

Region V

DI

GUIDANCE FOR INSPECTION PROCEDURE 87100

INDUSTRIAL RADIOGRAPHY INSPECTION FIELD NOTES

Inspection Report No. 9001

License No. 50-16084-01

Licensee (name and address)

Docket No. 030-10346

Alaska Industrial X-Ray, Inc.
4047 Kingston Drive
Anchorage, Alaska 99504

Licensee Contact. Peter Miller

Telephone No. 907-344-4661

Last Amendment No. 6

Date of Amendment. July 6, 1989

Priority: I Program Code () 03310 - Fixed (x) 03320 - Temporary

Date of Inspection May 21, 1990

Type of Inspection () Announced () Initial
(x) Unannounced () Special
(x) Reinspection
Next Inspection Date May, 1991 (x) Normal () Extended () Reduced

Summary of Findings and Action:

- () No Noncompliance, Clear 591 issued
- (x) Noncompliance, 591 issued
- () HQ Action
- () Action on Previous N/C
- () Regional Action

Personnel Contacted

Three items of non-compliance were identified during the inspection.

* Those present at exit interview.

Inspector J. Frank Pans

Approved [Signature]

5/30/90
(Date Signed)

6/28/90
(Date Signed)

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1. ORGANIZATION

a. Management Structure

Pete Miller, President, RSC
 Don Miller, Treasurer
 Richard Miller, Treasurer
 Sam Kelly, Treasurer
 Kyle Freeman, Treasurer
 Ken Van Dier, Radiographer
 Tom Haggitt, " "

b. Administrative structure meets license requirements.

() Yes () No [L/C] [34.11(e)]

Remarks.

c. Individuals identified in the license as being responsible for the programs still hold those positions. () Yes () No

Remarks.

This is a small operation consisting essentially of Pete Miller, president of RSC and Ken Van Dier, radiographer. Tom Haggitt is a part time radiographer. He and the other trustees work when there is enough work.

d. Radiography Personnel

Radiographers

Radiographer's Assistants

See "management structure" above.

(continue d., if needed, on paragraph 22.)

2. INSPECTION HISTORY

a. Item(s) of noncompliance or deviations noted during last inspection conducted on June 19, 1987 () Yes () No

Corrected by letter dated N.A.

<u>Requirement</u>	<u>Severity</u>	<u>Corrected</u>	<u>Status</u>
Quant. history has no activity record	5	✓	closed
Filter badge records not maintained	5	✓	closed
Failure to back test prior to shipment	4	✓	closed

(continue b., if needed, on paragraph 22.)

c. If any item(s) of noncompliance or deviations noted during last inspection were not corrected, explain.

(continue c., if needed, on paragraph 22.)

item 4j Don Miller's (The RSC's son) examination was reviewed. His passing score was 75% and it was noted that one question erroneously marked as correct when it was on Lesson III. The corrected final score was 65%. The RSC was told that Don Miller must retest back to Timineu until he successfully passes the examination.

item 3. cont.:

According to the RSC business is picking up again to the extent that the volume is back up to that of six years ago.

3. SCOPE OF PROGRAM

The licensee's operation is a small one consisting of two radiographers and another radiographer & trainees on a part time basis. Two of the trainees are the RSC's sons. See opposite page

4. TRAINING, RETRAINING AND SUPERVISION OF RADIOGRAPHY PERSONNEL

a. Radiographers and Assistants named in license. () Yes () No

b. Radiographer's Assistant under direct supervision of a Radiographer. () Yes () No [34.44] N.A.
Remarks.

At this time the licensee has no radiographer's assistants.

c. Approved training program. () Yes () No

d. Deficiencies noted. () Yes () No [L/C]
Remarks.

e. Training provided by. Pete Keller; RSC

f. Written tests. () Yes () No

g. Oral tests. () Yes () No

h. Radiographers completed field examination. [34.31)a)(4) and (b)(3)] () Yes () No

i. Record of test results. () Yes () No [34.31(c)]
Remarks.

The 1989 exam for Ken VanDusen was missing but other documentation were available.

j. Test results reviewed by NRC inspector. () Yes () No see opposite page.

k. Radiographer completed on-the-job training. [34.11(b)(3)]
() Yes () No
Remarks.

l. Retraining program required by License Condition. () Yes () No

m. Periodic training. () Yes () No

n. Retraining program implemented: () Yes () No [L/C]
Remarks.

o. Records of retraining reviewed. () Yes () No

items a. cont.:

- * Tom Wright was audited on 4/3/89 and not audited again until 11/1/89. Ken VanDuser was audited on 10/11/89 and not audited again until 4/3/90.
- * Audit records for 1988 were not maintained.

According to the RSC, when the field sites are out in the field, the air fares can be very high for a round trip just to make an audit. eg. \$500-\$900. Suggestions were given the RSC for acceptable solutions to make this issue.

p. Instruction to workers in accordance with 19.12.

Yes () No

Remarks.

5. INTERNAL AUDITS OR INSPECTIONS

a. Audits or inspections conducted at 3-month intervals in accordance with 34.11(d). () Yes No [L/C]

Remarks.

* Tom Haggett, radiographer, was audited on 4/3/89 and not audited again until 11/1/89. Tom Haggett worked all of Feb. and March (see opposite page)

b. Records maintained. Yes () No [L/C]

Remarks.

see opposite page

6. INSPECTION AND MAINTENANCE OF DEVICES, CONTAINERS, AND CHANGERS

a. Included in Operating and Emergency Procedures.

Yes () No [34.32(j)]

Remarks.

b. Equipment check prior to use each day. Yes () No [34.28(a)]

Remarks.

c. Equipment check at 3-month intervals. Yes () No [34.28(b)]

Remarks.

d. Record of results maintained. Yes () No [34.28(b)]

Remarks.

7. NRC REGULATIONS, LICENSE AND OPERATING AND EMERGENCY PROCEDURES

a. Parts 19, 20, and 34; the license; and Operating and Emergency Procedures furnished to all radiographers and radiographer's assistants. Yes () No [34.31(a)(2)]

Remarks.

b. Operating and Emergency Procedures approved by NRC. [34.11(c)]

Yes () No

8. UTILIZATION LOG

a. Utilization log maintained. () Yes () No [34.27]
Remarks.

b. Utilization log contains all required information. () Yes
() No [34.27(a),(b),(c)]
Remarks.

9. QUARTERLY INVENTORIES

a. Quarterly physical inventories conducted. () Yes () No
[34.26]
Remarks.

b. Quarterly inventories contain all information. () Yes () No
[34.26]
Remarks.

c. Materials possessed authorized by the license. () Yes () No
Remarks.

d. Byproduct Material inventory on. _____
Source
Changer

<u>Model #</u>	<u>Quantity</u>	<u>Isotope</u>	<u>Source S/N</u>	<u>Camera Model</u>	<u>S/N</u>
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The licensee has three exposure devices with sources.

e. Procurement and use of byproduct material in accordance with
license requirements. () Yes () No [L/C]
Remarks.

10. MATERIALS, FACILITIES AND EQUIPMENT

a. Fixed Facility. *U A.*

1) As described in application dated _____, Report
dated _____, or _____

(a). Cell(s) interlocked [20.203(c)(2)(i)] () Yes () No *N.A.*

(b). Cell(s) controlled in accordance with 20.203(c)(2)(ii) or (iii). [34.29(b)] () Yes () No *N.A.*
Remarks.

(2) Entrance controlled in accordance with 20.203(c)(2).
() Yes () No [20.203(c)(2)] *N.A.*
Remarks.

(3) Exit in accordance with 20.203(c)(3). () Yes () No *N.A.*
[20.203(c)(3)]
Remarks.

(4) Surveillance or locked to prevent unauthorized entry.
() Yes () No [20.203(c)(4), 34.41] *N.A.*
Remarks.

(5) Visible and audible signals to warn of the presence of radiation: () Yes () No [34.29(b)] *N.A.*
(a) Alarms operated correctly; i.e., visible due to radiation; audible when entrance attempted during source exposure. [34.29(b)]
Remarks.

(6) Alarm system tested at 3 month intervals. () Yes () No *N.A.*
[34.29(c)]
Remarks.

(7) Record of alarm system test. () Yes () No [34.29(c)] *N.A.*
Remarks.

(8) Radiographic exposure devices and storage containers meet radiation level limits of 34.21. () Yes () No [34.21] *N.A.*
Remarks.

b. Storage Area.

(1) Sources locked in device. (✓) Yes () No [34.22(a)]
Remarks.

item 10 d. (4) =

E&T Electronics was visited during the inspection. According to Edward Yang of E&T Electronics, he had been doing instrument calibrations using sealed sources in the Air Force. He has been using the State of Alaska Calibration Facility sources at Wasilla under Truman Beav's supervision. However since E&T Electronics is a separate entity operating as an instrument calibration service it must obtain a license to do so.

(2) Storage devices meet radiation levels (Yes () No [34.21]
Remarks.

(3) Devices secured to prevent unauthorized removal from an unrestricted area. (Yes () No [20.207]
Remarks.

c. Field Location

(1) Field work authorized. (Yes () No [L/C]
Remarks.

(2) Field inspection conducted. () Yes (No

(3) Proper postings (signs) ropes, etc., available as required by regulations or license. () Yes () No *N.A.*
Remarks.

d. Survey Meters

(1) Calibrated and operable meters available and used:
(Yes () No [34.43(c)]
Remarks.

(2) Type and number available.

(3) 2 mR/hr through 1 R/hr can be measured. (Yes () No [34.24]
Remarks.

(4) Calibrated by. E & T Electronics, Inc. *see opposite page*

(5) Calibration method authorized. () Yes () No [L/C]
Remarks.

(6) Calibrated at 3-month intervals. (Yes () No [34.24]
Remarks.

e. Special Equipment (shields, collimators, etc.)

Remarks. yes

11. PERSONNEL MONITORING

a. Film or TLD badge supplier. Rib, handouts - Frequency monthly [L/C]

b. Reports reviewed by: RSD Frequency: monthly

c. NRC inspector reviewed personnel monitoring records for period 1987 to Mar. 1990

d. License exposure limit. 1.25 R/Quarter 3 R/Quarter

e. NRC forms or equivalent.

(1) NRC-4. () Yes () No Complete.* () Yes () No
* Must be completed before individuals receive more than 1.25 rems per calendar quarter.

(2) NRC-5. () Yes () No Complete. () Yes () No
[20.401(a)]

f. Maximum ^{annual} ~~quarterly~~ exposure. 560 mrem Average. _____

g. Each individual assigned film badge and dosimeter. () Yes () No [34.33(a)]
Remarks.

h. Dosimeter type. _____ Range. 0-200 mrem.

i. Annual check of dosimeter for correct response. () Yes () No [34.33(c)]
Remarks.

j. Dosimeter recharged at start of each shift. () Yes () No [34.33(a)]
Remarks.

k. Dosimeter dose recorded daily. () Yes () No [34.33(b)]
Remarks.

12. LEAK TESTS

- a. Leak test method approved. () Yes () No [34.25(c)]
Remarks.
- b. Model of leak test kit. _____
- c. Test at 6-month intervals. () Yes () No [34.25(b)]
Remarks.
- d. Record of leak test results maintained. () Yes () No
[34.25(c)]
- e. Records reviewed by NRC inspector for period June, 1982 to present
Remarks.

13. SURVEYS

- a. Area of facility survey conducted to show compliance with
20.105. () Yes () No [20.201(b)] U.A.
Remarks.
The license has no fixed facility.
- b. Area of facility survey recorded. () Yes () No [20.401(b)]
Remarks. U.A.
- c. NRC inspector reviewed records for period _____ to _____ U.A.
- d. Maximum radiation levels in unrestricted areas.
Remarks.
≤ 2 mrem/hr
- e. Survey after each exposure: () Yes () No [34.43(b)]
Remarks.
- f. Survey includes guide tube. () Yes () No [34.43(b)]
Remarks.
- g. Record of final survey before securing device at place-of-
storage. () Yes () No
Remarks.

14. POSTING AND LABELING

- a. High Radiation Area posted as required. (Yes () No [20.203(c)(1)]
Remarks.
- b. Radiation Area posted as required. (Yes () No [20.203(b)]
Remarks.
- c. Use or storage area posted "Caution - Radioactive Material". (Yes () No [20.203(e)(1)]
Remarks.
- d. Containers or devices properly labeled. (Yes () No [20.203(f)]
Remarks.
- e. Posting of "Notice to Workers". (Yes () No [19.11(a) or (b)]
Remarks.
- * The applications dated 5/17/79 and the letter dated 11/19/79 were not available at the time of the inspection.
- f. Posting of "Notice to Employees". (Yes () No [19.11(c)]
Remarks.

15. CONFIRMATORY MEASUREMENTS

- a. Confirmatory measurements made by inspector. (Yes () No
- b. Survey instrument. Xetex 305B NRC Serial No. 8174
Last date of calibration. Mar. 1, 1990
- c. Describe type and results of measurements and compare these with licensee's measurements. A radiation survey was conducted of the exposure devices and storage areas. No abnormal or significant radiation levels were noted.

16. RECEIVING AND SHIPPING OF RADIOACTIVE MATERIALS

- a. Procedures for picking up, receiving, and opening of packages. (Yes () No [20.205]
Remarks.

- b. Written procedures. () Yes () No
- c. Shipping incidents since last inspection. () Yes () No
- d. Survey of packages when received. () Yes () No [20.205(c)(1)]
Remarks.

- e. Record of survey of packages. () Yes () No [20.401(b)]
Remarks.

- f. Shipment of sources since last inspection. () Yes () No

- (1) Only container authorized by licensee has been used.
() Yes () No
Remarks.

- (2) Shipping papers and package labeling properly completed
() Yes () No [71.5]
Remarks.

- (3) Licensed material transferred in accordance with [30.41].
() Yes () No
Remarks.

- (4) Record of receipt and transfer. () Yes () No [30.51]
Remarks.

17. TRANSPORTATION (10 CFR 71.5a and 49 CFR 171-178)

- | | <u>Yes</u> | <u>N/A</u> | <u>Vio.</u> |
|--|---|---|-------------|
| a. Licensee makes shipments of RAM?
Such shipments are:
(<input checked="" type="checkbox"/>) delivered to Common Carriers?
(<input checked="" type="checkbox"/>) transported in licensee's own
vehicle as private carrier?
() both? | (<input checked="" type="checkbox"/>) | () | () |
| If a. above is "Yes," complete following items: | | | |
| b. Are Authorized Packages used?
[173.415-416]
Types used:
DOT-7A, Type A [173.415] | (<input checked="" type="checkbox"/>) | () | () |
| Performance test records on file?
DOT-55 [173.416(a)] | () | (<input checked="" type="checkbox"/>) | () |

- Licensee aware of 6/30/85 Cutoff on use? () (✓) ()
- () Certified [173.416(b)]
 NRC COC's on file? [71.12(c)(1)] (✓) () ()
 Registered with NRC as user? [71.12(c)(3)] (✓) () ()
 Documented NRC-Approved Q/A program? [71.12(b)] (✓) () ()
 NRC Q/A Approval No. _____
- () Other _____
- c. Special Form Material Performance test records available for each source design [173.476(a)] (✓) () ()
- d. Packages labeled as required? [172.403(a)(b)(c)(e)(f)] (✓) () ()
 () Excepted () WI () YII (✓) YIII (✓) () ()
 Surveys performed to select correct label category and compliance with radiation limits? (175.475(i)). (✓) () ()
- e. Packages marked with required, i.e., proper shipping name, Spec. No., COC No., etc. [172.300 thru 172.310] (✓) () ()
- f. Shipping papers prepared for each shipments? [172.200] (✓) () ()
 Such papers contain required information [172.203(d)] (✓) () ()
- g. For licensee Private Carrier Shipments:
 Vehicles placarded as required? [172.500, 172.504] (✓) () ()
 Cargo blocked, braced, tied down in vehicle? [177.842(d)] (✓) () ()
 Any incidents reported to DOT? [171.15-16] () (✓) ()
- h. Licensee carries shipping papers that are readily accessible when transporting RAM. (✓) () ()

18. NOTIFICATION AND REPORTS

a. Licensee in compliance with 19.13 (reports to individuals).
 () Yes () No [19.13] N/A.
 Remarks.

b. Licensee in compliance with 20.405 (overexposures).
 () Yes () No [20.405(a)] N/A.
 Remarks.

- c. Licensee in compliance with 20.403 (incidents).
 Yes No [20.403] N.A.
Remarks.
- d. Licensee in compliance with 20.402 (theft or loss).
 Yes No [20.402(a)] or [20.402(b)] N.A.
Remarks.
- e. Annual Report to Commission. Yes No [20.407]
Remarks.
- f. Termination Report to Commission. Yes No [20.408] N.A.
Remarks.

19. LICENSE CONDITIONS

- a. All License Conditions reviewed during inspection. Yes
 No
- b. Activities were conducted in accordance with License Conditions
except as noted elsewhere in this report. Yes No
Remarks.

20. BULLETINS AND INFORMATION NOTICES

- a. Bulletins and Information Notices issued during current year.
 Yes No
- b. Bulletins and Information Notices received by licensees. Yes
 No
- c. Licensee took appropriate action in response to Bulletins and
Information Notices. Yes No
Remarks.

21. ITEMS OF NONCOMPLIANCE

See appendix A.

22. CONTINUATION OF PREVIOUS PARAGRAPHS - USE BACK OF PAGE IF NECESSARY

APPENDIX A - DOCUMENTATION of NONCOMPLIANCE

Licensee: Alaska Industrial X-RayLicense no: 50-16084-01

Reference	Basis for noncompliance	
Report item <u>5.2</u> 10 CFR <u>34.11(d)(1)</u> Lic Cond <u> </u> Type n/c <u>5.2.4</u>	Two radiographers were audited in excess of 90 days.	
Report item <u>5a</u> 10 CFR <u>34.11(d)(5)</u> Lic Cond <u> </u> Type n/c <u>5.2.5</u>	Records of audits conducted of radiographers were not maintained for 1988.	
Report item <u>14e</u> 10 CFR <u>19.11(c)</u> Lic Cond <u> </u> Type n/c <u>5.2.3</u>	The applications dated 5/17/79 and the letter dated 11/19/79 of the reference documents to the license were not available at the time of the inspection.	
Report item <u> </u> 10 CFR <u> </u> Lic Cond <u> </u> Type n/c <u> </u>	Report item <u> </u> 10 CFR <u> </u> Lic Cond <u> </u> Type n/c <u> </u>	IE:V Form 618

Type of License: Radiography

License No.: 50-16084-c1

Licensee: Alaska Industrial X-Ray, Inc.

Docket No.: 030-10246

PERFORMANCE EVALUATION FACTORS

- _____ Failure of Isotope Committee (or certain key members thereof) to meet or discuss meaningful issues for a Broad Scope type license.
- _____ RSO too busy with other assignments (RSO spending less than 25% of time).
- _____ Lack of involvement of senior management to oversee RSO performance (management unaware of operations).
- _____ Inadequate consultant service (consultant not finding any problems but NRC does).
- _____ Insufficient technologist/authorized user/radiation safety staffing for licensed program workload.
- _____ Program not being audited by management or the Radiation Safety Committee.

ACTIONS TAKEN

- ___ Notice of Violation Letter with Severity Levels III ___, IV ___, V ___.
- ___ NRC Form 591 Clear ___, Violations 3.
- ___ Telephone Call to Licensee
- ___ Management Meeting with Licensee
- ___ Enforcement Conference with Licensee
- ___ Escalated Enforcement (Civil Penalty)
- ___ Early reinspection required. Date _____.

INSPECTOR'S COMMENTS

This is an average program.

J.F. Pang
Inspector

5/24/90
Inspection Date

[Signature]
Section Chief

6/28/90
Date

APPENDIX C

INSPECTION CHECKLIST
SUPPLEMENTARY INFORMATION

REPORT No.: 90-01

DATE: 5/29/90

LICENSEE: Alaska Industrial X-Ray, Inc.

LIC. No.: 50-16084-01

IF BROADSCOPE - NAME/LOCATION OF PERMITTEE: _____

VIOLATIONS THIS INSPECTION
{#/PARA: 5. a ; ite. }

UNRESOLVED ITEMS
{PARA: }

UNCORRECTED/REPEAT VIOLATIONS
{PARA: }

DEVIATIONS
{PARA: }

NONCITED VIOLATIONS IDENTIFIED
BY THE LICENSEE
{PARA: }

INSPECTOR'S COMMENTS
ON PEF

This is an average program.

NONCITED VIOLATIONS IDENTIFIED
BY THE NRC
{ }

FREQUENCY CHANGE REQUIRED

PRIORITY CHANGE REQUIRED
{AUTHORITY: }

INSPECTORS WILL PRESENT THIS APPENDIX TO THE SECTION CHIEF ALONG WITH FINAL INSPECTION DOCUMENTATION.

THIS FORM WILL BE RETAINED BY THE NMS SECTION CHIEF FOR FUTURE REFERENCE AND STATISTICAL DATA GENERATION.