

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 30-20982/85-02

Docket No. 030-20982

License No. 37-23370-01 Priority 1 Category C1

Licensee: North American Inspection, Inc.
P.O. Box 88
Laurys Station, PA 18059

Facility Name: North American Inspection, Inc.

Inspection At: 3906 Main Street, Laurys Station, PA

Inspection Conducted: June 13, 14, and 26, 1985

Inspectors: J. Davis, Health Physicist

8/28/85
date

C. Rowe, Health Physicist

8/28/85
date

J. Miller, Health Physicist

8/28/85
date

Approved by: J. Kinneman, Chief Nuclear Materials
Safety Section A

8/28/85
date

Inspection Summary: Special unannounced inspection of radiation safety
program on June 13, 14, and 26, 1985.

Areas Inspected: Organization, training and qualification of personnel,
records review, and use of materials, facilities and equipment.

Results: One apparent violation was identified: failure to perform
adequate radiation surveys in unrestricted area (paragraph 5). In addition,
one apparent deviation of a written commitment was identified: use of the
Laurys Station facility for isotope radiography (paragraph 5).

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DETAILS

1. Persons Contacted

*Keith Shumway, President
Kerry Frack, Radiographer
George Weaver, Radiographer
Bryan Shumway, Radiographer

*Denotes those present at the exit interview.

2. Organization

Mr. K. Shumway is the President for North American Inspection, Inc. (NAII). The licensee possessed seven iridium-192 sources and one cobalt-60 source at the time of the inspection and employed six radiographers, including Mr. K. Shumway.

The licensee's January 3, 1984 license application states that Mr. Sam Hopkins is the Radiation Safety Officer for North American Inspection, Incorporated. However, Mr. Hopkins, in a letter to the NRC dated April 30, 1985 (Attachment 4), states that he is not, and never has been, the Radiation Safety Officer for this company. Mr. George Weaver is listed in the application as the Assistant Radiation Safety Officer and has been assisting Mr. Shumway in performing this function. The application further states that the Assistant Radiation Safety Officer may exercise all duties and responsibilities of the Radiation Safety Officer in his absence. Furthermore, both Mr. Shumway and Mr. Weaver have the qualifications required to be approved by the NRC as the Radiation Safety Officer.

No violations were identified.

3. Training and Qualification of Personnel

On June 13 and 14, 1985, the inspector reviewed the licensee's training records for radiographers Bryan Shumway, Donna Frack, Larry Thompson and David Hopkins.

Mr. Bryan Shumway had 40 hours of radiation safety training provided by Imperial Inspection Incorporated, Lafayette, Louisiana. The Radiation Safety Test that he took for NAII on June 12, 1983 was scored as 87½%. Mr. Don Shumway was the instructor. Mr. Bryan Shumway passed the Radiographer Examination on February 26, 1985 and received a 98% score; he passed the Radiographic Procedure Exam on February 27, 1985 and received 96% score; and he passed the practical performance examination on February 27, 1985.

Mrs. Donna Frack had 40 hours of radiation safety training provided by Imperial Inspection Incorporated, on June 12, 1983. Mrs. Frack passed the NAII Radiographer Examination on April 17, 1984 and received a 70% score; she passed the Radiographic Procedure Exam on April 19, 1984 and received a 80% score; and she passed the practical performance examination on February 25, 1985.

Mr. Larry Thompson, an experienced radiographer, started with NAII on February 13, 1984. He passed the Radiographic Procedure Exam on April 19, 1984 with a 95% score; passed the Radiographer Examination on April 19, 1984 with a 82% score; and he passed the practical performance exam on April 19, 1984.

Mr. David Hopkins' training records could not be found at NAII during the inspection. A licensee representative stated that all training was handled by Mr. Sam Hopkins and all training and testing were provided by Mr. Hopkins for this son, David. A copy of these training records was provided during the Enforcement Conference conducted at the NRC Region I office on July 9, 1985. These records indicated that Mr. Hopkins had received the training required by 10 CFR 34.31.

On June 26, 1985, the inspectors reviewed records of required annual retraining for radiographers. The inspectors noted that records of Radiographer's Periodic Refresher Training (Attachments 1 and 2) for two individuals indicated that they had received fourteen and ten and one-half hours training, respectively, on February 26, 1985. The inspectors noted that a Daily Radiation Survey Report (Attachment 3) indicated that the two individuals had performed radiographic operations in Boyertown, Pennsylvania on February 26, 1985. The inspectors discussed this with the company president and he stated that the training was received during the day and the radiography was performed on an evening shift. The radiographers were not available for interview by the inspectors.

No violations were identified.

4. Records Review

On June 13 and 14, 1985, the inspector reviewed the licensee's utilization logs. It was noted that the licensee maintains a utilization log containing the make and model number of the exposure device, the identity of the radiographer, the plant or site where used, and the dates of use.

On June 26, 1985, the inspectors reviewed records associated with the licensee's program, including daily radiation survey reports, leak testing, survey instrument calibration, quarterly maintenance, quarterly inventory, personnel monitoring, and radiation survey reports.

No violations were identified.

5. Use of Materials, Facilities and Equipment

Initially the licensee president stated that no gamma radiography was performed at the Laurys Station address, only x-ray radiography. However, discussions with the licensee president subsequently indicated that the only time gamma radiography was performed at the Laurys Station facility was on June 8, 1985. The licensee had stated in the letter which it provided to the NRC at the Enforcement Conference on November 13, 1984 that "... all isotope exposure work has ceased ...until such time as the facility is properly prepared" (referring to installation of a visible and audible warning system).

The finding that the licensee performed radiography with iridium-192 on June 8, 1985 constitutes a deviation from its commitment to cease such work until the facility was properly prepared.

During the gamma radiography that was performed on June 8, 1985 at NAII, Laurys Station, the records of the physical radiation survey indicate that "2 mR" was present at 50 feet from the North, East and South and at 70 feet from the West. The report states that signs, constant surveillance and a tungsten collimator were used. In addition, the report stated that the total number of exposures taken on June 8, 1985 was 36 and the total time the source was exposed was seven minutes.

The inspector made radiation surveys outside of the Laurys Station facility while a simulated exposure was positioned in the same location as indicated on the June 8, 1985 survey report, using a 53-curie iridium-192 source. The inspector used an Eberline Instrument Corporation Model E-120G Geiger Counter, calibrated on April 26, 1985 by Brookhaven National Laboratory. The highest radiation level in the unrestricted areas which existed outside the facility was 20 millirem per hour. Background levels were observed on the porch of the private home located adjacent to the nearby Hiway Restaurant.

The licensee representative estimated the average time for each of the June 8, 1985 exposures to be 15 seconds and stated that the radiographs were taken over a six-hour period. If the radiographer took an average of six exposures per hour, then the total time of the exposure would be 90 seconds in one hour. An exposure rate in the unrestricted area of 80 mrem per hour for 90 seconds would be necessary to produce 2 mrem in any one hour, the limit for an unrestricted area. Since the highest exposure rate measured by the inspectors was only 20 mrem per hour, no violation is believed to have occurred.

However, the inspector questioned the licensee representative about the accuracy of the survey information on the June 8, 1985 Daily Radiation Survey report. The licensee president acknowledged that the information provided on the Daily Radiation Survey report apparently did not represent accurate or actual survey data for June 8, 1985. He stated that the distance from the source to the "2 mR" line (information that was recorded on the survey report) was a "guesstimation."

The finding that the licensee's survey in the unrestricted area outside the Laurys Station facility on June 8, 1985 was inaccurate and therefore inadequate to assure compliance with 10 CFR 20.105(b) represents an apparent violation of 10 CFR 20.201(b).

6. Exit Interview

The inspectors met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on June 14 and June 26, 1985. The inspectors summarized the scope and findings of the inspection.



NORTH AMERICAN INSPECTION, INC.

P.O. BOX 88
LAURYS STATION, PA. 18059

FORM RS-5-2 (4184)

(RIV0)

RADIOGRAPHER'S PERIODIC REFRESHER TRAINING

As required by CFR Part 34 Paragraph 34.11 Sub-paragraph (b)(2) and in N.A.I.I.s' N.R.C. License condition as contained in License Application Part 5 Paragraph 5.

- I. RADIOGRAPHERS NAME Kerry M Frack SOCIAL SECURITY # _____
- II. Date of Original Radiographers Certification by N.A.I.I. 4-19-84
- III. SUBJECT(S) REVIEWED Liberal TYPE REVIEW: Oral X Written 7 Demo 7
1. Review and critique of internal radiographers experience
 2. Discussing of available radiographers experience
 3. Review and discuss personnel doses and reduction
 4. New procedures and regulations
 5. Review critical operating and emergency procedures (posting requirements)
 6. Review at least one fundamental radiation topic (radiation posting)
 7. Review Radiographer's Performance Review
- IV. Time allotted to Subjects 1. 1hr 2. 1/2hr 3. 1/2hr 4. 1/2hr 5. 2hrs 6. 2hrs 7. 4hrs
- V. Radiation Safety Officers review and comments.

Comments This radiographer was subjected to intense questions and answers as a result of a posting violation for radiation area. He was also subjected to intense use of NAI's transportation procedures

VI. STATEMENT OF UNDERSTANDING

I Kerry M. Frack do herewith express understanding and the purpose of subjects contained in III. Items 1 thru 7. 2-26-85

VII. CERTIFICATION

I certify that the foregoing review was conducted by me. An interview was entertained with the Radiographer to further his understanding of N.A.I.I.s' RSO Program.

Signed Em. Hyman Date February 26, 1985 Next Review Required 2/26/86

Note: Please see results of unannounced audit conducted Saturday, February 23, 1985



NORTH AMERICAN INSPECTION, INC.

P.O. BOX 88
LAURYS STATION, PA. 18059

FORM RS-5-2 (4184)

(RIV0)

RADIOGRAPHER'S PERIODIC REFRESHER TRAINING

As required by CFR Part 34 Paragraph 34.11 Sub-paragraph (b)(2) and in N.A.I.I.s' N.R.C. License condition as contained in License Application Part 5 Paragraph 5.

I. RADIOGRAPHERS NAME David M. Hopkins SOCIAL SECURITY #
II. Date of Original Radiographers Certification by N.A.I.I. 4-19-84
III. SUBJECT(S) REVIEWED 1 thru 6 TYPE REVIEW: Oral X Written 7 Demo 7

1. Review and critique of internal radiographers experience
2. Discussing of available radiographers experience
3. Review and discuss personnel doses and reduction
4. New procedures and regulations
5. Review critical operating and emergency procedures
6. Review at least one fundamental radiation topic
7. Review Radiographer's Performance Review

IV. Time allotted to Subjects 1. 2hrs 2. 2hrs 3. 2hr 4. 2hrs 5. 2hrs 6. 2hrs 7. 2hr

V. Radiation Safety Officers review and comments.

Comments particular emphasis on (1) transportation (2) US NRC
Compliance inspections (3) unannounced audit covered
in item 7 above.

VI. STATEMENT OF UNDERSTANDING

I David M. Hopkins do herewith express understanding and the purpose of subjects contained in III. Items 1 thru 7. David M. Hopkins

VII. CERTIFICATION

I certify that the foregoing review was conducted by me. An interview was entertained with the Radiographer to further his understanding of N.A.I.I.s' RSO Program.

Signed Sm/hjk Date February 26, 1985 Next Review Required 2/26/86

DAILY RADIATION SURVEY REPORT

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Form RS-4-4 (Rev. 0)
(1-84)RADIOGRAPHER Kerry M. FrackJOB LOCATION Baytown, PA.DATE Tues. Feb 24, 1985 TIME 8.30PROJECT Cryo Chem

1. SOURCE OF RADIATION: IR-192 ☒ S/N 32.124, CO-60 ☐ S/N , X-RAY ☐ S/N
2. CURIES: 52 X-RAY KV-MA MAXIMUM:
3. SURVEY METER NO. 31292 CALIBRATION DUE DATE 3-24-85
4. CAMERA MODEL NO. Century S MANUFACTURER GAMMA Ind. S/N 2832
5. DAILY EQUIPMENT CHECK PERFORMED? (Form No. RS-4-3) EQUIPMENT ACCEPTABLE? YES ☒ NO ☐
6. RADIOGRAPHER DOSIMETER S/N 4040723 DATE CALIBRATION DUE 4-19-85
7. ASST. RADIOGRAPHER DOSIMETER S/N 4040724 DATE CALIBRATION DUE 4-19-85
8. RADIOGRAPHER FILM BADGE S/N 00004 ASST. RADIOGRAPHER FILM BADGE NO. 00019
9. SOURCE DECAY CURVE IN LOG BOOK? YES ☒ NO ☐
- SOURCE TRANSPORTATION DOCUMENTS IN LOG BOOK? YES ☒ NO ☐
10. RADIOGRAPHY MANUAL S/N #5, 3 OR MORE RADIATION SIGNS IN LAB/SITE? YES ☒ NO ☐
11. DOSIMETER RECORD RECEIVED: RADIOGRAPHER: (START 0 MR FINISH 0 MR) Hart
ASSISTANT RADIOGRAPHER: (START 0 MR FINISH 5 MR) Dmit
12. TOTAL EXPOSURE TIME FOR SHIFT/DAY: HOURS, 4 MINUTES 15 sec.
13. PERSONNEL NOTIFIED OF RADIATION AREAS, WHERE APPLICABLE? YES ☒ NO ☐ Empty Shop
14. CONSTANT SURVEILLANCE? YES ☒ NO ☐ DID YOU USE ROPES? YES ☐ NO ☒
- DID YOU USE SIGNS? YES ☒ NO ☐ WAS A COLLIMATOR USED? YES ☒ NO ☐
15. RECORD OF PHYSICAL SURVEY MADE TO DETERMINE SOURCE IS IN SHIELDED POSITION PRIOR TO SECURING EXPOSURE DEVICE yes
- a. IRIIDIUM 192 12 MR/HR AT 6 INCHES FROM SURFACE. ON CONTACT 65 MR/HR
- b. COBALT 60 MR/HR AT SURFACE OF EXPOSURE DEVICE.

16. VEHICLE STORAGE SURVEY:

- 1a. LEAVE: 47 MR/HR AT DRIVER, 47 MR/HR AT OUTSIDE SURFACE, 47 MR/HR AT 1 FT. FROM SURFACE
- 1b. RETURN: 47 MR/HR AT DRIVER, 47 MR/HR AT OUTSIDE SURFACE, 47 MR/HR AT 1 FT. FROM SURFACE

EXPOSURE AREA A, B, OR C AS MAY BE APPLICABLE, WHERE MORE THAN ONE (1) EXPOSURE CONDITION EXISTS PER WORK SHIFT, RECORD IN EXPOSURE AREA A, B, OR C:

RESULT OF PHYSICAL SURVEY

40 MR
15 ft

40 MR
10 ft

SOURCE

40 MR
20 ft

60 MR
40 ft

BARRICADE EQUIPMENT

☒ SIGNS ☐ ROPES

☒ CONSTANT SURVEILLANCE

3/8" Collimator

RESULT OF PHYSICAL SURVEY

40 MR
45 ft

40 MR
10 ft

SOURCE

40 MR
20 ft

40 MR
40 ft

BARRICADE EQUIPMENT

☒ SIGNS ☐ ROPES

☒ CONSTANT SURVEILLANCE

☒ Collimator

Panoramic 3/8" CLATH

RESULT OF PHYSICAL SURVEY

60 MR
35 ft

60 MR
15 ft

SOURCE

60 MR
15 ft

60 MR
50 ft

BARRICADE EQUIPMENT

☒ SIGNS ☐ ROPES

☒ CONSTANT SURVEILLANCE

☒ Panoramic Exposure

3/16" material

ANY VARIATIONS IN PHYSICAL SURVEYS SHOULD BE NOTED AND SKETCHED ON THE REVERSE SIDE OF THIS FORM.

SIGNATURE OF RADIOGRAPHER

NAME OF ASST. RADIOGRAPHER (if applicable)

April 30, 1985

U.S.N.R.C. - Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Attention: Mr. Thomas T. Martin, Director
Division of Radiation Safety and Safe Guards

Subject: North American Inspection, Inc.'s Safety Program

Reference: U.S.N.R.C. License #37-23370-01

Dear Mr. Martin:

This letter is to advise you that I do not and have not maintained an administrative position in the Radiation Safety Program of this company since its inception.

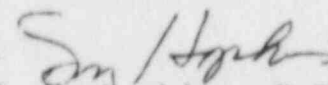
My participation has from its inception been one of a consulting basis and possessed no authority with reference to implementation of North American Inspection, Inc.'s Radiation Safety Program and/or the Rules and Regulations as defined by applicable parts of Title 10 contained in the Nuclear Regulations covering license facilities to use radioactive materials.

Further, I do not have knowledge of the day to day enforcement of North American Inspection, Inc.'s Radiation Safety Program.

The work performed by me was defined in a predetermined agenda by Mr. Shumway and my work was limited to same.

The purpose of this letter is to establish that I am not and have never been the R.S.O. for this company.

Respectfully submitted,


S. M. Hopkins, P.E.
7300 St. Peters Church Rd. N.E.
Louisville, Ohio 44641
(216) 877-1459

jb

cc: T.E. Murley, Regional Administrator
R.K. Shumway, N.A.I.I.

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