03034232

TO: License Fee and Accounts Receivable Branch

FROM: Region IV - WCFO

SUBJECT: **VOIDED APPLICATION**

Applicant: Impact Systems, Inc.

Control Number: 572399

License No.:

Docket No.: 030-34232

Date Voided: 9/25/96

Reason for Void:

An amendment is needed to License 48-24767-01, Mosinee Paper + Pulp, a RIII license. A new license for Impact Systems is not appropriate. This should be treated as "void - no review". Basis for void is in attached documents.

Beth A. Prange
Signature

9/25/96
Date

Attachment:
Official Record Copy of
Voided Action

FOR LFARB USE ONLY

Final Review of VOID completed:

X Refund Authorized and processed

\ No Refund Due

___ Fee Exempt or Fee Not Required

ML40 0/1

Comments: After review.

Log completed
Processed by:

BETWEEN:

License Fee Management Branch, ARM
and
Regional Licensing Sections

(FOR LFMS USE)
INFORMATION FROM LTS

Program Code:
Status Code: 3
Fee Category:
Exp. Date: 0
Fee Comments:
Decom Fin Assur Reqd:

96 SEP -6

LICENSE FEE TRANSMITTAL

A. REGION V

1. APPLICATION ATTACHED
   Applicant/Licensee: IMPACT SYSTEMS, INC.
   Received Date: 960828
   Docket No: 3034232
   Control No.: 572399
   License No.:
   Action Type: New Licensee

2. FEE ATTACHED
   Amount: $550.00
   Check No.: 075306

3. COMMENTS

Signed Jean Davis
Date 8-28-96

B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered ✓)

1. Fee Category and Amount: 3P $550

2. Correct Fee Paid. Application may be processed for:
   Amendment
   Renewal
   License ✓

3. OTHER

Signed Rita Messier
Date 9/3/96

1996 SEP -3 AM 11:17

$550 Refunded

Log Sep 1 ✓
Remitter
Check No. 075306
Amount $550
Fee Category 3P
Type of Fee Appl
Date Check Rec'd. 9/3/96
Date Completed
By: Jean

U.S. NUCLEAR REGULATORY COMMISSION
REGION V

TELEPHONE OR VERBAL CONVERSATION RECORD

DATE ~~00/00/00~~ 8/28/96

TIME 3:45 ~~00:00~~ am/(pm)

returned call [X] INCOMING CALL [ ] OUTGOING CALL [ ] VISIT

PERSON CALLING:	OFFICE/ADDRESS:	PHONE NUMBER:
Peter Typpo	Impact Systems, Inc.	(408) 453-3700
PERSON CALLED:	OFFICE/ADDRESS:	PHONE NUMBER:

CONVERSATION

SUBJECT - License Application, Control No. 572399

SUMMARY -

1.) Mr. Typpo stated that the system was being leased to Mosinee Pulp + Paper Division. Although the mill has a specific license (48-24767-01), they didn't want to amend it to add this unit! I explained that this raised the question - "Who is the licensee?" If there is a problem with the x-ray florescence scanner, who is responsible? Mr. Typpo said that they do have # 2 company representatives near the site that go there almost daily. I stated that this was an unusual situation. I suggested he call John Madera in RIII rep the Mosinee Pulp Paper ~~[illegible]~~ license. I believed that the daily operation of the unit should be covered under the RIII license. Mr. Typpo said that he had no objection.

REFERRED TO:	[ ] ADVISE ME ON ACTION TAKEN
ACTION REQUESTED:	INITIALS:
	DATE:
ACTION TAKEN:	INITIALS:
	DATE:

NRC FORM 218 REV-0 8/93 [WP/bdc-RIV]

U.S. NUCLEAR REGULATORY COMMISSION
REGION V

TELEPHONE OR VERBAL CONVERSATION RECORD

DATE 00/00/00

TIME 00:00 am/pm

[ ] INCOMING CALL [ ] OUTGOING CALL [ ] VISIT

PERSON CALLING:	OFFICE/ADDRESS:	PHONE NUMBER:
PERSON CALLED:	OFFICE/ADDRESS:	PHONE NUMBER:

CONVERSATION

SUBJECT -

SUMMARY -

2.) We discussed 10 CFR 31.9 and reciprocity, neither of which ~~were~~ was familiar to Mr. Typpo. I faxed a 241 Form and a copy of 31.9 to him. I referred him to Nancy Hodges or Christi Hernandez for reciprocity information, and I gave him their fax number.

3.) I referred him to Sandy Kimberley for fee information.

4.) We discussed broadening the application to the service license to cover other customer job sites. I mailed him a copy of the June '85 gauge servicing guide.

5.) I asked him to let us know whether he wanted to pursue this application. If not, he should get a refund.

– B. Prange

REFERRED TO:	[ ] ADVISE ME OF ACTION TAKEN
ACTION REQUESTED:	INITIALS:
	DATE:
ACTION TAKEN:	INITIALS:
	DATE:

NRC FORM 218 (REV-0 8/93) [WP/Ldc-RIV]

1075 E. Brokaw Road
San Jose, CA 95131
Phone: (408) 453-3700
Fax: (408) 453-4115

TELEFAX

Date: 9/24/96 cc:

To: Beth A. Prange
Sr. Health Physicist (Licensing)
Materials Branch

Fax No.: (510)975-0381

From: Peter Typpo

No. of Pages: One

Subject: License Application by Impact Systems, Inc. for Mosinee Paper

Dear Ms. Prange:

We hereby withdraw our license application for Mosinee Paper located in 100 Main Street, Mosinee, Wisconsin. Mosinee Paper has an existing license that will be amended to include the new equipment.

Thank you for clarifying the licensing requirements to us. We forwarded the information to our customer, and our problem was immediately resolved.

Best regards,

Peter Typpo

572399

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV

Walnut Creek Field Office
1450 Maria Lane
Walnut Creek, California 94596-5368

SEP 19 1996

Impact Systems, Inc.
ATTN: Jack Lynch
Vice President-Operations
1075 E. Brokaw Road
San Jose, California 95131

SUBJECT: ACKNOWLEDGMENT OF REQUEST FOR LICENSING ACTION

REFERENCE: Application received August 28, 1996

We have completed the administrative review and initial processing of your application.

Please note that the technical review may identify additional omissions in the submitted information or technical issues that require additional information.

New actions are normally processed within 90 days, unless the technical review identifies:

- Major technical deficiencies
- Policy issues are identified that require input and coordination with other NRC Regional offices, Agreement State offices, or NRC's Office of Nuclear Materials and Safeguards

A copy of your correspondence has been forwarded to our License Fee and Accounts Receivable Branch, Office of the Controller, who will contact you separately if the appropriate license fee has not been submitted for your request, or for billing if your request is subject to full cost recovery.

Any correspondence about this application should reference the Control number listed below.

Sincerely,

Beth A. Prange

Beth A. Prange
Sr. Health Physicist (Licensing)
Materials Branch

Enclosures:
As stated

Control No. 572399

bcc:
Docket File

To receive a copy of this document, indicate in the box "C" - Copy without attachment/enclosure "E" - Copy with attachment/enclosure "N" - No Copy

OFFICE	RIV:AO:NMLB	N		N				
NAME	B. Prange BAP							
DATE	9/19/96		/ /96					

030-34232 29102 New

NRC FORM 313
(10-94)
10 CFR 30, 32, 33
34, 35, 36, 39 and 40

U. S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR MATERIAL LICENSE

APPROVED BY OMB: NO. 3150-0120
EXPIRES 6-30-96

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 8 HOURS. SUBMITTAL OF THE APPLICATION IS NECESSARY TO DETERMINE THAT THE APPLICANT IS QUALIFIED AND THAT ADEQUATE PROCEDURES EXIST TO PROTECT THE PUBLIC HEALTH AND SAFETY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0120), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY
OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555-0001

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:

IF YOU ARE LOCATED IN:

CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA, RHODE ISLAND, OR VERMONT, SEND APPLICATIONS TO:

LICENSING ASSISTANT SECTION
NUCLEAR MATERIALS SAFETY BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA, PUERTO RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION II
101 MARIETTA STREET, NW, SUITE 2900
ATLANTA, GA 30323-0199

IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

MATERIALS LICENSING SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION III
801 WARRENVILLE RD.
LISLE, IL 60532-4351

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TX 76011-8064

RECEIVED
AUG 27 1996
REGION IV

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S.NUCLEAR REGULATORY COMMISSION JURISDICTIONS.

1. THIS IS AN APPLICATION FOR (Check appropriate item)

- [X] A. NEW LICENSE
- [ ] B. AMENDMENT TO LICENSE NUMBER _____
- [ ] C. RENEWAL OF LICENSE NUMBER _____

2. NAME AND MAILING ADDRESS OF APPLICANT (Include Zip code)

Impact Systems, Inc.
1075 E. Brokaw Road
San Jose, CA 95131

3. ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

Mosinee Pulp & Paper Division
100 Main Street
Mosinee, WI 54456-1497

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION
Charlton W. Marshall
Peter Typpo

TELEPHONE NUMBER
(408) 453-3700

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL.
a. Element and mass number, b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time. See Attachment

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED. See Attachment

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE. See Attachment

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS. See Attachment

9. FACILITIES AND EQUIPMENT See Attachment

10. RADIATION SAFETY PROGRAM See Attachment

11. WASTE MANAGEMENT See Attachment

12. LICENSEE FEES (See 10 CFR 170 and Section 170.31)
FEE CATEGORY
AMOUNT ENCLOSED $

13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39 AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

CERTIFYING OFFICER – TYPED/PRINTED NAME AND TITLE
Jack Lynch, Vice President-Operations

SIGNATURE Jack Lynch

DATE 12-4-96

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			$		
APPROVED BY				DATE	

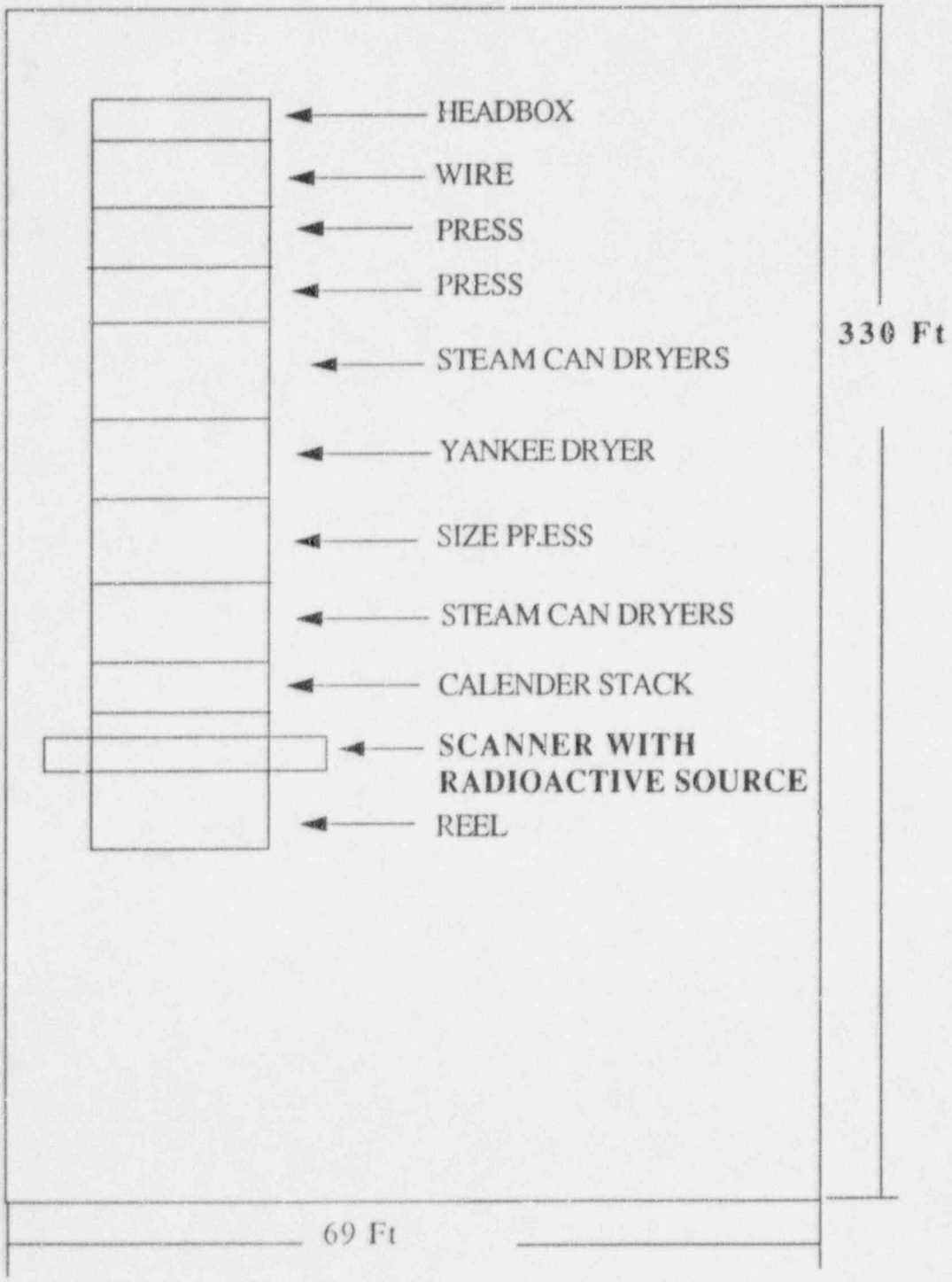
NRC FORM 313 (10-94)

PRINTED ON RECYCLED PAPER

572399

APPLICATION FOR MATERIAL LICENSE

MOSINEE PAPER MACHINE #4 LOCATED AT 100 MAIN STREET
MOSINEE WISC. 54456-1497



APPLICATION FOR MATERIAL LICENSE

ITEM 5:

Sealed source -- Promethium-147, manufactured by Amersham Corp., model no. PHC.C1, BSI/ISO classification C33222, and an activity of 500 millicuries (18.5 GBq).

ITEM 6:

Maximum amount to be possessed at any one time not to exceed (1) one source with 500 an activity of millicuries (18.5 GBq).

ITEM 7:

Charlton W. Marshall	Impact RSO
Peter Typpo	Impact RSO
David Gilley	Impact site Representative (Impact trained to do source wipe testing and window replacement.)

Charlton W. Marshall has been through an 80 hour course at Georgia Tech. and 40 hours Impact training. Does source loading, wipe testing, profile testing, window replacement, and is certified to do radiation safety training for Impact and customer personnel.

Peter Typpo holds a masters degree in nuclear physics and has completed the 40 hour Impact training. Does source loading, wipe testing, profile testing, and window replacement.

Dave Gilley has completed the 40 hour Impact radiation safety course and has been certified to do wipe testing and window replacement.

ITEM 8:

Impact personnel working on the Impact model 4400 O-frame scanner have received the Impact safety training and have been certified to do wipe testing and window replacement.

All mill operators will receive Impact safety training on radiation safety and what to do in case of fire or other emergencies and will review the video on Radiation Protection Standards.

ITEM 9:

See attached drawings.

APPLICATION FOR MATERIAL LICENSE (Continued)

ITEM 10:

The Radiation Safety Program will include:

1) Impact's Radiation Safety Program
2) Posting of Notice to Employees (standards for protection ag st Radiation).
3) Posting of Radioactive Material labels on sensors and sensor covers.
4) Posting of local emergency phone numbers along with phone numbers of responsible persons.
5) What to do in case of fire or other emergencies.

ITEM 11:

Impact Systems RSOs will be responsible for:

1) Installation of the Radioactive Source.
2) Wipe Testing (either by an RSO or someone in Impact trained to do such test.)
3) Relocation of said Radioactive Source should it be required. (NRC Region 3 will be notified thirty (30) days in advance of any such relocation.)
4) Removal and disposal of any radioactive material provided by Impact Systems Inc. at this location.

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICE

SAFETY EVALUATION OF DEVICE

NO: CA386D101S DATE: December 4, 1989 PAGE: 1 of 10

DEVICE TYPE: Beta Gauge and X-Ray Fluorescence

MODEL: 4400 (O-frame Scanner)
4401 (C- frame Scanner)

MANUFACTURER: Impact Systems Oy
Kivelantie 5
70420 Kuopio
Finland

DISTRIBUTOR: Impact Systems, Inc.
1075 East Brokaw Road
San Jose, CA 95131

SEALED SOURCE MODEL DESIGNATION:

ISOTOPE	MANUFACTURER	MODEL NUMBER
Krypton-85	Amersham Corporation	KAC-D3
Promethium-147	Amersham Corporation	PHC.C1
Iron-55 (disk)	Amersham Corporation	IEC.D2
Iron-55 (ring)	Amersham Corporation	IEC.A2

ISOTOPE	MAXIMUM ACTIVITY
Krypton-85	300 millicuries
Promethium-147	500 millicuries
Iron-55	100 millicuries

LEAK TEST FREQUENCY: Krypton-85: Not required
All others: Every six months

PRINCIPLE USE: (E) Beta Gauge source
(U) X-Ray Fluorescence

CUSTOM DEVICE: ____YES X NO

DEVICE TYPE: Beta Gauge and X-Ray Fluorescence

DESCRIPTION:

Source Holder

Each sealed source used in the device is secured inside a source holder that includes the shutter mechanism. A typical source holder (Basis Weight source holder with a krypton-85 source) is shown in Figure 1.

The shutter mechanism is operated with a pneumatic cylinder with spring return. The air pressure to the shutter is controlled by a solenoid valve. The return spring will close the shutter if either the air pressure or the electrical power to the solenoid is lost. The shutter is a bronze plate with a lead insert that will be placed in front of the source when the shutter is in a closed position. When the shutter is in an open position, an opening with a conical aluminum insert will be in front of the source.

The shutter position is monitored with a microswitch that operates the radiation warning lights on the source housing and on the scanner frame. For the iron-55 ring source, the beam is turned off by moving the source holder away from the source housing aperture using a pneumatic cylinder with spring return. In this case, the position of the source holder is monitored with a microswitch that controls the radiation lights in the same way as the switches on the shutters.

Source Housing

The source holder is located inside a source housing. The source housings for krypton-85, promethium-147 and iron-55 disk source are virtually identical with some dimensional differences to allow for different source dimensions. Figure 2 shows a source housing.

Each source housing has a dedicated pair of radiation light (red and green) indicating the shutter position. Each source housing also has an identification label indicating the manufacturer and the model number as well as a label with the radiation symbol and the text "CAUTION-RADIOACTIVE MATERIAL" followed by the isotope and the activity of the source. Both labels are made of stainless steel.

Source Head

The device contains a source head and a detector head mounted above and below the material to be measured. Up to two source housings with radioactive sources can be included in a source head. The maximum configuration will have either a single krypton-85 source housing or single promethium-147 source housing together with either the ash gauge source housing containing the iron-55 disk source or the fluorescence gauge source housing containing the iron-55 ring source. The radioactive material labels on the source housings are visible on one side of the source head. Stainless steel "CAUTION-RADIOACTIVE MATERIAL" labels with the symbol are placed on the other three sides. Figure 3 shows the construction of the source head containing three source housings: krypton-85, iron-55 and a non radioactive infrared source.

DEVICE TYPE: Beta Gauge and X-Ray Fluorescence

SCANNER:

The source head as well as the detector head are mounted on a scanner, the source head being on top. The scanner is a metal construction that supports the source and detector heads and contains the mechanism for moving them across the material to be measured. The material to be measured passes through a 10 mm wide gap between the source and the detector heads. The size of this gap makes the radiation beam area inaccessible while the heads are together. A magnetic interlock switch will force the shutters closed if the heads are together. A magnetic interlock switch will force the shutters closed if the head are separated. A pair of radiation warning lights are located on the control panel at the end of the scanner and another set is located over the scanner to guarantee visibility from all accessible directions. These lights will be red if any shutter is even partially open and green when all shutters are fully closed.

The scanner can be either an O-frame scanner where the head move on two parallel tracks, one above and one below the material that is being measured, or it can be a C-frame scanner where the heads are mounted on a C-shaped structure that traverses on a single track above the material that is being measured. Figures 4. and 5. show the O-frame and the C-frame scanners.

For both scanners the same source and detector housings are used in the same measurement geometry. In both cases the same scanner controls, the same radiation lights indicating the shutter position, and the same magnetic interlock systems are used.

LABELING:

These devices are labeled in accordance with Section 30278 of the California Radiation Control Regulations (equivalent to 10 CFR 20.203). The source head contains several labels (one on each side) with a radiation symbol and the text stating "CAUTION-RADIOACTIVE MATERIAL".

DIAGRAM: See Figures 1, 2, 3, 4, and 5

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICE

SAFETY EVALUATION OF DEV[illegible]

NO: CA386D101S DATE: December 4, 1989 PAGE: 4 of 10

DEVICE TYPE: Beta Gauge and X-Ray Fluorescence

DIAGRAM:

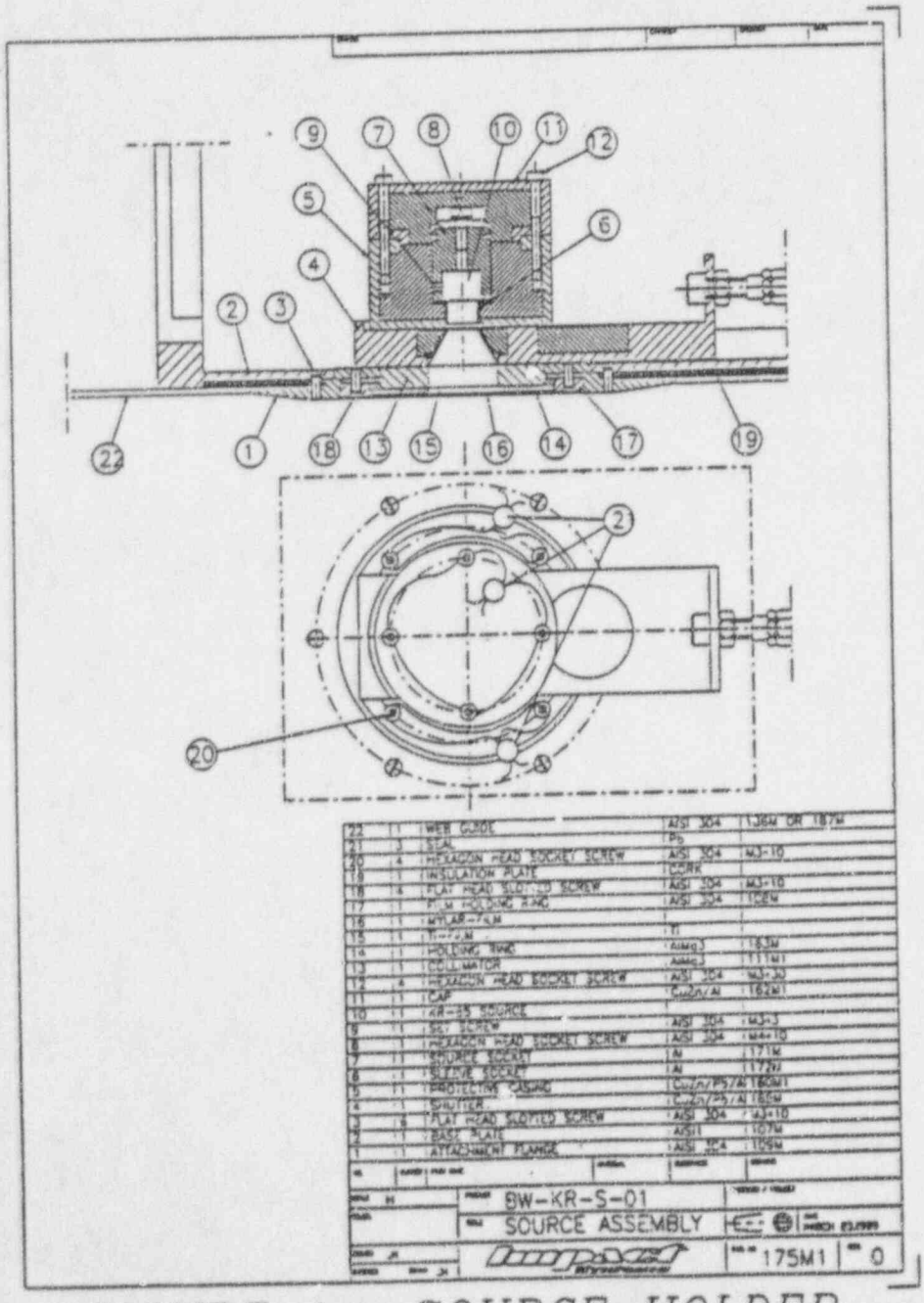


FIGURE 1. SOURCE HOLDER

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICE

SAFETY EVALUATION OF DEVICE

NO: CA386D101S DATE: December 4, 1989 PAGE: 5 of 10

DEVICE TYPE: Beta Gauge and X-Ray Fluorescence

DIAGRAM:

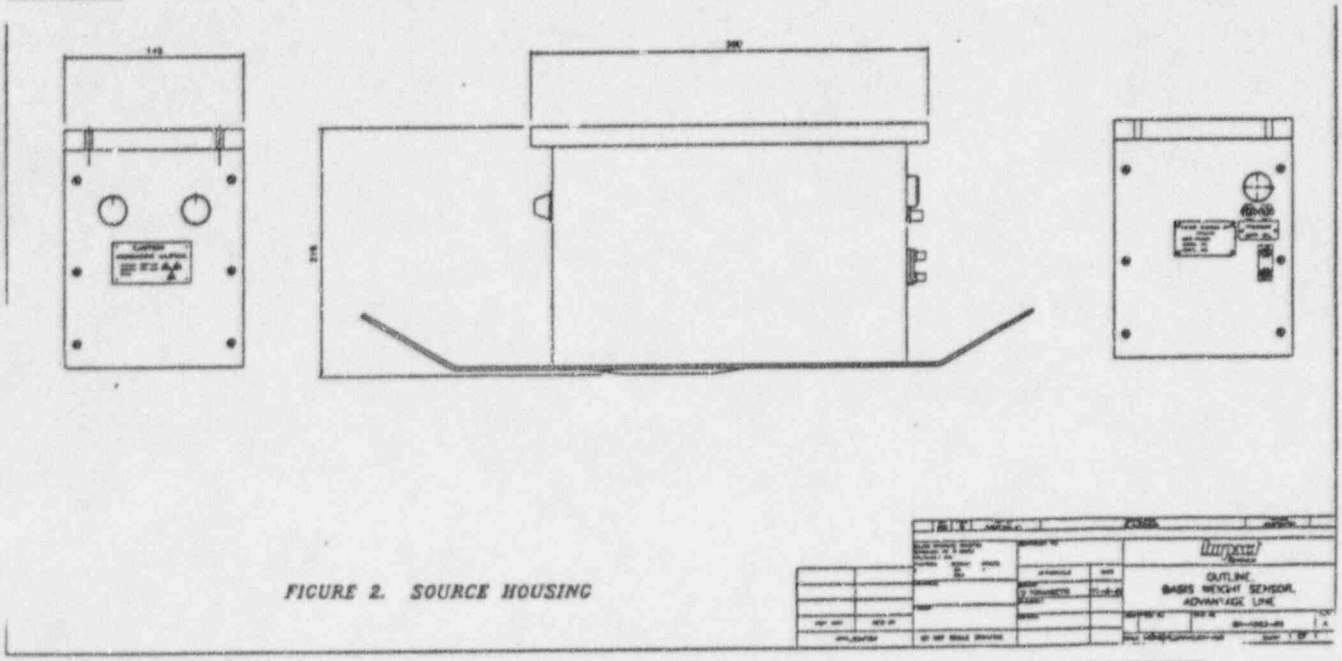


FIGURE 2. SOURCE HOUSING

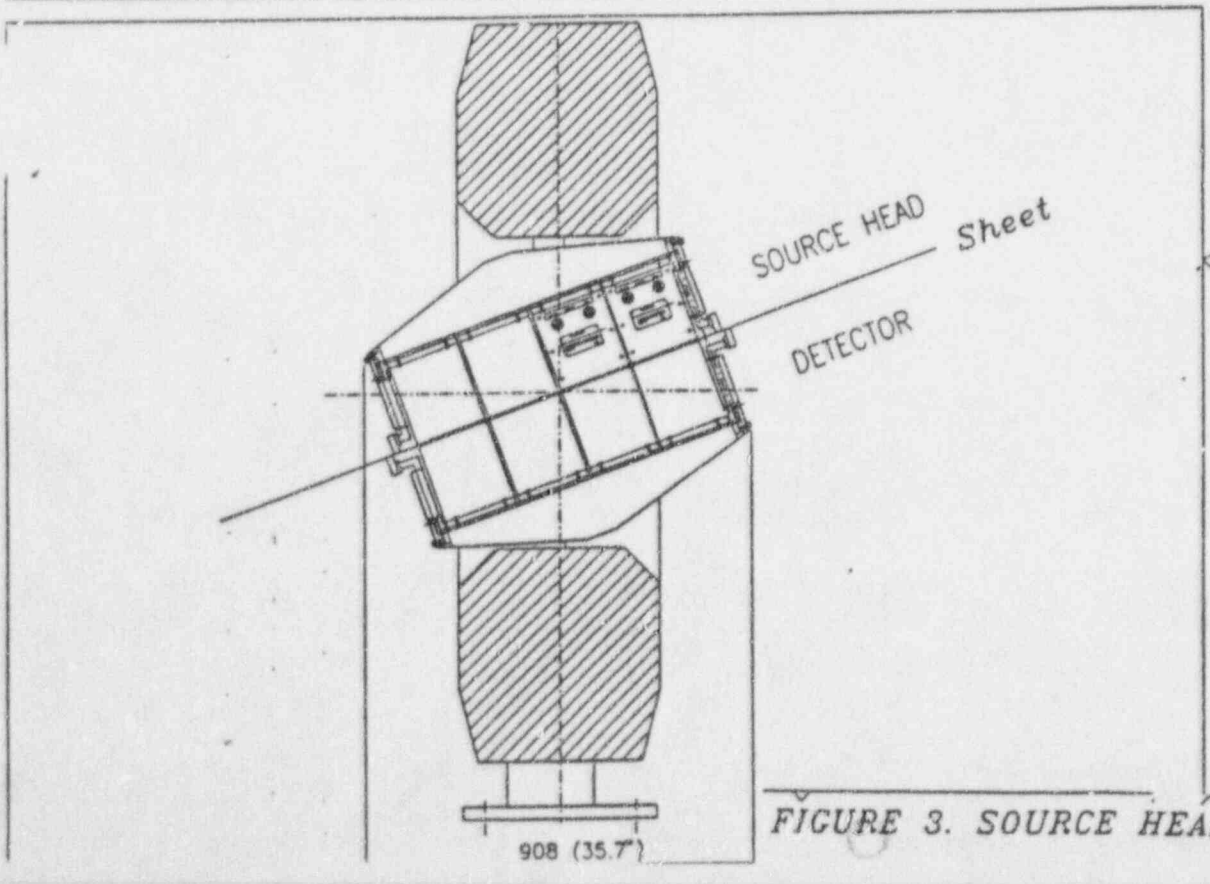


FIGURE 3. SOURCE HEAD

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICE

SAFETY EVALUATION OF DEVICE

NO: CA386D101S DATE: December 4, 1989 PAGE: 6 of 10

DEVICE TYPE: Beta Gauge and X-Ray Fluorescence

DIAGRAM:

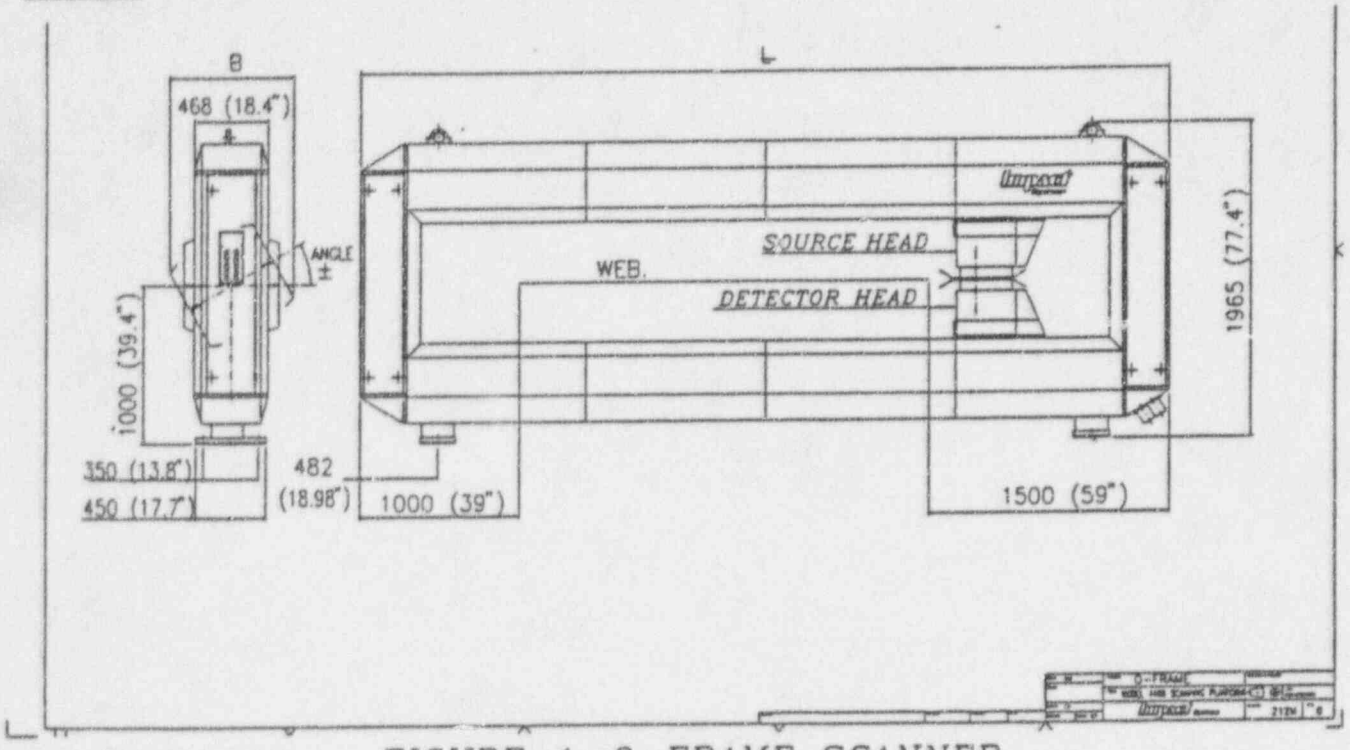


FIGURE 4. O-FRAME SCANNER

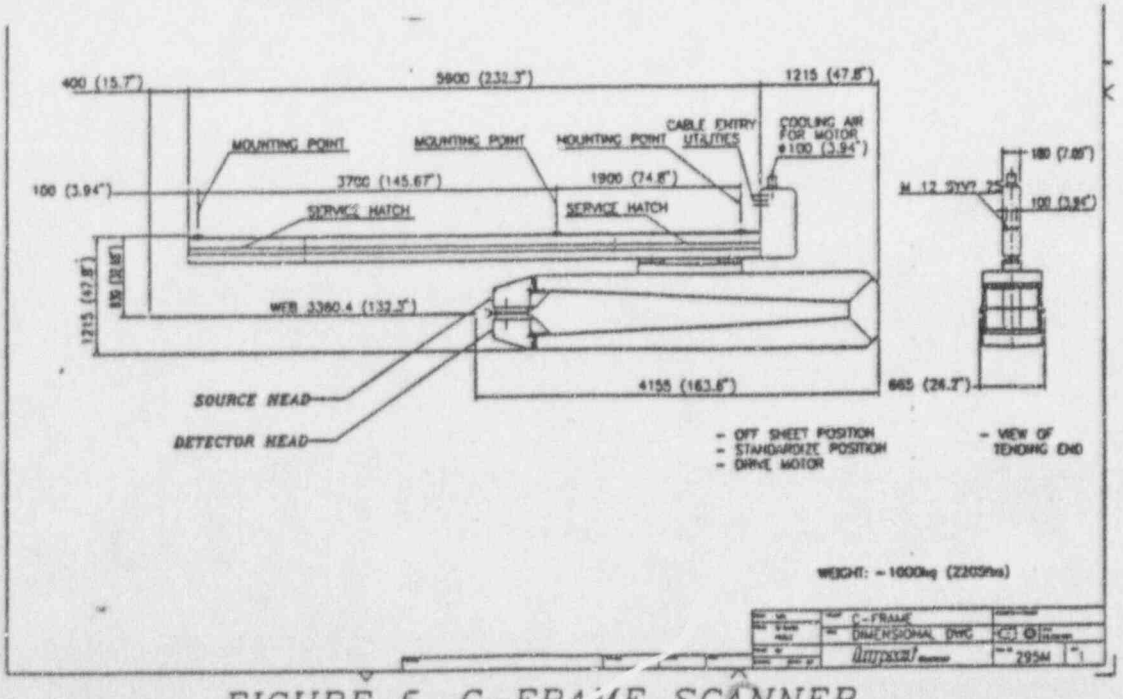


FIGURE 5. C-FRAME SCANNER

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICE

SAFETY EVALUATION OF DEVICE

NO: CA386D101S DATE: December 4, 1989

DEVICE TYPE: Beta Gauge and X-Ray Fluorescence

CONDITIONS OF NORMAL USE:

The devices will be used in areas having environments fit for human occupancy.

These gauging systems are used to measure properties of materials such as basis weight and ash content of paper in an industrial environment such as paper mills.

PROTOTYPE TESTING:

Prototype testing was done by Impact Systems Oy in Finland. These tests demonstrated the device's ability to withstand it's operating environment.

The shutter mechanisms for each gauge type were cycled 100,000 times without failure. This number of cycles is equivalent to five years of normal operation.

Prototype testing was conducted in accordance with the American National Standard N538 and the classification assigned is ANSI-42 565-885-R1.

EXTERNAL RADIATION LEVELS:

Tests were made in accordance with the American National Standard N538. The following maximum radiation levels for the device were observed with Krypton-85 being the principal radionuclide as the source of radiation. The device also included an Iron-55 source head.

	Measured Radiation Levels (mR/hr)	
Distance from the Source (cm)	Shutter Open	Shutter Closed
5	75.0	0.6
30	4.0	<0.25
100	<0.25	<0.25

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICE

SAFETY EVALUATION OF DEVICE

NO: CA386D101S DATE: December 4, 1989

DEVICE TYPE: Beta Gauge and X-Ray Fluorescence

QUALITY ASSURANCE AND CONTROL:

The quality assurance and control of the device starts at Impact Systems Oy where the program includes the incoming inspection of the parts that are used to build the product.

The mechanical dimensions and the surface quality of the source holder parts are inspected to assure that the source will fit properly into the source holder. The shutter parts including the shutter cylinder and spring combination are checked in a similar manner to guarantee proper shutter function. Five percent of the shutter cylinders and springs are tested by running them through 100,000 cycles of simulated shutter operation. The springs and cylinders used in this test are discarded after the test.

After the source holder and the shutter are fully assembled into the source housing, the shutter mechanism is tested by moving it manually. Then the radioactive source is installed into the source holder and the source housing is mounted on the scanner.

Completed systems will be tested with radioactive sources for external radiation levels, functioning of the radiation warning lights, shutters, interlocks, scanner operation, measurement accuracy and the functioning of the systems software before leaving the factory in Finland. The sources will be removed before shipment, and will remain in Finland. The source housings without the radioactive sources are shipped to Impact Systems, Inc. in San Jose, California, for the installation of the sources.

The source Installation includes testing the mechanical functionality of the shutter, a solid source leak test when applicable and the measurement of the external radiation levels with a closed shutter. The source housings are then delivered to a customer site with temporary shipping shields mounted over the source window areas. This work is performed by authorized persons under the guidance of the Radiation Safety Officer.

After arrival at a customer site the source housings will be installed to the scanner. Then a leak test is performed for the solid sources, the radiation profiles are measured, and the functioning of the shutters, interlocks and the indicator lights is tested. The results are recorded and any deficiencies are reported.

In each phase of the quality assurance program the persons performing the quality function have the authority and responsibilities as stated in Appendix B of the American National Standard N538.

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICE

SAFETY EVALUATION OF DEVICE

NO: CA386D101S DATE: December 4, 1989

DEVICE TYPE: Beta Gauge and X-Ray Fluorescence

LIMITATIONS AND/OR OTHER CONSIDERATIONS OF USE:

1. These devices shall be distributed only to specific licensees of the NRC or the Agreement States.

2. Installation, initial testing and survey, training, maintenance and repair shall be performed by Impact Systems, Inc. or by persons specifically trained by the manufacturer of the distributor.

3. Dismantling and relocation shall be performed by Impact Systems, Inc. or by persons specifically trained by the manufacturer or the distributor.

4. Disposal or transfer shall be only to Impact Systems, Inc. or to persons specifically licensed by the NRC or Agreement States to dispose of or to receive the device.

5. The device shall be tested for leakage and proper functioning of the on/off mechanism by Impact Systems, Inc. at time of installation. Leak tests shall be conducted at intervals not to exceed six months by Impact Systems, Inc. or persons specifically licensed to do so by the NRC or Agreement States. The leak test shall be capable of detecting 0.005 microcuries of removable contamination.

SAFETY ANALYSIS SUMMARY

Based on our review of the information and test data cited below, we conclude that Models 4400 (O-frame Scanner) and 4401 (C-frame Scanner) gauging and fluorescence devices are acceptable for licensing purposes. Furthermore, we conclude that this device would be expected to maintain it's containment integrity for normal conditions of use and accidental conditions which might occur during uses specified in this certificate. The following information is provided to substantiate these conclusions:

The design of the device, the collimation contained within the source housing, the external shielding employed on the device and the manner in which it is mounted over the product to be measured makes it virtually impossible for persons operating or working near the device to receive radiation dosages in excess of that allowed by the regulations.

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICE

SAFETY EVALUATION OF DEVICE

NO: CA386D101S DATE: December 4, 1989 PAGE: 10 of 10

DEVICE TYPE: Beta Gauge and X-Ray Fluorescence

REFERENCES:

This Certificate of Registration is based on information and test data contained in the following documents which are hereby incorporated by reference and made a part of this registry document.

A. Impact Systems, Inc. application and letter with attachments dated April 28, 1989, and May 30, 1989.

B. Impact Systems, Inc. letters with attachments dated August 14, 1989, August 18, 1989, May 15, 1989, May 30, 1989 (received September 19, 1989). and June 30, 1989, all signed by Peter Typpo.

C. Impact Systems, Inc. Radiation Safety Manual with accompanying letter dated July 14, 1989, signed by Peter Typpo.

D. Impact systems, Inc. User's Manual Submitted dated December 7, 1989, signed by Peter Typpo.

E. NBS Handbook No. 129, "ANSI N.538", Classification of Industrial Ionizing Radiation Gauging devices, 1977.

DATE: December 29, 1989 REVIEWED BY: Barbara A Stahl

DATE: January 2, 1990 CONCURRENCE: Edwin Bjorklund

ISSUING AGENCY: California Department of Health Services.

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY

PETE WILSON, Governor

DEPARTMENT OF HEALTH SERVICES
714/744 P STREET
P. O. BOX 942732
SACRAMENTO, CA 94234-7320
(916) 445-0931

April 11, 1996

NOTICE OF RECEIPT OF RENEWAL APPLICATION FOR REVIEW

IMPACT SYSTEMS, INC.
1075 E. BROKAW ROAD
SAN JOSE, CA 95131

ATTN: CHARLTON W. MARSHALL
RADIATION SAFETY OFFICER

DOCKET NUMBER: 041196-5250

LICENSE NUMBER: 5250-43

APPLICATION DATE: APRIL 9, 1996

The above captioned renewal application has been docketed for review. Your application is deemed timely and accordingly, the license will not expire until final action has been taken by the Department. This application will be taken up in the order received.

Correspondence or other communication concerning the above referenced application must be submitted **in duplicate** and should make clear reference to your assigned docket number pertaining to this specific request. Future requests, not related to the above request, will be assigned a new docket number.

Thank you.

RADIOACTIVE MATERIALS LICENSING
RADIOLOGIC HEALTH BRANCH

RADIOACTIVE MATERIAL LICENSE

Pursuant to the California Code of Regulations, Division 1, Title 17, Chapter 5, Subchapter 4, Group 2, Licensing of Radioactive Material, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, use, possess, transfer, or dispose of radioactive material listed below; and to use such radioactive material for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations, and orders of the Department of Health Services now or hereafter in effect and to any standard or specific condition specified in this license.

1. *Licensee*	Impact Systems Incorporated	3. *License No.* 5250-43	*Amendment No.* 6
2. *Address*	1075 East Brokaw Road San Jose, CA 95131	4. *Expiration date* May 10, 1996	(3)
Attention:	Peter Typpo Vice President, R&D	5. *Inspection agency*	Radiologic Health Branch Berkeley

In response to the letter, with attachment, dated November 21, 1994, signed by Peter Typpo, License Number 5250-43 is hereby amended as follows:

6. Nuclide	7. Form	8. Possession Limit
A. Iron 55	A. Sealed sources (Amersham Model IEC.D2)	A. **5** sources not to exceed 100 millicuries each.
B. Krypton - 85	B. Sealed sources (Amersham Model KAC.D3)	B. **10** sources not to exceed 300 millicuries each.
C. Promethium - 147	C. Sealed Source, (Amersham Model PHC.C1)	C. **10** sources, not to exceed 500 millicuries each.
D. Iron - 55	D. Sealed Source (Amersham Model IEC.A2)	D. 2 sources, not to exceed 100 millicuries.

9. Authorized Use

A. - D. To be used for installation, maintenance, leak testing and distribution of Impact Systems O-Frame Scanner Model 4400 and C-Frame Scanner Model 4401 beta gauge and X-ray fluorescence to specific licensees of Nuclear Regulatory Commission or Agreement States.

LICENSE CONDITIONS

10. **Radioactive material shall be used only at the following locations:**

(a) **1075 East Brokaw Road, San Jose, CA**

(b) **37333 Cedar Boulevard, Newark, CA**

RADIOACTIVE MATERIAL LICENSE License Number: 5250-43

Supplementary Sheet Amendment Number: 6

11. This license is subject to an annual fee for sources of radioactive material authorized to be possessed at any one time as specified in Item 8 of this license. The annual fee for this license is required by and computed in accord ce with Sections 30230-30232 of the California Radiation Control Regulations and is also subject to an annual cost-of-living adjustment pursuant to Section 113 of the California Health and Safety Code.

12. (a) Radioactive material shall be used by, or under the supervision of, the following individuals:

(1) Charlton W. Marshall

(2) Peter M. Typpo

(b) Installation, relocation, training and initial radiation survey of devices containing radioactive material described in this license may be performed by the following individuals:

(1) Charlton W. Marshall

(2) Peter M. Typpo

13. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Items 6, 7, 8 and 9 of this license in accordance with statements, representations, and procedures contained in the documents listed below. The Department's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

(a) The application and letter with attachments both dated April 28, 1989, signed by Peter Typpo.

(b) The letter with attachment dated May 30, 1989, signed by Peter Typpo.

(c) Impact Systems, Inc., letters with attachments dated May 30, 1989 (received September 19, 1989), July 14, 1989 (Radiation Safety Manual), August 14, 1989 and August 18, 1989, all signed by Peter Typpo.

(d) The letter received October 3, 1989, and letter dated June 30, 1989, both signed by Bev Politzer.

(e) The letter with attachment dated February 16, 1990 (new storage location), signed by Peter Typpo.

(f) The letter with attachments dated November 19, 1990, signed by Peter Typo, relative to the work location at 1075 East Brokaw Road facility.

(g) The letter dated December 9, 1994, signed by Charlton W. Marshall, regarding a change in dosimeter processing frequency from monthly to quarterly.

14. The Radiation Safety Officer in this program shall be Charlton W. Marshall.

RADIOACTIVE MATERIAL LICENSE

License Number: 5250-43

Supplementary Sheet

Amendment Number: 6

15. The licensee shall not undertake an installation, relocation, removal or maintenance of any gauge system beyond leak test and shutter check without drawings of the system adequate for the undertaking. Such drawings together with a service log shall be maintained subject to inspection. The service log entries shall include the name, address, and license number of the customer and shall further specify the nature of the service undertaken.

16. The licensee shall distribute only sealed sources and/or devices for which a Sealed Source and Device Registry Sheet (SS&D) Sheet) has been issued or otherwise approved by the California Department of Health Services, the Nuclear Regulatory Commission, or other Agreement State. Sealed sources and/or devices distributed must adhere to the design specifications described in the SS&D Sheet. Any changes in the design or specifications of these sealed sources and/or devices require the manufacturer to apply for and receive an amendment to the SS&D Sheet prior to distribution.

17. Sealed sources possessed under this license shall be tested for leakage and/or contamination as required by Section 30275 (c) of the California Radiation Control Regulations.

18. Quantitative analytical assays for the purpose of tests for leakage and/or contamination of sealed sources shall be performed only by persons specifically authorized to perform that service.

19. The following individuals are authorized to collect wipe test samples of sealed sources possessed under this license using leak test kits acceptable to the California Department of Health Services:

    (a) The Radiation Safety Officer

    (b) Qualified individuals designated in writing by the Radiation Safety Officer

20. Records of leak test results shall be kept in units of microcuries and maintained for inspection. Records may be disposed of following Department inspection. Any leak test revealing the presence of 0.005 microcuries or more of removable radioactive material shall be reported to the Department of Health Services, Radiologic Health Branch, 601 N. 7th Street P.O. Box 942732, Sacramento, CA 94234-7320, within five days of the test. This report shall include a description of the defective source or device, the results of the test, and the corrective action taken.

For the State Department of Health Services

Date January 31, 1995

By: _____

Radiologic Health Branch
P.O. Box 942732, Sacramento, CA 94234-7320