



Pittsburgh-Des Moines Corporation

1015 Tuttle Street
P.O. Box 1596
Des Moines, Iowa 50306
515-244-6000

July 26, 1985

RECEIVED

'85 AUG -9 P1:51

United States Nuclear Regulatory Commission
Region III
Glen Ellyn, Illinois 60137

U.S. N.R.C.
LIC. FEE MGMT. BRANCH

Re: 14-01837-04

Gentlemen:

This correspondence is to inform you of personnel and administration changes that will take place August 1, 1985 concerning the Radiography program at PDM Corporation.

Effective August 1, 1985, Arnold Prosch will no longer be the Radiation Safety Officer. Replacing him will be Al DeFrancisco. Mr. DeFrancisco has been employed by PDM Corporation for 25 years and has been Plant QA Supervisor and Manager at various PDM Plants since 1979. He has been involved with industrial radiography since 1974. In October of 1980 he successfully completed the Safety Course offered by Technical Operations, Inc. entitled "Radiation Safety Aspects of Isotope Radiography". He was qualified as Radiographer on December 13, 1982. I have indoctrinated him in the administrative and programmatic responsibilities of the Radiation Safety Officer, and he is familiar with our equipment. Also, he has been indoctrinated on how to perform leak tests. Attached please find background information on Mr. DeFrancisco.

Due to his wide background in Industrial Radiography and administrative ability, we deem him qualified to act as Radiation Safety Officer.

The Radiation Safety Supervisor will remain the same as before with Rick Petersen in that position.

The appropriate revised manual pages are enclosed. Hopefully, you will find these proposed pages acceptable and the program can continue as before.

Sincerely,

PITTSBURGH-DES MOINES CORPORATION

Arnold Prosch
Radiation Safety Officer

Applicant	Carly G. H.
Check No.	000146
Amount	Fee Category 230. (30.)
Type of Fee	Amendment
Date Check Rec'd	9/1/85
Received By	JK / [Signature]

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JUL 31 1985

REGION III

AP/am

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REG3 LIC30
14-01837-04 PDR



Pittsburgh-Des Moines Corporation

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P.O. Box 1596

Des Moines, Iowa 50306

515-244-6000

QUALIFICATIONS FOR RADIOGRAPHER
FOR

ALBERT DEFRANCISCO

The Pittsburgh Des Moines Corporation hereby certifies that the above named individual has completed the training and testing necessary for the operation of the radiographic isotope. The above named individual has demonstrated ability in the following areas:

1. Use of the survey meter
2. Placing signs, lights, and ropes at the proper locations.
3. Use of the Radiation Safety Manual
4. Keeping of the restricted areas under surveillance.
5. Demonstrated ability to use the Tech Ops model 616

Pittsburgh Des Moines Corporation

By: Arnold Prosch INSTRUCTOR

DATE DEC. 13, 1982

Technical Operations Incorporated



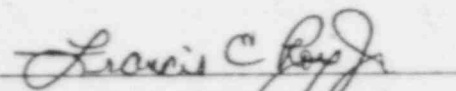
hereby certifies

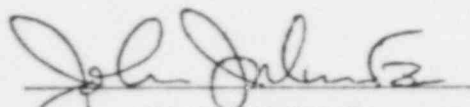
ALBERT J. DEFRANCISCO

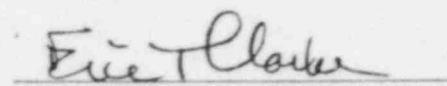
has successfully completed the course:

"Radiation Safety Aspects of Isotope Radiography"

ATTESTED: 24 October 1980


FRANCIS E. ROY, JR.
Instructor


JOHN J. MUNRO, III
Technical Director


E.T. CLARKE, Ph.D.
Executive Secretary & Chairman
of the Isotopes Committee

Pittsburgh-Des Moines Corporation

Radiographers Manual

REV.

A

DATE

7-26-85

Log of Revisions

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NOTATIONS IN THIS COLUMN INDICATE WHERE CHANGES HAVE BEEN MADE

Pittsburgh-Des Moines Corporation

NOTATIONS IN THIS COLUMN INDICATE WHERE CHANGES HAVE BEEN MADE

II. Administrative		
Authority and Responsibility	REV. A	DATE 7-26-85
<p>A <u>Al DeFrancisco - RADIATION SAFETY OFFICER</u></p> <ol style="list-style-type: none"> 1. Serve as a liaison officer with the Nuclear Regulatory Commission, State Radiation and other agencies on matters relating to licensing and use of radiographic equipment. 2. Have direct supervisory responsibility for the organization and operation of the Pittsburgh - Des Moines Corporation Radiation Safety Program. 3. Procure radiation source equipment and related items necessary for the safety program. 4. Maintain control of procurement and disposal of licensed by-product material. 5. Procure and maintain the leak testing services of a qualified laboratory. 6. Establish and maintain adequate storage facilities. 7. Procure film badge service from a qualified laboratory. 8. Procure and maintain adequate radiation survey instruments. 9. Procure survey instrument calibration services from a qualified laboratory. 10. Procure services of a physician to perform radiation physicals as prescribed in corporate radiation program on an annual basis. 11. Report all incidents as itemized under Summary of Notification Requirements. 12. Review, develop and maintain up-to-date operating and emergency procedures to assure compliance with NRC regulations, agreement State requirements and our license. 13. Review and maintain a personnel monitoring program, assign film badges and review results. 14. Conduct the training program for radiographers and assistants. 15. Establish and maintain a continuous internal inspection system. 16. Review and maintain the record-keeping system. 17. Investigate cause of incidents and accidents, and determine necessary preventive action. 18. Act in an advisory capacity to management and radiography personnel. 19. Assume control and institute corrective action in emergency situations. 		
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VIII. Administrative

TRAINING PROGRAM

REV.

A

DATE 7-26-85

Assistant Radiographer - Cont.

"Personal Supervision" is defined as:

1. The radiographer's personal presence at the site where and when the sealed source is being used.
2. The ability of the radiographer to give immediate assistance if required.
3. The radiographer's watching the assistant's performance of the operations referred to in this section

PROCEDURE FOR QUALIFICATION OF RADIOGRAPHIC PERSONNEL

A. ASSISTANT RADIOGRAPHER

A person is hired by the company and is considered a trainee until they complete the training requirements of Assistant Radiographer. They will be issued a copy of the Radiation Safety Manual. This lists the emergency procedure. This classroom training will last approximately 8 - 10 hours.

The following is an outline of this training:

1. Read and review the material in the booklet entitled "Radiographer Assistant Training Manual."
2. Review parts 19, 20, 21, 34, 40 of 10 CFR.
3. Discuss with instructor the topics of: Tech OPS equipment, responsibilities of Radiographers, Radiographer Assistants, dosimeters, film badges, survey meters, purpose of 10 CFR, discuss boundary limits.
4. Discuss each paragraph of the emergency procedures in the Safety Manual.

After this training the person is considered knowledgeable enough so they can handle the equipment and operate it in the presence of a Radiographer. The time spent as an Assistant Radiographer will be approximately three months, where they are gaining experience using the equipment and performing the duties that are required of them. A description of the course outline for Assistant Radiographer is given in the booklet used for training Assistant Radiographers. An examination consisting of 25 questions will be administered and a passing score of 125 points out of 150 points will be required to pass the general exam. This examination and answer sheet are included with this packet. The test questions will be changed bi-annually. The check list used for the

VIII Administrative

TRAINING PROGRAM

DATE 7-26-85

PROCEDURE FOR QUALIFICATION OF RADIOGRAPHIC PERSONNEL

A. ASSISTANT RADIOGRAPHER (Continued)

field examination is also included. 45 points out of a possible 50 points will be required to successfully pass this exam. The number of points assigned to each question is listed to the left of the question number in the exam. After the person obtains 45 points out of the 50 points possible for the field exam, and after they obtain 125 points out of the possible 150 points for the general exam, they will have successfully completed the examination requirements. If a person fails to obtain the minimum points required, they will receive additional training in the deficient areas and be retested. After they successfully pass the exams they will be considered an Assistant Radiographer.

In conclusion, the steps required for qualification to Radiographer's Assistant are as follows:

1. Issue a copy of the Radiation Safety Manual.
2. Complete the classroom training per the outline. (This includes initial introduction to equipment.)
3. Administer the 25 question written exam and grade.
4. Administer the field exam and grade.

After successful completion of the above the person will be considered an Assistant Radiographer and this will be recorded on the qualification sheet (included with this information). The records of the exam will be maintained for a minimum of three years. The applicant can then perform as a Radiographic Assistant.

B. RADIOGRAPHER

After the Assistant Radiographer has spent approximately three months successfully performing in the capacity of an Assistant Radiographer, he would become eligible to take on the additional responsibility of a Radiographer. To become a Radiographer the person would have to complete the classroom training requirements which consist of approximately 40 hours of training. An outline of the subjects covered are listed in the front of the booklet entitled "Training Guide for Radiographic Isotope Safety". During the course, worksheets will be given to the students as they will provide the student a chance to practice what they have learned. Completing the worksheets is not mandatory but is recommended for successful completion of the final exam.

The applicant should be familiar with the equipment because of the three months previous experience. If new equipment is obtained, instruction will be given at this time on the new equipment. Also, if any new equipment is obtained after qualifying as a Radiographer, then the Radiographer will be given instruction pertaining to the new equipment. The certificate will reflect this additional training.

Pittsburgh-Des Moines Corporation

REVISIONS IN THIS COLUMN INDICATE WHERE CHANGES HAVE BEEN MADE

VIII Administrative

TRAINING PROGRAM

REV. A

DATE 7-26-85

PROCEDURE FOR QUALIFICATION OF RADIOGRAPHIC PERSONNEL

B. RADIOGRAPHER (Continued)

After the applicant successfully completes the 40 hour training course, he would be eligible to take the 50 question exam and the field examination. If they successfully pass these examinations and if they have spent three months as an Assistant Radiographer, they must then orally review the Safety Manual with the RSO, RSS or instructor and then would be considered a Radiographer.

The 50 question test is worth a total of 140 points. To successfully pass the exam the student must obtain at least 110 points. The field examination requires a minimum of 70 points out of a possible 80 points to successfully pass. If any one or both of the exams are failed, then additional training and studying will be done by the applicant and they will be retested. The 50 question examination will be changed bi-annually.

It is our intent to qualify the person as an Assistant Radiographer so they are eligible to gain experience by working with the source and also working with the Radiographer.

The person is considered to be a Radiographer after they have met all of the following requirements:

1. Successfully completed the 40 hour training course.
2. Successfully passed the written and field exams for Radiographer.
3. Spent approximately 3 months as an Assistant Radiographer.
4. Orally reviewed the Safety Manual with the RSO, RSS or instructor.

After the above requirements are met then a qualification sheet for Radiographer will be filled out. The records of the exams will be maintained for a minimum of three years.

C. EXPERIENCED PERSONNEL

If a new employee has had previous experience with radiography while with another employer, he will be required to give evidence of the extent of his experience and training and will then be given such training as appears necessary to familiarize him with the Pittsburgh-Des Moines Radiation Safety Program. He will be given appropriate examinations to evaluate his familiarity with the Pittsburgh-Des Moines Radiation Safety Program, license and equipment, and to further evaluate his previous experience and training for the purpose of classifying him as an Assistant Radiographer or Radiographer.

If the person has had previous training in a curriculum outlined in 10 CFR Part 34 appendix A, it will be evaluated as such.

Courses of instruction that have a curriculum that meets the requirements of 10 CFR Part 34 appendix "A", Fundamentals of Radiation Safety, such as the Non Destructive Testing Technology Program at Hutchinson Area Vocational Technical Institute, Hutchinson, Minnesota, and safety courses

I. Radiographer's Manual

Emergency Procedures

REV. A

DATE 7-26-85

Emergency Procedures (con't)7. Vehicular accident while traveling to an exposure site:

1. Set up and post a 2 MR/HR restricted area.
2. If survey meter is inoperable, use calculations to establish the perimeter of the restricted area, assume that source is in an exposed position inside the vehicle.
3. In case of a minor accident, where it can be visually determined that the source is safely stored in its container, no restriction of areas is required.
4. If survey meter is operable and no radiation hazard exists and the vehicle is movable, continue
5. In any case, immediately after establishing the restricted area, notify Radiation Safety Supervisor and the local civil authorities.

In the event of an emergency, immediately call one of the following;

Division Radiation Safety Officer
Al DeFrancisco

Tel. (515) 244-6000
Home (515) 285-0691

Radiation Safety Supervisor
Rick Petersen

Tel. (515) 270-8712
Home (515) 986-4375

NOTATIONS IN THIS COLUMN INDICATE WHERE CHANGES HAVE BEEN MADE

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X. Radiographer's Manual

Quarterly Maintenance

REV. A

DATE 7-26-85

Procedures for the Tech OPS Model 616 Unit

1. Make a radiation survey on the exterior surface of the projector. The radiation levels should not exceed 0.25 MR per hour per curie. Example: 80 curies x 0.25 = 20 MR/HR. (This is at a distance of 6 inches)
2. Visually inspect for damage.
3. Check fastenings on the actuator.
4. Inspect control tube port for dirt.
5. Check for presence and legibility of nameplate.
6. Does lock operate properly?
7. Check for visual damage of the control unit.
8. Test for leaks by turning control valve to OFF. Pump vacuum of approximately 15 inches. Observe gage. Gage should remain steady. A falling gage indicates a leak. A leaking control must be repaired.
9. System Check
Conduct in an area where the source may be exposed. Position projector so that beam is directed away from you and preferably into a shielding wall or floor. Place a survey meter turned ON adjacent to projector so you can observe it.

Connect tube to projector.

Lock projector

Connect tube to control.

Set control valve to OFF.

Pump vacuum to approximately 15 inches.

Turn control to ON. Observe survey meter. Radiation level should not change. If radiation level increases, the lock is faulty and must be repaired.

Observe vacuum gage. A falling gage indicates a leak in control hose or source actuator.

Turn control to OFF.

Remove hose from projector.

IMPORTANT

10. Be sure control valve is turned to OFF. Be sure hose is removed from projector before unlocking.

Unlock Projector

Replace hose in projector.

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