



DEPARTMENT OF THE NAVY  
NAVAL EXPLOSIVE ORDNANCE DISPOSAL TECHNOLOGY CENTER  
INDIAN HEAD, MARYLAND 20640

5000  
Ser AC-4/

966

9 OCT 1985

From: Commanding Officer, Naval Explosive Ordnance Disposal Technology Center  
To: U.S. Nuclear Regulatory Commission, Division of Fuel Cycle and Material  
Safety, Washington, DC 20555  
Via: Officer-in-Charge, Naval Sea Systems Command Detachment, Radiological  
Affairs Support Office (RASO), Yorktown, VA 23691-5000

Subj: AMENDMENT OF MATERIALS LICENSE NUMBER <sup>19</sup>10-00318-05

Ref: (a) Title 10, Code of Federal Regulation, Part 40  
(b) Title 10, Code of Federal Regulation, Part 30.38

Encl: (1) Training and Experience Statement for Ivory C. Purser, Radiation  
Safety Officer  
(2) Training and Experience Statement for Richard Burdette  
(3) Training and Experience Statement for Joyce Chandler

1. In accordance with references (a) and (b), request subject license be amended as follows:

a. Designate Mr. Ivory C. Purser as Radiation Safety Officer (RSO). Mr. Purser's training and experience is outlined in enclosure (1).

b. Designate Mr. Richard Burdette as a user. Mr. Burdette's training and experience is outlined in enclosure (2).

c. Designate Ms. Joyce Chandler as a user. Ms. Chandler's training and experience is outlined in enclosure (3).

d. Delete the following personnel from the subject license:

- (1) Robert L. Dow
- (2) Lyle O. Malotky
- (3) Richard S. Pence, Jr.

2. Point of contact is Mr. I. C. Purser, AC-4, (301)-743-4611.

*H.B. Lamkin*

H.B. LAMKIN  
BY DIRECTION

TRAINING AND EXPERIENCE for: Ivory C. Purser, Jr. Radiation Safety Officer

COURSE TITLE	DATE	TYPE OF TRAINING
RADIATION SAFETY USING INDUSTRIAL ISOTOPES, NDT PRODUCTS DIVISION, DIANO CORP., 1020 LONDON Rd., Cleveland, OH	09-13 SEPT 74 (40 Hours)	A. RADIATION SAFETY 1. Properties of Radioisotopes 2. Attenuation of Gamma Rays 3. Measurement of X and Gamma Rays 4. Biological Effect of Radiation B. Manual of Good Practices for Industrial Radiography C. Health, Safety and Regulatory Controls D. Gamma Ray Radiography E. Radiation Protection : Output of X-Ray Machines F. Radioisotopes : Their Production and Significance in Industry Radiography G. Final Test

COURSE TITLE	DATE	TYPE OF TRAINING
INDUSTRIAL RADIOGRAPHY, by F.L. Clifford Associates PO Box 452, Niantic, CT	12-16 Jan 76 (40 Hours)	A. The Structure of Matter 1. Atomic Concepts 2. Atomic Discoveries 3. Particles of Matter 4. Atoms and Elements 5. Molecules and Compounds 6. Fundamental Particles 7. The Atom as Solar System 8. Atomic Number and Weight 9. Isotopes B. Radiation and Radiation Machines 1. Radioactivity 2. Discovery of Radiation 3. Kinds of Radiation 4. Properties of Radiation 5. The Electromagnetic Spectrum 6. Radiation Machines C. Nuclear Reaction and Radioisotopes 1. Nuclear Reactions 2. Nuclear Fission

3. Chain Reaction and Criticality
4. Fission Products
5. Activation of Isotopes
6. Nuclear Reactor
7. Decay of Radioactivity
8. The Curie
9. Plotting Radioactive Decay
10. Decay Schemes
- D. Interaction of Radiation with Matter
  1. Ionization and Ions
  2. Ionization by Particles
  3. Ionization by Electromagnetic Radiation
  4. The Roentgen
  5. Radiation Attenuation
  6. Absorption of Radiation
  7. Half-value Layer
  8. Reduction Factors
  9. Principles of Radiation Safety
- E. Radiation Detection and Measurement
  1. Radiation Detection
  2. Radiation Measurement
  3. Dosimeters
  4. Survey Meters
  5. Instrument Characteristics
  6. Instrument Calibration
  7. Source Calibration
- F. The Nature and Consequences of Radiation Exposure
  1. Radiation Health Perspective
  2. Sources of Information About Radiation Effects on Man
  3. Measurement Units of Radiation Doses
  4. The Nature of the Radiation Health Problems
  5. Levels and Symptoms of Radiation Injury
  6. Common Terms of Reference for Gross Effects of Radiation Injury
  7. Summary of Biological Effects of Radiation

8. Personnel Monitoring
9. Exposure for the Total Population
10. Physical Examination
11. Instrumentation
12. Contamination
- G. Final Test

COURSE TITLE	DATE	TYPE OF TRAINING
RADIOGRAPHIC, SPERRY, School for Nondestructive Testing, General Dynamics, Columbus, OH	23 Oct-03 Nov 1978 (80 hours)	<ol style="list-style-type: none"> <li>A. Introduction-Reference: Nondestructive Testing, Radiographic Testing Handbook CT-6-6</li> <li>B. Materials and Materials Discontinuities</li> <li>C. Physical Principles</li> <li>D. Radiation Sources</li> <li>E. Characteristic of X-Rays and Gamma Rays</li> <li>F. Production of X-Rays and Gamma Rays</li> <li>G. Radiation Detection and Measurements</li> <li>H. Control of Radiation</li> <li>I. Personnel Safety</li> <li>J. Biological Effects of Radiation on Human Body</li> <li>K. Safe Practices in Use, Handling, and Storage of Radioisotopes</li> <li>L. Operating and Emergency Procedures</li> <li>M. Federal Regulatory Requirements: Title 10 CFR, Parts 19, 20, 30, 34, and 71</li> <li>N. Interpretation of Test Results</li> <li>O. Examination               <ol style="list-style-type: none"> <li>1. General: 80%</li> <li>2. Specific: 92%</li> <li>3. Practical: 100%</li> </ol> </li> </ol>

COURSE TITLE	DATE	TYPE OF TRAINING
Maintenance, TECH/OPS, 40 North Ave, Burlington, MA	10-11 Nov 80 (16 Hours)	<ul style="list-style-type: none"> <li>A. Projector               <ul style="list-style-type: none"> <li>1. Source Connector Inspection</li> <li>2. Lock Assembly Inspection</li> <li>3. Lock Assembly Repair</li> <li>4. Routine Maintenance</li> </ul> </li> <li>B. Control Unit               <ul style="list-style-type: none"> <li>1. Control Unit Repair</li> <li>2. Control Cable Inspection</li> <li>3. Control Cable Cleaning and Lubricating</li> <li>4. Control Cable Replacement</li> <li>5. Odometer Adjustment</li> </ul> </li> <li>C. Guide Tube               <ul style="list-style-type: none"> <li>1. Inspection</li> <li>2. Clearing</li> <li>3. Repair</li> </ul> </li> <li>D. Maintenance Records               <ul style="list-style-type: none"> <li>1. Requirements of Title 10, CFR 34.28</li> </ul> </li> </ul>

COURSE TITLE	DATE	TYPE OF TRAINING
Radiation Safety Program Administrator's Seminar, TECH/OPS, 40 North Ave Burlington, MA	12-13 Nov 80 (16 Hours)	<ul style="list-style-type: none"> <li>A. Introduction</li> <li>B. Basic Radiation Protection               <ul style="list-style-type: none"> <li>1. Title 10 CFR 20</li> <li>2. NRC Reg. Guide 8.10</li> </ul> </li> <li>C. Instruction to Worker               <ul style="list-style-type: none"> <li>1. Title 10 CFR 19</li> <li>2. NRC Reg. Guide 8.13</li> </ul> </li> <li>D. Defects and Noncompliance               <ul style="list-style-type: none"> <li>1. Title 10 CFR 21</li> </ul> </li> <li>E. Specific Requirements for Industrial Radiography               <ul style="list-style-type: none"> <li>1. Title 10 CFR 34</li> <li>2. NRC Reg. Guide 10.6</li> </ul> </li> <li>F. Requirements for Source Material               <ul style="list-style-type: none"> <li>1. Title 10 CFR 40</li> </ul> </li> <li>G. Reciprocity Between NRC and Agreement States               <ul style="list-style-type: none"> <li>1. Title 10 CFR 150</li> </ul> </li> <li>H. Fees, Reports Requirements and Miscellaneous               <ul style="list-style-type: none"> <li>1. Title 10 CFR 120</li> <li>2. NRC Reg. Guide 10.1</li> </ul> </li> <li>I. Enforcement Criteria               <ul style="list-style-type: none"> <li>1. Title 10 CFR 2</li> </ul> </li> <li>J. Transportation               <ul style="list-style-type: none"> <li>1. Title 10 CFR 71</li> </ul> </li> </ul>

## 2. Title 49 CFR

COURSE TITLE	DATE	TYPE OF TRAINING
X-Ray Radiation Safety Refresher Training, Naval Energy Environmental Support Activity, Port Hueneme, CA	8-9 Apr 82 (16 Hours)	<ul style="list-style-type: none"> <li>A. Refresher Training on Navy Reg's for Radiation Safety</li> <li>B. Case History of Radiation Mishaps</li> <li>C. BUMEDINST P-5055</li> </ul>

COURSE TITLE	DATE	TYPE OF TRAINING
Radiation Safety Officer Course No. A-7K-0016, Naval Sea Systems Command Detachment Radiological Affairs Support Office (RASO) Yorktown, VA 23691	15-26 Oct 1985 (80 hrs)	<ul style="list-style-type: none"> <li>A. RSO Duties and Responsibilities</li> <li>B. Atomic and Nuclear Structure</li> <li>C. Rad Quant/Units</li> <li>D. Navy Radiation Sources</li> <li>E. Modes of Radioactive Decay</li> <li>F. Attenuation of Particulate Radiation</li> <li>G. Attenuation of Photons</li> <li>H. Radiation Biology</li> <li>I. Radiation Accidents</li> <li>J. Radiation Intensity and Exposure</li> <li>K. Radiation Detection</li> <li>L. Radiological Training</li> <li>M. Survey Instruments</li> <li>N. Radiation Protection Standards</li> <li>O. Radiation Health and Dosimetry</li> <li>P. Control of Radiation Areas</li> <li>Q. Control of Contaminated Areas, Surveys and Decon Procedures</li> <li>R. NRC Licensing</li> <li>S. Shielding of X and Gamma Radiation</li> <li>T. Transportation, Storage and Disposal of RAM</li> <li>U. DU/Radium Handling Procedures</li> <li>V. Statistics for Nuclear Data Analysis</li> <li>X. Pick-up, Receipt and Opening of Radioactive Materials</li> <li>Y. Operating and Emergency Procedures</li> </ul>



## TRAINING AND EXPERIENCE

Ivory C. Purser, Jr. Radiation Safety Officer

### Experience Using Isotope Source Equipment

A. Isotope Sources	Model Projector	Manufacture/Place/Time Frame
1. 100 Curies of Cobalt-60	680 Projector	TECH/OPS, NAVEODTECHCEN, Oct 78 to Present
2. 50 Curies of Cobalt-60	578 Projector	TECH/OPS, NAVEODTECHCEN, Oct 78 to Present
3. 5 Curies of Cobalt-60	525 Projector	TECH/OPS, NAVEODTECHCEN, Oct 78 to Present
4. 15 Millicuries of Cobalt-60	571 Projector	TECH/OPS, NAVEODTECHCEN, Oct 78 to Present
5. 200 Curies of Iridium-192	699 Projector	TECH/OPS, NAVEODTECHCEN, Oct 78 to Present
6. 100 Curies of Iridium-192	533 Projector	TECH/OPS, NAVEODTECHCEN, Oct 78 to Present

### B. Source Changer

1. Model 416	TECH/OPS, NAVEODTECHCEN, Oct 78 to Present
2. Model 488	TECH/OPS, NAVEODTECHCEN, Oct 78 to Present
3. Model 414	TECH/OPS, NAVEODTECHCEN, Oct 78 to Present

### C. TYPE OF RADIATION SURVEY METER

1. Eberline E-510-G
2. Admiral Corporation, Model-IM-85/PDR-27
3. Electronic Products Company, Model-IM-125-B/PDR-43
4. MDH, Industries, Inc., Model-1015-Series X-Ray Monitor
5. Tracer Lab, Inc., Model-SUIH
6. Pocket Dosimeter, Model-IM-9F/PD
7. Pocket Dosimeter, Model-IM-135/PD
8. Pocket Dosimeter, Model-IM-235/PD

TRAINING AND EXPERIENCE for: Richard Burdette

TYPE OF TRAINING

TIME & LOCATION OF TRAINING

B.S. Degree in Chemistry provided  
a general background in radiation  
and its hazards.

1972 Purdue University

Radiation Safety Aspects of Isotope. 1985 (Course 40 hrs) by Tech/Ops Inc.

Topics

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Structure of Matter  
Radiation and Radioactivity  
Control of Radiation Exposure  
Measurement of Radiation  
Federal Standards of Radiation Protection  
Radiographic Equipment Description and Operation  
Inspection and Maintenance of Radiographic Equipment  
Source Changing  
Survey Meter and Calibration  
Final Examination



TRAINING AND EXPERIENCE for: Joyce Chandler

TYPE OF TRAINING

B.S. Degree in Chemistry Engineering  
which included courses and  
labs in areas such as physical  
chemistry, organic chemistry,  
modern physics, and engineering  
material which dealt with  
radioactive and ionization  
dynamics.

TIME & LOCATION OF TRAINING

1984 Georgia Inst. of  
Technology



DEPARTMENT OF THE NAVY

NAVAL SEA SYSTEMS COMMAND DETACHMENT  
RADIOLOGICAL AFFAIRS SUPPORT OFFICE (RASO)  
YORKTOWN, VA 23691-5098

IN REPLY REFER TO

'85 NOV -4 AIO:46

8128/3256.11B  
Ser 11/ 665

29 OCT 1985

U.S. Nuclear Regulatory Commission  
Division of Fuel Cycle and Material Safety  
ATTN: Chief, Materials Licensing Branch  
Mail Stop SS-396  
Washington, DC 20555

Gentlemen:

The enclosed application by the Naval Explosive Ordnance Disposal Technology Center, Indian Head, Maryland to amend U.S. Nuclear Regulatory Commission Materials License No. 10-00318-05 is endorsed.

It is requested that receipt acknowledgement data be forwarded to this Office on the enclosed card.

Sincerely,

P. J. DURFEE  
Commander, MSC, USN  
Officer in Charge

Enclosure:

- (1) NAVEODTEHCEN Indian Head  
ltr 500 Ser AC-4/966  
of 2 Oct 85
- (2) 1 pt Acknowledgement Card

Copy to: (w/o encl)  
NAVEODTEHCEN Indian Head

DURFEE OF

~~8512030657~~

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DEPARTMENT OF THE NAVY  
NAVAL EXPLOSIVE ORDNANCE DISPOSAL TECHNOLOGY CENTER  
INDIAN HEAD, MARYLAND 20640

5000

Ser AC-4/

966

9 OCT 1985

From: Commanding Officer, Naval Explosive Ordnance Disposal Technology Center  
To: U.S. Nuclear Regulatory Commission, Division of Fuel Cycle and Material  
Safety, Washington, DC 20555  
Via: Officer-in-Charge, Naval Sea Systems Command Detachment, Radiological  
Affairs Support Office (RASO), Yorktown, VA 23691-5000

Subj: AMENDMENT OF MATERIALS LICENSE NUMBER 10-00318-05

Ref: (a) Title 10, Code of Federal Regulation, Part 40  
(b) Title 10, Code of Federal Regulation, Part 30.38

Encl: (1) Training and Experience Statement for Ivory C. Purser, Radiation  
Safety Officer  
(2) Training and Experience Statement for Richard Burdette  
(3) Training and Experience Statement for Joyce Chandler

1. In accordance with references (a) and (b), request subject license be  
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d. Delete the following personnel from the subject license:

- (1) Robert L. Dow
- (2) Lyle O. Malotky
- (3) Richard S. Pence, Jr.

2. Point of contact is Mr. I. C. Purser, AC-4, (301)-743-4611.

H.B. LAMKIN  
By direction

*Dupe of  
9513030662*

TRAINING AND EXPERIENCE for: Ivory C. Purser, Jr. Radiation Safety Officer

COURSE TITLE	DATE	TYPE OF TRAINING
RADIATION SAFETY USING INDUSTRIAL ISOTOPES, NDT PRODUCTS DIVISION, DIANO CORP., 1020 LONDON RD., Cleveland, OH	09-13 SEPT 74 (40 Hours)	A. RADIATION SAFETY: 1. Properties of Radioisotopes 2. Attenuation of Gamma Rays 3. Measurement of X and Gamma Rays 4. Biological Effect of Radiation B. Manual of Good Practices for Industrial Radiography C. Health, Safety and Regulatory Controls D. Gamma Ray Radiography E. Radiation Protection : Output of X-Ray Machines F. Radioisotopes : Their Production and Significance in Industry Radiography G. Final Test

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3. Chain Reaction and Criticality
4. Fission Products
5. Activation of Isotopes
6. Nuclear Reactor
7. Decay of Radioactivity
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9. Plotting Radioactive Decay
10. Decay Schemes
- D. Interaction of Radiation with Matter
  1. Ionization and Ions
  2. Ionization by Particles
  3. Ionization by Electromagnetic Radiation
  4. The Roentgen
  5. Radiation Attenuation
  6. Absorption of Radiation
  7. Half-value Layer
  8. Reduction Factors
  9. Principles of Radiation Safety
- E. Radiation Detection and Measurement
  1. Radiation Detection
  2. Radiation Measurement
  3. Dosimeters
  4. Survey Meters
  5. Instrument Characteristics
  6. Instrument Calibration
  7. Source Calibration
- F. The Nature and Consequences of Radiation Exposure
  1. Radiation Health Perspective
  2. Sources of Information About Radiation Effects on Man
  3. Measurement Units of Radiation Doses
  4. The Nature of the Radiation Health Problems
  5. Levels and Symptoms of Radiation Injury
  6. Common Terms of Reference for Gross Effects of Radiation Injury
  7. Summary of Biological Effects of Radiation

- G. Personnel Monitoring
- H. Exposure for the Total Population
- I. Physical Examination
- J. Instrumentation
- K. Contamination
- L. Final Test

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## COURSE TITLE

## DATE

## TYPE OF TRAINING

Maintenance, TECH/OPS,  
40 North Ave, Burlington, MA

10-11 Nov 80  
(16 Hours)

- A. Projector
  - 1. Source Connection Inspection
  - 2. Lock Assembly Inspection
  - 3. Lock Assembly Repair
  - 4. Routine Maintenance
- B. Control Unit
  - 1. Control Unit Repair
  - 2. Control Cable Inspection
  - 3. Control Cable Cleaning and Lubricating
  - 4. Control Cable Replacement
  - 5. Odometer Adjustment
- C. Guide Tube
  - 1. Inspection
  - 2. Clearing
  - 3. Repair
- D. Maintenance Records
  - 1. Requirements of Title 10, CFR 34.28

## COURSE TITLE

## DATE

## TYPE OF TRAINING

Radiation Safety Program  
Administrator's Seminar,  
TECH/OPS, 40 North Ave  
Burlington, MA

12-13 Nov 80  
(16 Hours)

- A. Introduction
- B. Basic Radiation Protection
  - 1. Title 10 CFR 20
  - 2. NRC Reg. Guide 8.10
- C. Instruction to Worker
  - 1. Title 10 CFR 19
  - 2. NRC Reg. Guide 8.13
- D. Defects and Noncompliance
  - 1. Title 10 CFR 21
- E. Specific Requirements for Industrial Radiography
  - 1. Title 10 CFR 34
  - 2. NRC Reg. Guide 10.6
- F. Requirements for Source Material
  - 1. Title 10 CFR 40
- G. Reciprocity Between NRC and Agreement States
  - 1. Title 10 CFR 150
- H. Fees, Reports Requirements and Miscellaneous
  - 1. Title 10 CFR 120
  - 2. NRC Reg. Guide 10.1
- I. Enforcement Criteria
  - 1. Title 10 CFR 2
- J. Transportation
  - 1. Title 10 CFR 71



2. Title 49 CFR

COURSE TITLE	DATE	TYPE OF TRAINING
X-Ray Radiation Safety Refresher E-P Apr 82 Training, Naval Energy (16 hours) Environmental Support Activity, Port Hueneme, CA		<ul style="list-style-type: none"> <li>A. Refresher Training on Navy Regs for Radiation Safety</li> <li>B. Case History of Radiation Mishaps</li> <li>C. BUMEDINST P-5055</li> </ul>

COURSE TITLE	DATE	TYPE OF TRAINING
Radiation Safety Officer Course 15-26 Oct No. A-7K-0016, Naval Sea Systems 1935 (80 hrs) Command Detachment Radiological Affairs Support Office (RASO) Yorktown, VA 23691		<ul style="list-style-type: none"> <li>A. RSO Duties and Responsibilities</li> <li>B. Atomic and Nuclear Structure</li> <li>C. Rad Quant/Units</li> <li>D. Navy Radiation Sources</li> <li>E. Modes of Radioactive Decay</li> <li>F. Attenuation of Particulate Radiation</li> <li>G. Attenuation of Photons</li> <li>H. Radiation Biology</li> <li>I. Radiation Accidents</li> <li>J. Radiation Intensity and Exposure</li> <li>K. Radiation Detection</li> <li>L. Radiological Training</li> <li>M. Survey Instruments</li> <li>N. Radiation Protection Standards</li> <li>O. Radiation Health and Dosimetry</li> <li>P. Control of Radiation Areas</li> <li>Q. Control of Contaminated Areas, Surveys and Decon Procedures</li> <li>R. NRC Licensing</li> <li>S. Shielding of X and Gamma Radiation</li> <li>T. Transportation, Storage and Disposal of RAM</li> <li>U. DU/Radium Handling Procedures</li> <li>V. Statistics for Nuclear Data Analysis</li> <li>X. Pick-up, Receipt and Opening of Radioactive Materials</li> <li>Y. Operating and Emergency Procedures</li> </ul>

## TRAINING AND EXPERIENCE

Ivory G. Purser, Jr. Radiation Safety Officer

Experience Using Isotope Source Equipment

Isotope Sources	Model Projector	Manufacture/Place/Time Frame
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2. 50 Curies of Cobalt-60	578 Projector	TECH/OPS, NAVECDTECHCEN, Oct 78 to Present
3. 5 Curies of Cobalt-60	525 Projector	TECH/OPS, NAVECDTECHCEN, Oct 78 to Present
4. 15 Millicuries of Cobalt-60	571 Projector	TECH/OPS, NAVECDTECHCEN, Oct 78 to Present
5. 200 Curies of Iridium-192	699 Projector	TECH/OPS, NAVECDTECHCEN, Oct 78 to Present
6. 100 Curies of Iridium-192	533 Projector	TECH/OPS, NAVECDTECHCEN, Oct 78 to Present

### 3. Source Changer

1. Model 416	TECH/OPS, NAVECDTECHCEN, Oct 78 to Present
2. Model 468	TECH/OPS, NAVECDTECHCEN, Oct 78 to Present
3. Model 414	TECH/OPS, NAVECDTECHCEN, Oct 78 to Present

### C. TYPE OF RADIATION SURVEY METER

1. Eberline S-510-B
2. Admiral Corporation, Model-IM-85/PDR-27
3. Electronic Products Company, Model-IM-125-B/PDR-43
4. MDH, Industries, Inc., Model-1015-Series X-Ray Monitor
5. Tracer Lab, Inc., Model-SUIM
6. Pocket Dosimeter, Model-IM-9F/PD
7. Pocket Dosimeter, Model-IM-135/PD
8. Pocket Dosimeter, Model-IM-235/PD

TRAINING AND EXPERIENCE for: Richard Burdette

TYPE OF TRAINING

TIME & LOCATION OF TRAINING

B.S. Degree in Chemistry provided  
a general background in radiation  
and its hazards.

1972 Purdue University

Radiation Safety Aspects of Isotopes. 1985 (Course 40 hrs) by Tech/Cps Inc.

Topics

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Structure of Matter  
Radiation and Radioactivity  
Control of Radiation Exposure  
Measurement of Radiation  
Federal Standards of Radiation Protection  
Radiographic Equipment Description and Operation  
Inspection and Maintenance of Radiographic Equipment  
Source Changing  
Survey Meter and Calibration  
Final Examination

TRAINING AND EXPERIENCE for: Joyce Chandler

TYPE OF TRAINING

B.S. Degree in Chemistry Engineering  
which included courses and  
labs in areas such as physical  
chemistry, organic chemistry,  
modern physics, and engineering  
material which dealt with  
radioactive and ionization  
dynamics.

TIME & LOCATION OF TRAINING

1984 Georgia Inst. of  
Technology