

Docket File

NOTE: All areas indicated in field notes are not required to be addressed during each inspection.

INDUSTRIAL RADIOGRAPHY INSPECTION FIELD NOTES
Region 5

Inspection Report No. 9101

License No. 50-16084-C1

Licensee (name and address)

Docket No. 030-10346

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

Licensee Contact Peter Wisler

Telephone No. (907) 344-4061

Last Amendment No. 7

Date of Amendment 10/24/90

Priority: 1

Program Codes: () 03310 - Fixed
() 03320 - Temporary

Date of Last Inspection 5/21/90 & 9/8/90

Date of This Inspection 5/13/91

Type of Inspection: () Announced () Unannounced
() Routine () Special
() Initial () Reinspection

Next Inspection Date May, 1992 () Normal () Reduced () Extended

Summary of Findings and Action:

() No violations, Clear 591 or letter issued
() Violations, 591 or letter issued
() Action on Previous Violations

Inspector: I. Frank Pang
(Signature)

Date 5/28/91

Approved: [Signature]
(Signature)

Date 6/14/91

A/20

1. ORGANIZATION

a. Briefly describe the organizational structure:

Peter Miller, President, RSC

three full time radiographers
 five part time
 () Y () N

b. Organizational structure meets license requirements. [L/C]

c. Radiographers and Assistants named in license () Y () N

d. List radiography personnel:
 (Indicate if they are radiographers or assistants)

- * Ken Van Dine, Radiographer
- * Don Miller, "
- * Tom Hazlett, "
- Walter Baskin, "
- Dale Knickerbocker, "
- Patricia Kelley, "
- John Powell, "

Sean Kelley, Asst. Radiographer

Michael Heffernan, Asst. Radiographer

* Full Time radiographers

2. INSPECTION HISTORY

a. Last inspection conducted on 5/21/90 + 9/8/90

b. Violations or deviations were identified () Y () N

c. Response letter or 591 dated 9/24/90

d. Violations from Previous Inspection

<u>Requirement</u>	<u>Violation</u>	<u>Corrective Action Taken (Y/N)</u>	<u>Status</u>
10CFR 34.11 (d)(1)	Radiographer's audit in excess of 90 days	Y	closed
10CFR 34.11 (d)(2)	Records of audits not maintained	Y	closed
10CFR 34.11 (a)	Certain reference books not available	Y	closed
10CFR 34.43 (b)	Incomplete circumferential surveys	Y	closed
10CFR 34.43 (a)	Improperly operating survey instrument	Y	closed

e. Any previous violations not corrected () Y () N

Explain.

3. SCOPE OF PROGRAM

- a. License has multiple authorized locations of use Y () N
- b. If so, list location(s) inspected () N/A
- c. List those individuals contacted during inspection

* Peter Miller, Pres. & RSC.

*Indicates presence at exit meeting

- d. Briefly describe scope, including types of equipment, types of use involving byproduct material, frequency of use, staff size, etc.

The licensee has four exposure devices and a staff of three full time radiographers. Currently the licensee has a long term radiography contract utilizing about 2-3 radiographers at Paradise Bay. The licensee also conducts X-Ray radiography as well.

Part time workers are hired when the workload requires it

4. OPERATING AND EMERGENCY PROCEDURES

- a. Licensee maintains current procedures [34.32] Y () N
- b. Procedures contain all information specified in [34.32] Y () N
- c. Procedures are approved by NRC [34.11] Y () N

Remarks.

5. TRAINING, RETRAINING, AND INSTRUCTIONS TO WORKERS

- a. Instructions to workers per [10 CFR 19.12] Y () N
- b. Parts 19, 20, and 34; the license; and Operating and Emergency Procedures furnished to all radiographers and assistants [34.31(a)(2),(b)(1)] Y () N

Remarks.

- c. Training program required [L/C, 34.31] Y () N

(1) If so, briefly describe training program:

The RSO can provide the training in accordance with the training plan approved by NRC.

- (2) Training program implemented Y () N
- (3) Written tests completed by all radiographers and assistants [34.31(a)(4), (b)(3)] Y () N
- (4) Oral tests [34.31(b)(3)] Y () N
- (5) Inspector reviewed test results Y () N
- (6) All radiographers completed on-the-job training Y () N
- (7) Retraining program required Y () N
- (8) Retraining program implemented Y () N
- (9) Records maintained [34.31(c)] Y () N

Remarks.

Records of annual refresher training appear to be marginal in that the record of the test is not a good one. The RSO was requested to improve his record of annual refresher training.

6. INTERNAL AUDITS OR INSPECTIONS

- a. Audits or inspections of each radiographer and assistant are conducted per [34.11(d)] Y () N
- b. Equipment check prior to use each day [34.28(a)] Y () N
- c. Equipment inspection and maintenance performed at 3-month intervals per procedures [34.28(b)] Y () N

d. Records maintained.

Y () N

Remarks.

7. FACILITIES

a. Permanent radiographic installation [34.2]

N/A

(1) High Radiation Area entrances and exits controlled in accordance with [20.203(c)]

() Y () N

(2) Entrance controls are of type described in [34.29(a)]

() Y () N

If YES, complete (a)-(e) below:
[34.29(b)]

() N/A

(a) Visible and audible signals warn of radiation

() Y () N

(b) Visible signal actuates when source is exposed

() Y () N

(c) Audible signal actuates if entry is attempted when source is exposed

() Y () N

(d) System tested at 3-month intervals

() Y () N

(e) Records maintained

() Y () N

Remarks.

b. Temporary High Radiation Area entry controlled in accordance with [20.203(c)(4) and 34.41]

Y () N () N/A

c. Field location

(1) Field work authorized [L/C]

Y () N () N/A

(2) Field inspection conducted

() Y N () N/A

NOTE: If inspector performs field inspection, a separate radiography field audit report should be completed and attached to these field notes.

d. Storage Area

- (1) Storage facilities as described in license [L/C] Y () N
- (2) Sources locked in devices [34.22] Y () N
- (3) Devices secured to prevent tampering or unauthorized removal [34.23] Y () N

Remarks.

The current field site where licensed radiography is being conducted is Paradise Bay, AK.

8. MATERIALS AND EQUIPMENT

- a. Describe any special equipment used by licensee: (shields, collimators, etc.)

- b. Radiographic exposure devices and storage containers meet radiation level limits per [34.21] (new rule eff. 01/10/90) Y () N
- c. During radiographic operations, sources are locked in shielded position each time source is returned to that position [34.22(a)] Y () N
- d. All sealed sources not fastened to or contained in a radiographic exposure device are tagged per [34.25(e)] () Y () N *NA*

Remarks.

e. Leak tests

- (1) Leak test method approved [34.25(c)] Y () N
- (2) Model of leak test kit _____
- (3) Leak tests performed at intervals not to exceed six months [34.25(b)] Y () N
- (4) Records maintained [34.25(c)] Y () N

f. Inventory

- (1) Quarterly physical inventories conducted [34.26] Y () N
- (2) Inventories contain all required information [34.26] Y () N
- (3) Materials possessed as authorized by license [L/C] Y () N
- (4) Procurement and use in accordance with license [L/C] Y () N
- (5) Most recent BPM inventory conducted on April 1, 1991

Source Changer Model #	Activity	Isotope	Source S/N	Camera Model and S/N
	95C	Ir-192	EM 45	Genie Century 100 2485
	20 C:	"	1403	" " " 2628
	75 Ci	"	EM 33	" " " 2469
Remarks.	45 C:	"	FM 87	" " " 1816

g. Utilization logs

- (1) Utilization logs maintained [34.27] Y () N
- (2) Logs contain all required information [34.27] Y () N

Remarks.

9. INSTRUMENTATION

a. Describe the type and number of survey instruments possessed by the licensee:

4 Victoreans
4 Industrial Nuclear Corp

- b. Instruments are capable of measuring 2 mR/hr through 1 R/hr [34.24] Y () N
- c. Operable and calibrated survey instruments available and used on each job [34.43(a)] Y () N
- d. Calibration performed at intervals not to exceed three months [34.24] Y () N
- e. Records maintained [34.24] Y () N

Remarks.

10. RADIATION SURVEYS

- a. Area or facility surveys conducted to show compliance with 20.105 [20.201(b)] Y () N
- b. Records maintained [20.401(b)] Y () N
- c. Survey after each exposure, including guide tube and entire circumference of device [34.43(b)] Y () N
- d. Survey of device when placed in storage, including entire circumference of device [34.43(c)] Y () N
- e. Records maintained of final survey made when devices are stored for day [34.43(d)] Y () N

Remarks.

11. PERSONNEL RADIATION PROTECTION - EXTERNAL

- a. Film or TLD supplier R.L. Vandenberg Frequency Monthly
- b. Supplier is NVLAP - approved Y () N
- c. Reports reviewed by RSO Frequency Monthly
- d. License exposure limit: 1.25 rem/qtr () 3 rem/qtr
- e. NRC inspector reviewed personnel monitoring records for period 1990 to April, 1991
- f. NRC forms or equivalent
- (1) NRC-4: () Y N Complete: () Y () N N/A

NOTE: NRC-4 must be completed PRIOR to individual receiving more than 1.25 rem per calendar quarter.

- (2) NRC-5: Y () N Complete: Y () N () N/A
[20.401(a)]
- g. List maximum exposures (millirem):
1990 - Max. whole body exp. - 1000 mrem
Jan. - Mar. 1991 - " " " " - 400 mrem
- h. Each individual is assigned a pocket dosimeter, an alarm ratemeter (eff. 1/10/91), and a film badge/TLD [34.33(a)] Y () N

Remarks.

The license has six alarm doserate meters.

- i. Pocket dosimeters
- (1) Type Victoreen
- (2) Range 0-200
- * (3) Recharged at start of each shift [34.33(a)] Y () N *
- (4) Daily readings recorded [34.33(b)] Y () N
- (5) Dosimeters checked for response ($\pm 30\%$) at intervals not to exceed one year [34.33(c)] Y () N

j. Alarm ratemeters (eff. 01/10/91)

- (1) Type Dosimeter Corporation of America
- (2) Range > 500 mr/hr
- (3) Alarm checked at start of each shift
[34.33(f)(1)] Y () N
- (4) Alarm preset at 500 mr/hr
[34.33(f)(2)] Y () N
- (5) Alarm ratemeters calibrated ($\pm 20\%$)
at intervals not to exceed one year
[34.33(f)(4)] Y () N

Remarks.

* Pocket dosimeters had not been recharged at the beginning of several shifts by D. Miller.

12. NOTIFICATION AND REPORTS

- a. Licensee in compliance with [19.13]
(reports to individuals) () Y () N () N/A
- b. Licensee in compliance with [20.402]
(theft or loss) () Y () N () None
- c. Licensee in compliance with [20.403]
AND [34.30 - eff. 01/10/91]
(incidents) () Y () N () None
- d. Licensee in compliance with [20.405].
AND [34.30 - eff. 01/10/91]
(overexposures) () Y () N () None
- e. Annual reports furnished to NRC per
[20.407] () Y () N
- f. Termination reports furnished to NRC per
[20.408] () Y () N N.A.

Remarks.

13. POSTING AND LABELING

- a. Radiation Areas properly posted [20.203(b)] Y () N
- b. High Radiation Areas properly posted [20.203(c)(1)] Y () N
- c. Use or storage areas posted "Caution - Radioactive Materials" [20.203(e)(1)] Y () N
- d. Containers or devices properly labeled [20.203(f)] Y () N
- e. NRC-3 "Notice to Workers" is posted [19.11] Y () N
- f. Parts 19 and 20 and license are posted or a notice indicating where documents can be examined is posted [19.11] Y () N

Remarks.

14. RECEIPT AND TRANSFER OF RADIOACTIVE MATERIAL

- a. Procedures established and followed for picking up, receiving, and opening packages [20.205(d)] Y () N
- b. Incoming packages wiped per [20.205(b)] () Y () N N/A.
- c. Incoming packages surveyed per [20.205(c)] Y () N
- d. Shipment of sources since last inspection () N/A
 - (1) Used container authorized by license [L/C] Y () N
 - (2) Shipping papers and package labeling properly completed [71.5] Y () N
 - (3) Transfer(s) performed per [30.41] Y () N
- e. Records of surveys and receipt/transfer maintained per [20.401(b) and 30.51] Y () N

Remarks.

15. TRANSPORTATION (10 CFR 71.5(a) and 49 CFR 171-189)

- a. Licensee makes shipments of RAM Y () N
- b. Shipments are:
- () delivered to common carriers
 - transported in licensee's own private vehicle
 - both
 - () no shipments since last inspection

Remarks.

Complete only if shipments made since last inspection:

c. Shipments

- (1) Authorized packages used [173.415,416] Y () N () N/A
- (2) Package type used Type B
- (3) For DOT-7A packages, performance test record on file [173.415(a)] () Y () N () N/A
- (4) For DOT-55 packages, use is approved by NRC [173.416(a)] () Y () N () N/A
- (5) Other Type B packages used are approved [173.416(a)] Y () N () N/A
- (6) Licensee has COCs on file with NRC [71.12(c)(1)] () Y () N () N/A ✕
- (7) Licensee has a QA program approved by NRC [71.12(b)] Y () N () N/A
- (8) For special form sources, performance test record on file [173.476(a)] Y () N () N/A
- (9) Packages properly labeled [172.403, 173.441] Y () N () N/A
- (10) Packages properly marked [173.200] Y () N () N/A
- (11) Proper shipping papers prepared and used [172.200-204] Y () N () N/A
- (12) Shipping papers readily accessible during transport [177.817(e)] Y () N () N/A
- (13) Vehicles placarded as necessary [172.500, 504] Y () N () N/A
- (14) Cargo blocked and braced [177.842(d)] Y () N () N/A

(15) Any incidents reported to DOT
[171.15-16]

() Y () N () None

Remarks.

* The licensee's COC had recently expired. The RSO has submitted a renewal application for the COC and has also initiated efforts to obtain the protocols of the reference documents relating to the maintenance and use of the type B containers at the time of the inspection.

16. RECORDKEEPING FOR DECOMMISSIONING

() N/A

- a. Records of information important to the safe and effective decommissioning of the facility maintained in an independent and identifiable location until license termination [30.35(g)]
- b. Records include all information outlined in [30.35(g)]

() Y () N

() Y () N

Remarks.

17. BULLETINS AND INFORMATION NOTICES

- a. Bulletins, Information Notices, etc., received by the licensee
- b. Licensee took appropriate action in response to Bulletins, INs, etc.

() Y () N

() Y () N

Remarks.

18. INDEPENDENT MEASUREMENTS

- a. Survey instrument used Xetox 305B
- b. NRC Serial No. 8324
- c. Last date of calibration 3/14/91
- d. Inspector's measurements were compared to licensee's () Y (✓) N
- e. Describe the type and results of measurements:

A radiation survey was conducted of the storage area (in Anchorage) for the exposure devices.

19. CONTINUATION OF REPORT ITEMS - USE BACK OF PAGE IF NECESSARY

20. LIST OF VIOLATIONS

1. Pocket dosimeters had not been recharged at the start of the shift on several occasions.

21. PERFORMANCE EVALUATION FACTORS

Licensee (name & location) Alaska Industrial X-Ray, Inc Inspector J. Frank Pang
4047 Kingston Drive
Anchorage, AK 99504 Inspection Date 5/13/91

- a. Lack of senior management involvement with the radiation safety program and/or Radiation Safety Officer (RSO) oversight () Y () N
- b. RSO too busy with other assignments () Y () N
- c. Insufficient staffing () Y () N
- d. Radiation Safety Committee fails to meet or functions inadequately () Y () N () N/A
- e. Inadequate consulting services or inadequate audits () Y () N () N/A

Remarks (consider above assessment and/or other pertinent PEFs):

This company is owned and operated by the RSO and is essentially a small operation.

Regional follow-up on above PEFs citations: