | 4 MeV                                | USAAPG          | 1 year   | rad surveys          |
| Cesium-137              | curie amts                           | USAAPG          | 1 year   | rad surveys          |
| Plutonium-239           | millicurie amts                      | USAAPG          | 1 year   | rad surveys          |
| Co-60                   | 10,000 Ci                            | USAAPG          | 1 year   | irradiator leak test |
| CF-252                  | 19 micrograms                        | USAAPG          | 1 year   | Neutron Source       |
| U-235                   | Curie Amts.                          | USAAPG          | 1 year   | Reactor Fuel         |
| Th-230                  | Microcurie Amts                      | USAAPG          | 1 year   | Radiation Surveys    |
| Pm-147                  | Microcurie Amts                      | USAAPG          | 1 year   | Radiation Surveys    |
| Kr-85                   | Microcurie Amts                      | USAAPG          | 1 year   | Radiation Surveys    |

## RADIOLOGICAL PERMIT APPLICATION SUPPLEMENT

NAME: RUFF Kenneth I.  
 (Last) (First) (Middle)

TENANT ACTIVITIES WILL SUBMIT THRU INTERNAL CHANNELS.

LIST BELOW YOUR TRAINING AND EXPERIENCE WITH RADIOISOTOPES AND OTHER SOURCES OF IONIZING RADIATION (use supplemental sheets if necessary)

1. TRAINING (To be completed by Responsible Investigator, Radiation Protection Supervisor)

| WHERE TRAINED   |                           | DURATION OF TRAINING | ON THE JOB<br>(Circle answer)        |                          | FORMAL COURSE<br>(Circle answer)     |                          |
|---|---------------------------|----------------------|--------------------------------------|--------------------------|--------------------------------------|--------------------------|
| a. Principles and practice of radiation protection.                                     | APG, MD<br>HP Orientation | 5 years<br>20 hours  | <input checked="" type="radio"/> Yes | <input type="radio"/> No | <input checked="" type="radio"/> Yes | <input type="radio"/> No |
| b. Radioactivity measurement standardization and monitoring techniques and instruments. | APG, MD<br>HP Orientation | 5 years<br>20 hours  | <input checked="" type="radio"/> Yes | <input type="radio"/> No | <input checked="" type="radio"/> Yes | <input type="radio"/> No |
| c. Mathematics and calculations basic to the use and measurement of radioactivity.      | APG, MD                   | 1 year               | <input checked="" type="radio"/> Yes | <input type="radio"/> No | <input type="radio"/> Yes            | <input type="radio"/> No |
| d. Biological effects of radiation.   | HP Orientation, APG       | 20 hours             | <input type="radio"/> Yes            | <input type="radio"/> No | <input checked="" type="radio"/> Yes | <input type="radio"/> No |

2. EXPERIENCE Test Director - Artillery Ammunition

[illegible]

|       |        |         |          |
|-------|--------|---------|----------|
| NAME: | SEARS, | TIMOTHY | WILLIAM  |
|       | (last) | (First) | (Middle) |

Nuclear Power School, Bainbridge, MD  
Nuclear Power, Phototype, West Milton, NY  
Basic Radiological Health, Ft McCillien (Schedule for 1981)

LIST BELOW YOUR TRAINING AND EXPERIENCE WITH RADIOISOTOPES AND OTHER SOURCES OF IONIZING RADIATION (use supplemental sheets if necessary)

1. TRAINING (To be completed by Responsible Investigator, Radiation Protection Supervisor)

|   | WHERE TRAINED   | DURATION OF TRAINING | ON THE JOB<br>(Circle answer) | FORMAL COURSE<br>(Circle answer) |
|---|-----------------|----------------------|-------------------------------|----------------------------------|
| a. Principles and practice of radiation protection.                                     | West Milton, NY | 3 wks                | [Yes] No<br>2 wk              | [Yes] No<br>1 wk                 |
| b. Radioactivity measurement standardization and monitoring techniques and instruments. | West Milton, NY | 3 wks                | [Yes] No<br>2 wk              | [Yes] No<br>1 wk                 |
| c. Mathematics and calculations basic to the use and measurement of radioactivity.      | West Milton, NY | 3 wks                | [Yes] No<br>2 wk              | [Yes] No<br>1 wk                 |
| d. Ecological effects of radiation  | West Milton, NY | 1 wk                 | Yes No<br>2 wk                | [Yes] No<br>1 wk                 |

## 2. EXPERIENCE

[illegible]

| NAME: | Ondek                                 | Joseph  | Paul     | Jr. |
|-------|---------------------------------------|---------|----------|-----|
|       | (Last)                                | (First) | (Middle) |     |
|       | Environmental Quality Group APG       |         |          |     |
|       | Attended A.B.C. School, while in USMC |         |          |     |
|       | Aerology Course NATTU Lakeland, VA    |         |          |     |

1. TRAINING (To be completed by Responsible Investigator, Radiation Protection Supervisor)

| WHERE TRAINED   |   | DURATION OF TRAINING        | ON THE JOB<br>(Circle answer) | FORMAL COURSE<br>(Circle answer) |
|---|---|-----------------------------|-------------------------------|----------------------------------|
| a. Principles and practice of radiation protection.                                     |   |                             | Yes    No                     | Yes    No                        |
| b. Radioactivity measurement standardization and monitoring techniques and instruments. |   |                             | Yes    No                     | Yes    No                        |
| c. Mathematics and calculations basic to the use and measurement of radioactivity.      | College up through Calculus                   |                             | (Yes)    No                   | (Yes)    No                      |
| d. Biological effects of radiation.   | Environmental Management<br>ALMC Fort Lee, VA | Part of<br>2-week<br>course | (Yes)    No                   | (Yes)    No                      |

[illegible]

192-19 ~~22~~ 649

## RADIOLOGICAL PERMIT APPLICATION SUPPLEMENT

NAME: KLUCK, DAVID LeROY

School Attended: University of Minnesota Degree: Master of Public Health

TENANT ACTIVITIES WILL SUBMIT THRU INTERNAL CHANNELS.

LIST BELOW YOUR TRAINING AND EXPERIENCE WITH RADIOISOTOPES AND OTHER SOURCES OF IONIZING RADIATION (use supplemental sheets if necessary)

1. TRAINING (To be completed by Responsible Investigator, Radiation Protection Supervisor)

|   | WHERE TRAINED           | DURATION OF TRAINING | ON THE JOB<br>(Circle answer)           | FORMAL COURSE<br>(Circle answer)        |
|---|-------------------------|----------------------|---|---|
| a. Principles and practice of radiation protection.                                     | AHS, Ft Sam Houston, TX | 1 month              | Yes <input checked="" type="radio"/> No | <input checked="" type="radio"/> Yes No |
| b. Radioactivity measurement standardization and monitoring techniques and instruments. | " "                     | "                    | Yes <input checked="" type="radio"/> No | <input checked="" type="radio"/> Yes No |
| c. Mathematics and calculations basic to the use and measurement of radioactivity.      | " "                     | "                    | Yes <input checked="" type="radio"/> No | <input checked="" type="radio"/> Yes No |
| d. Biological effects of radiation  | " "                     | "                    | Yes <input checked="" type="radio"/> No | <input checked="" type="radio"/> Yes No |

2. EXPERIENCE Not Applicable

[illegible]

## RADIOLOGICAL TRAINING

DENVER C. MISER  
Health Physicist, Army Pulse Radiation Division

| 8. Type of Training                                | Where Trained                                       | Duration | On The Job | Formal Course |
|--|---|----------|------------|---------------|
| a. Principles and Practice of Radiation Protection | Public Health<br>Service Schools<br>US Army Schools | 17 weeks | Yes        | Yes           |
| b. Radioactivity Measurements, etc.                | Public Health<br>Service Schools<br>US Army Schools | 17 weeks | No         | Yes           |
| c. Mathematics and Calculations                    | Johns Hopkins Univ<br>W. Virginia Univ              | 1 year   | No         | Yes           |
| d. Biological Effects of Radiation                 | Public Health<br>Service Schools<br>US Army Schools | 17 weeks | No         | Yes           |

## 9. Experience:

From November 1962 to March 1972 Mr. Miser served as a Health Physics Technician with the U.S. Army Nuclear Defense Laboratory providing Health Physics and Radiac Calibration services to all USA NDL Divisions. From March 1972 to present Mr. Miser has been serving as the Health Physics Operator and staff Health Physicist at the Army Pulse Radiation Division (APRD) Reactor Facility.

## 10. Additional Training and Experience:

## a. Educational:

- (1) Chemical Laboratory Specialist School, Ft. McClellan, ALA.
- (2) Basic Radiological Health and Occupational Radiological Health, Public Health Service School, Rockville, MD.
- (3) Nuclear Emergency Team Operations, US Army School, Sandia Base, N.M.
- (4) In Place Filter Testing Workshop, Harvard University School of Public Health, Boston, MASS.
- (5) Advanced Radiological Health Course, University of Texas Health Science Center, San Antonio, Texas



b. Job Assignments:

- (1) Health Physics Technician, NDL Health Physics Office
- (2) Health Physics Operator, APRD
- (3) Member Inspection Team for Army Reactors.
- (4) Member U.S. Army Radiation Control Team
- (5) Member, APG Nuclear Surety Board
- (6) Member, APG Radiation Protection Committee

c. Use of Ionizing Radiation:

- (1) Large  $\text{Co}^{60}$  Irradiators.
- (2) Plutonium-239 Sources up to 80 gms.
- (3) Californium-252 Neutron Source.
- (4) Accelerators; C-W and Tandem Van deGraff
- (5) Fast Pulse Reactors.
- (6) Fallout Field Simulation Sources (up to 1500 Curies,  $\text{Co}^{60}$  and  $\text{Cs}^{137}$ ).
- (7)  $^{235}\text{UF}_6$ .
- (8) Miscellaneous Sources of Ionizing Radiation used at Radiation Laboratories and Reactors.

d. Publications:

- (1) APRD Health Physics Manual.
- (2) APRD Environmental Monitoring Plan.
- (3) APRD Annual Environmental Monitoring Reports.

e. Awards:

- (1) Sustained Superior Performance Award - 1982.

## RADIOLOGICAL PERMIT APPLICATION SUPPLEMENT

|       |          |         |          |
|-------|----------|---------|----------|
| NAME: | FRAILER, | RONALD  | LEE      |
|       | (Last)   | (First) | (Middle) |

EDUCATION SCHOOL: Johns Hopkins University  
DEGREE: MS in Physics

LIST BELOW YOUR TRAINING AND EXPERIENCE WITH RADIOISOTOPES AND OTHER SOURCES OF IONIZING RADIATION (use supplemental sheets if necessary)

1. TRAINING (To be completed by Responsible Investigator, Radiation Protection Supervisor)

|  | WHERE TRAINED                               | DURATION OF TRAINING | ON THE JOB<br>(Circle answer)           | FORMAL COURSE<br>(Circle answer)        |
|--|---|----------------------|---|---|
| a Principles and practice of radiation protection.                                   | Public Health Service, HEW<br>Rockville, MD | 2 wks                | Yes <input checked="" type="radio"/> No | <input checked="" type="radio"/> Yes No |
| Radioactivity measurement standardization and monitoring techniques and instruments. | Public Health Service, HEW<br>Rockville, MD | 2 wks                | Yes <input checked="" type="radio"/> No | <input checked="" type="radio"/> Yes No |
| Mathematics and calculations basic to the use and measurement of radioactivity.      | Public Health Service, HEW<br>Rockville, MD | 2 wks                | Yes <input checked="" type="radio"/> No | <input checked="" type="radio"/> Yes No |
| a Biological effects of radiation  | Public Health Service, HEW<br>Rockville, MD | 2 wks                | Yes <input checked="" type="radio"/> No | <input checked="" type="radio"/> Yes No |

## 2. EXPERIENCE

[illegible]



# RADIOLOGICAL TRAINING OF ROBERT A. AASERUDE

| <u>Type of Training</u>                         | <u>Where Trained</u>       | <u>Duration</u> | <u>On the Job</u> | <u>Formal Course</u> |
|---|----------------------------|-----------------|-------------------|----------------------|
| Principles and Practice of Radiation Protection | Oregon State University    | 1 year          | No                | Yes                  |
|   | Health Physics Office, BRL | 2 years         | Yes               | No                   |
|   | Reactor Facility           | 15 years        | Yes               | No                   |
| Radioactivity Measurements                      | Oregon State University    | 1 year          | No                | Yes                  |
|   | Health Physics Office, BRL | 2 years         | Yes               | No                   |
|   | Reactor Facility           | 15 years        | Yes               | No                   |
| Mathematics and Calculations                    | Oregon State University    | 1 year          | No                | Yes                  |
|   | Health Physics Office, BRL | 2 years         | Yes               | No                   |
|   | Reactor Facility           | 15 years        | Yes               | No                   |
| Radiological Effects of Radiation               | Oregon State University    | 1 year          | No                | Yes                  |

ADDITIONAL TRAINING AND EXPERIENCE OF ROBERT A. AASERUDE

PERIOD: 1969 - 1984

1. Educational: Rockwell HP Course (2 weeks)  
Laser and Microwave (2 weeks) AEHA  
Harvard School of Public Health - Occupational and Environmental  
Radiation Protection (1 week)
2. Job Assignments:
  - a. Chief, Health Physicist
  - b. Reactor Health Physicist
  - c. Radiological Protection Officer
  - d. Radioactive Materials Inventory Control Officer
  - e. Chairman, Radiation Protection Committee
  - f. Member, Proposal Evaluation Board to perform technical evaluation for  
environmental radiological monitoring and health physics programs.
  - g. Special Nuclear Material Custodian
  - h. Alternate Radiological Accident/Incident Control Officer
3. Use of Ionizing Radiation: (See attached sheet)
4. Publications Related to Radiation Safety:
  - a. Reactor Health Physics Manual
  - b. Special Safety Analysis Report for Criticality Alarm System
  - c. Environmental Radiological Monitoring Plan
5. Awards: DA Suggestion Award for more effective usage of Liquid Nitrogen  
resources

## RADIOLOGICAL EXPERIENCE OF ROBERT A. AASERUDE

| <u>Isotope</u> | <u>Max. Amt<br/>of Source</u> | <u>Where Experience<br/>was Gained</u> | <u>Duration</u> | <u>Type of<br/>Use</u>              |
|----------------|-------------------------------|--|-----------------|-------------------------------------|
| H-3            | 1 curie                       | Ballistic Research<br>Laboratories     | 2 years         | Accelerator<br>Targets<br>Leak Test |
| Sr-90          | 1 Ci                          | "                                      | 1 year          | Leak Test                           |
| Cs-137         | 9 Ci                          | "                                      | 2 years         | Calibration<br>Source               |
| Pm-147         | 25 mCi                        | "                                      | 1 year          | Leak Test                           |
| Ra-226         | 200 mCi                       | "                                      | 1 year          | Calibration<br>Source               |
| U-238          | 100 pounds                    | "                                      | 2 years         | Health Physics<br>Surveys           |
| PU-239         | 5 Ci                          | "                                      | 2 years         | Fission Foils,<br>Neutron Source    |
| Am-241         | 16 $\mu$ Ci                   | "                                      | 1 year          | Leak Test                           |
| CF-252         | 19 micro-grams                | Reactor Facility                       | 4 years         | Neutron Source                      |
| Co-60          | 10,000 Ci                     | "                                      | 15 years        | Irradiator<br>Leak Test             |
| BA-133         | Small Amounts                 | "                                      | 15 years        | Check Source                        |
| CD-109         | "                             | "                                      | 15 years        | "                                   |
| Co-57          | "                             | "                                      | 15 years        | "                                   |
| Mn-54          | "                             | "                                      | 15 years        | "                                   |
| Np-237         | "                             | "                                      | 15 years        | "                                   |
| Na-22          | "                             | "                                      | 15 years        | "                                   |
| Th-230         | "                             | "                                      | 15 years        | "                                   |
| U-235          | Large Amounts                 | "                                      | 15 years        | Reactor Fuel                        |

Mr. Aaserude has a B.S. degree in Physics received in 1963 from Oregon State University and a M.S. degree in Radiological Physics received from Oregon State University in 1965. From August 1966 to July 1969, Mr. Aaserude served as the Radiological Safety Officer for the US Army Ballistic Research Laboratories and Chief, Health Physics Office with overall responsibility for the radiological health and safety program at the laboratories including staff supervision over the APRD (reactor) operation, the BRL Radiation Laboratory and the handling of all radioactive isotopes and other sources of ionizing radiation. From July 1969 to present, Mr. Aaserude has been serving as the Reactor Health Physicist at the Army Pulse Radiation Division (APRD) Reactor, Aberdeen Proving Ground, Maryland.

# RADIOLOGICAL TRAINING OF HUBERT P. YOCKEY

| 8. Type of Training                              | Where Trained                 | Duration  | On the Job | Formal Course |
|--|-------------------------------|-----------|------------|---------------|
| a. Principles & Practice of Radiation Protection | U of Cal Radiation Laboratory | 1939-1943 | Yes        | No            |
|  | Oak Ridge National Laboratory | 1948-1950 |            |               |
|  | Oak Ridge National Laboratory | 1952-1959 |            |               |
| b. Radioactivity Measurements, etc.              | U of Cal                      | 1939-1943 | Yes        | Yes           |
|  | ORNL                          | 1948-1950 |            |               |
| c. Mathematics & Calculations                    | ORNL                          | 1952-1959 | Yes        | No            |
|  | U of Cal                      | 1939-1943 | Yes        | Yes           |
|  | ORNL                          | 1948-1950 | Yes        | Yes           |
| d. Biological Effects of Radiation               | ORNL                          | 1952-1959 | Yes        | No            |
|  | U of Cal                      | 1939-1943 | No         | No            |
|  | ORNL                          | 1949-1950 | No         | No            |
|  | ORNL                          | 1952-1959 | No         | No            |
|  |                               |           |            |               |
|  |                               |           |            |               |

## 9. Experiences:

| Isotope | Max Amt | Where Experience was Gained | Duration | Type of Use |
|---------|---------|-----------------------------|----------|-------------|
|---------|---------|-----------------------------|----------|-------------|

Used U.S. Nuclear GR-9 Co-60 irradiator at Hughes Research Laboratories. Approximately 700 curies from June 1962 - October 1962.

Dr. Yockey received his PhD from the University of California in 1942 in Physics, has worked with 37 inch and 60 inch cyclotrons in 1939-1943; 1948-1950, and Assistant Director of Health Physics Division, Oak Ridge National Laboratories from 1952-1959. Certified Health Physicist 1 Dec 60.

ADDITIONAL TRAINING AND EXPERIENCE OF HUBERT P. YOCKEY

PERIOD: June 1969 - Present

- 1. Educational: None
- 2. Job Assignments:
  - a. Chief, Army Pulse Radiation Division, MTD
  - b. Chief, Reactor Branch, Vulnerability Laboratory, BRL
  - c. Member, Radiation Protection Committee
- 3. Use of Ionizing Radiations: Supervisor of BRL Pulse Radiation Facility  
Supervisor of MTD Pulse Radiation Facility
- 4. Publications Related to Safe Use of Ionizing Radiations: None
- 5. Awards: None

## RADIOLOGICAL PERMIT APPLICATION SUPPLEMENT

NAME: REEVES JOYCE ELAINE  
(Last) (First) (Middle)

TENANT ACTIVITIES WILL SUBMIT THRU INTERNAL CHANNELS.

LIST BELOW YOUR TRAINING AND EXPERIENCE WITH RADIOISOTOPES AND OTHER SOURCES OF IONIZING RADIATION (use supplemental sheets if necessary)

1. TRAINING (To be completed by Responsible Investigator, Radiation Protection Supervisor)

| WHERE TRAINED   |                                       | DURATION OF TRAINING            | ON THE JOB<br>(Circle answer) |           | FORMAL COURSE<br>(Circle answer) |           |
|---|---------------------------------------|---------------------------------|-------------------------------|-----------|----------------------------------|-----------|
| a. Principles and practice of radiation protection.                                     | USAEHA & APG<br>USAEHA<br>BATELLE PNL | 4 Years<br>40 hours             | <u>Yes</u>                    | <u>No</u> | <u>Yes</u>                       | <u>No</u> |
| b. Radioactivity measurement standardization and monitoring techniques and instruments. | USAEHA & APG<br>USAEHA                | 28 hours<br>4 years<br>70 hours | <u>Yes</u>                    | <u>No</u> | <u>Yes</u>                       | <u>No</u> |
| c. Mathematics and calculations basic to the use and measurement of radioactivity.      | USAEHA & APG<br>USAEHA                | 4 years<br>70 hours             | <u>Yes</u>                    | <u>No</u> | <u>Yes</u>                       | <u>No</u> |
| d. Biological effects of radiation.   | USAEHA & APG<br>BATELLE PNL - APG     | 4 years<br>24 hours             | <u>Yes</u>                    | <u>No</u> | <u>Yes</u>                       | <u>No</u> |

## 2. EXPERIENCE

| ISOTOPE OR OTHER SOURCE | MAXIMUM AMT OR DESCRIPTION OF SOURCE | LOCATION        | DURATION | TYPE OF USE          |
|-------------------------|--------------------------------------|-----------------|----------|----------------------|
| NICKEL 63               | Microcurie Amount                    | USAEHA/RICD/RAB | 2 Years  | Lab Procedures       |
| STRONTIUM 90            | Microcurie Amount                    | USAEHA/RICD/RAB | 2 years  | Lab Procedures       |
| URANIUM 238             | Microcurie Amount                    | USAEHA/RICD/RAB | 2 Years  | Lab Procedures       |
| CARBON 14               | Microcurie Amount                    | UASEHA/RICD/RAB | 2 Years  | Lab Procedures       |
| TRITIUM                 | Microcurie Amount                    | USAEHA/RICD/RAB | 2 years  | Lab Procedures       |
| TRITIUM                 | Curie Amounts                        | USAAPG          | 2 Years  | RAD Surveys          |
| URANIUM 238             | Curie Amounts                        | USAAPG          | 2 Years  | Surveys & Operations |
| X-Ray Prod. Equip       | 4 Mev                                | USAAPG          | 2 Years  | RAD Surveys          |
| CESIUM137               | Curie Amounts                        | USAAPG          | 2 Years  | RAD Surveys          |
| COBALT 60               | Curie Amounts                        | USAAPG          | 2 Years  | RAD Surveys          |
| THORUM 230              | Microcurie Amounts                   | USAAPG          | 2 Years  | RAD Surveys          |
| PM 147                  | Microcuries Amounts                  | USAAPG          | 2 Years  | RAD Surveys          |

EAP Form 1115R, 1 Feb 81  
(Previous editions will be used until exhausted.)

(APGR 385-3)

Experience continued

|                       |                       |        |         |                   |
|-----------------------|-----------------------|--------|---------|-------------------|
| KRYPTON <sub>85</sub> | Microcurie<br>Amounts | USAAPG | 2 Years | Radiation Surveys |
|-----------------------|-----------------------|--------|---------|-------------------|



old CV

RESUME

JOSE BELEN GOTAY, M.D., D.P.H.  
9601 Evansway Lane, Richmond, Virginia 23235  
P.O. Box 3886, Richmond, Virginia 23235  
(804) 320-3801

BUSINESS ADDRESS:

~~Richmond City Health Department  
600 East Broad Street, Room 629  
Richmond, Virginia 23219  
(804) 780-8571~~

PERSONAL

Place of Birth: Ponce, Puerto Rico  
Date of Birth: November 25, 1927  
Race: Caucasian  
Lineage: Spanish  
Citizenship: American  
Social Security Number: 215-28-5329  
Marital Status: Married - Pauline Dianne Gotay (Canadian)  
Children: Two Children - Ages 31 and 13

EDUCATION

Webster Elementary School - Penuelas, Puerto Rico (1933-1941)

Colegio Ponceno de Varones High School, Ponce, Puerto Rico  
(1941-1945)

Xavier University, Cincinnati, Ohio (1945-1949)

Colegio Franco-Espanol, Mexico, D.F., Mexico. B.S. Degree,  
November 1950

Faculty of Medicine, National University of Mexico, Ciudad  
Universitaria, Mexico, D.F., Mexico. M.D. Degree, June 9, 1959

School of Hygiene and Public Health, University of Toronto,  
Toronto, Ontario, Canada. D.P.H. Degree, June 11, 1973

INTERNSHIP

Rotating, Good Samaritan Hospital, Cincinnati, Ohio, from July 1,  
1959 to June 30, 1960

SPECIALTY AND/OR BOARD CERTIFICATION

Public Health, Board Eligible, The American Board of Preventive  
Medicine, Inc., August 12, 1982



RESUME

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JOSE BELEN GOTAY

Occupational Medicine ~ Preventive Medicine

STATE MEDICAL LICENSURE

Commonwealth of Puerto Rico Board of Medical Examiners,  
License No. 2375 dated April 26, 1963 (Permanent)

Michigan State Board of Registration in Medicine, License  
No. 27262 dated July 19, 1966 (Inactive)

Indiana State Board of Registration in Medicine, License No.  
21092 dated September 22, 1966 (Inactive)

Canal Zone Government, License No. 119, dated August 22, 1967  
(Inactive)

Virginia State Board of Medicine, License No. 30024, dated  
December 4, 1978. Renewed yearly on physician's birthday.  
Valid until November 1984

MILITARY EXPERIENCE

Captain, United States Air Force Medical Corps, 825th Medical  
Group, Strategic Air Command, Little Rock Air Force Base,  
Arkansas. Assigned primary duty as Medical Officer, General.  
Chief of Radiological Service. Dermatology Consultant. Tour  
of duty from August 6, 1960 to August 5, 1962. Honorable  
discharge.

WORK EXPERIENCE

Director of Public Health, City of Richmond, Virginia, from  
August 1978 to September 1983

Health Commissioner and Chief Medical Examiner for the City and  
County of Saginaw, Michigan. August 1971 to August 1978

Medical Officer, General, Department of the Air Force, Occupational  
Medicine Section, USAF Disp., (AFLC), Kelly Air Force Base,  
Texas 78241, from October 22, 1969 to August 2, 1971

Medical Officer, General Practice and Occupational Medicine,  
Chief of the Physical Examination Center, Health Bureau,  
Industrial and Preventive Medicine, Gorgas Hospital, Ancon,

RESUME

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JOSE BELEN GOTAY

Canal Zone (Panama), from October 14, 1967 to October 21, 1969

Plant Physician, Department of Industrial Medicine, Chrysler Corporation Indianapolis Foundry, Indianapolis, Indiana, from July 25, 1966 to October 10, 1967

Physician and Surgeon, Holmes & Narver, Inc., Task Group 8.5 U.S. Atomic Energy Commission, Johnston Atoll, Central Pacific Area, from November 15, 1965 to May 20, 1966

Medical Officer, General, Occupational Medicine Section, 2794th USAF Disp., (SABDMO), Kelly Air Force Base, Texas from May 20, 1963 to August 5, 1965

Physician and Surgeon I, Toa Alta Health Center, Commonwealth of Puerto Rico Department of Health from August 16, 1962 to April 5, 1963

Medical Officer, General (See Military Experience)

Rotating Intern, Good Samaritan Hospital, Cincinnati, Ohio from July 1, 1959 to June 30, 1960

Apprentice Laboratory Technician, Sequoia District Hospital, Redwood City, California, December 1956 to March 1957

Research Associate, Kettering Laboratory of Applied Physiology, Cincinnati, Ohio, 1951-1953

PUBLICATIONS

Receptional Thesis titled "Coccidioidomycosis in Mexico," published by the Thesis Commission of the National School of Medicine, UNAM, Mexico, April 6, 1959

HONORS AND AWARDS

Above mentioned thesis received Honor Mention by the Thesis Commission

Certificate of Appreciation for Noteworthy Performance of Duty issued June 7, 1962, and signed by Lieutenant General John D. Ryan, USAF, Commander of Second Air Force

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JOSE BELEN GOTAY

American Medical Association Physician's Recognition Award for 1973 in Continuing Medical Education (Valid through June 30, 1976)

American Medical Association Physician's Recognition Award for 1976 in Continuing Medical Education (Valid through May 1, 1979)

American Medical Association Physician's Recognition Award for 1979 in Continuing Medical Education (Valid through August 1, 1982)

American Medical Association Physician's Recognition Award for 1982 in Continuing Medical Education (Valid through April 1, 1985)

1977 Environmental Quality Award - State of Michigan. Awarded by Region V (Chicago) of the United States Environmental Protection Agency for significant contributions in the field of environmental quality during 1977. (Highest award given by the Regional Office)

Numerous other professional and civic awards and citations

PROFESSIONAL ORGANIZATIONS/MEMBERSHIPS (PAST AND PRESENT)

Member, Cincinnati Academy of Medicine, Hamilton County Medical Society, Cincinnati, Ohio, September 1959

Honorary Member, Pulaski County Medical Society and Arkansas Medical Society, 1960-1962

Member, Puerto Rico Medical Association, 1962-1963

Member, Marion County Medical Society, Indianapolis, Indiana, 1967-1968

Member, Indiana State Medical Association, 1967-1968

Member, Central States Society of Industrial Medicine and Surgery, April 1967

Honorary Member, Isthmian Medical Association, Canal Zone, 1967-1969

Member, Saginaw County Medical Society, October 1971-1979

RESUME

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JOSE BELEN GOTAY

- Member, Michigan State Medical Society, 1971-1979
- Member, American Medical Association 1967-1968, 1971-1979
- Member, American Public Health Association, October 1971 to present
- Member, Michigan Public Health Association, Inc. 1971-1979
- Member, Industrial Medical Association, 1967-1968 and 1971-1979  
Also member of Michigan IMA
- Member, Michigan Health Officers Association, 1971-1979. Elected to the Board of Directors of MHOA for a two year term in 1973
- Member, Sainaw Valley Public Health Association, 1971 until Association was dissolved in 1975. Vice-President 1973-1974
- Member, Michigan Diabetes Association, 1973-1975
- Member, Saginaw Social Club, 1971
- Member of the Board of Directors, The Saginaw County Information Center on Alcoholism, 1973 to 1978
- Member of the Board of Directors, Health Deliver, Inc., Saginaw, Michigan, 1973
- Member, American Mosquito Control Association, Inc., 1975-1978
- Member, Association of Public Health Physicians, 1977-1979
- Member, American College of Preventive Medicine, 1977
- Member, Richmond Academy of Medicine Inc., Richmond, Virginia, 1978 to present
- Chairman, Public Health and Preventive Medicine Committee, Richmond Academy of Medicine, Richmond, Virginia 1982
- Member, Board of Directors, American Red Cross, Richmond Chapter, 1979 to 1983
- Ex-Officio Member, Advisory, Central Virginia Health Systems Agency, Inc. 1979-1983

RESUME

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JOSE BELEN GOTAY

LANGUAGE SKILLS

Spanish and English

HOBBIES AND OTHER INTERESTS

Photography, wood carving, stamp collecting, oil painting,  
billiards, golf and tennis.

## CALIBRATION

1. The calibration of radiation detection instruments is performed by the Internal Calibration & Repair Center (ICRC), U.S. Army Missile Command, Aberdeen Proving Ground, MD 21002, in accordance with the Army Calibration Program. Instruments are recalled for calibration through the use of a computer print out. The frequency of calibration for radiation protection instruments does not exceed 90 days. Sources used are those of the ICRC. The ICRC is covered by an NRC BML No. BML 19-12056-03 .
2. Dosimeters (self -reading) are submitted to the ICRC for inspection and certification. Calibration frequency is 180 days.
3. Survey instruments are calibrated quarterly to within  $\pm 10\%$  of the calibrated Standard's Value, at a minimum of two points per scale, and separated by at least 50% of the scale.
4. Gamma Standard (AN/UDM-1) used to calibrate survey instruments are calibrated at ICRC by personnel from ACRC, Lexington-Blue Grass Army Depot. Calibrations are traceable to the National Bureau of Standards with a measurement uncertainty of no greater than  $\pm 5\%$  (at 99% confidence level). The Radiation Protection Officer, ICRC is authorized to collect required leak test samples and analysis is performed by Lexington-Blue Grass Army Depot.