

JUN 24 1988

CANNON USA

- 3 -

Our review of your application will continue upon receipt of the above information. Please reply within 30 days, in duplicate, and reference Mail Control No. 020361. If you have questions, please feel free to call me at (301) 492-0634.

Sincerely,
Original Signed By
J. Bruce Carrico

J. Bruce Carrico
Medical, Academic and Commercial
Use Safety Branch
Division of Industrial and
Medical Nuclear Safety, NMSS

Enclosures:
10 CFR Part 2
10 CFR Part 30
10 CFR Part 32

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8912060104 890720
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OFC: IMAB	IMAB	:	:	:	:	:
NAME: BCarrico	:	:	:	:	:	:
DATE: 06/24/88	:	:	:	:	:	:

OFFICIAL RECORD COPY

APPLICATION FOR MATERIAL LICENSE

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.

FEDERAL AGENCIES FILE APPLICATIONS WITH:

U.S. NUCLEAR REGULATORY COMMISSION
 DIVISION OF FUEL CYCLE AND MATERIAL SAFETY, NMSS
 WASHINGTON, DC 20555

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS, IF YOU ARE LOCATED IN:

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

U.S. NUCLEAR REGULATORY COMMISSION, REGION I
 NUCLEAR MATERIAL SECTION B
 631 PARK AVENUE
 KING OF PRUSSIA, PA 19406

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

U.S. NUCLEAR REGULATORY COMMISSION, REGION II
 MATERIAL RADIATION PROTECTION SECTION
 101 MARIETTA STREET, SUITE 2900
 ATLANTA, GA 30323

IF YOU ARE LOCATED IN:

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

U.S. NUCLEAR REGULATORY COMMISSION, REGION III
 MATERIALS LICENSING SECTION
 799 ROOSEVELT ROAD
 GLEN ELLYN, IL 60137

ARKANSAS, COLORADO, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, SOUTH DAKOTA, TEXAS, UTAH, OR WYOMING, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
 MATERIAL RADIATION PROTECTION SECTION
 611 RYAN PLAZA DRIVE, SUITE 1000
 ARLINGTON, TX 76011

ALASKA, ARIZONA, CALIFORNIA, HAWAII, NEVADA, OREGON, WASHINGTON, AND U.S. TERRITORIES AND POSSESSIONS IN THE PACIFIC, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION V
 MATERIAL RADIATION PROTECTION SECTION
 1450 MARIA LANE, SUITE 210
 WALNUT CREEK, CA 94596

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 JURISDICTION.

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

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

2. NAME AND MAILING ADDRESS OF APPLICANT (include Zip Code)

CANON U.S.A., INC.
 ONE CANON PLAZA
 LAKE SUCCESS, NY 11042

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

SEE APPENDIX A

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

MASANOBU TAMADA, ONE JERICHO PLAZA, JERICHO, NY 11753

TELEPHONE NUMBER

(516) 933-6327

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 Appendix B P. 3

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See Appendix B P. 3

9. FACILITIES AND EQUIPMENT.

See Appendix B P. 2, 3

10. RADIATION SAFETY PROGRAM.

See Appendix B P. 3

11. WASTE MANAGEMENT.

See Appendix B P. 3

12. LICENSEE FEES (See 10 CFR 170 and Section 170.31)

FEE CATEGORY 3-I, 3-P AMOUNT ENCLOSED \$ 520.00
 App. New License

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

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SIGNATURE—CERTIFYING OFFICER

TYPED/PRINTED NAME

TITLE

DATE

Kozaburo Uesugi
 Kozaburo Uesugi

Vice President and
 General Manager of Service

10/13/87

14. VOLUNTARY ECONOMIC DATA

a. ANNUAL RECEIPTS

<\$250K	\$1M-3.5M
\$250K-500K	\$3.5M-7M
\$500K-750K	\$7M-10M
\$750K-1M	>\$10M

b. NUMBER OF EMPLOYEES (Total for entire facility excluding outside contractors)

c. NUMBER OF BEDS

d. WOULD YOU BE WILLING TO FURNISH COST INFORMATION (Dollar and/or staff hours) ON THE ECONOMIC IMPACT OF CURRENT NRC REGULATIONS OR ANY FUTURE PROPOSED NRC REGULATIONS THAT MAY AFFECT YOU? (NRC regulations permit it to protect confidential commercial or financial—proprietary—information furnished to the agency in confidence)

YES NO

FOR NRC USE ONLY

TYPE OF FEE

FEE LOG

FEE CATEGORY

COMMENTS

APPROVED BY

APP

Nov 1987

3I+3P

(Voided 7/20/88 after review.)

J. Kimball

AMOUNT RECEIVED

CHECK NUMBER

\$290.00

586837/87339

020361

DATE

11/19/87

PRIVACY ACT STATEMENT

Pursuant to 5 U.S.C. 552a(e)(3), enacted into law by section 3 of the Privacy Act of 1974 (Public Law 93-579), the following statement is furnished to individuals who supply information to the Nuclear Regulatory Commission on NRC Form 313. This information is maintained in a system of records designated as NRC-3 and described at 40 Federal Register 45334 (October 1, 1975).

1. **AUTHORITY:** Sections 81 and 161(b) of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2111 and 2201(b)).
2. **PRINCIPAL PURPOSE(S):** The information is evaluated by the NRC staff pursuant to the criteria set forth in 10 CFR Parts 30, 32, 33, 34, 35 and 40 to determine whether the application meets the requirements of the Atomic Energy Act of 1954, as amended, and the Commission's regulations, for the issuance of a radioactive material license or amendment thereof.
3. **ROUTINE USES:** The information may be (a) provided to State health departments for their information and use; and (b) provided to Federal, State, and local health officials and other persons in the event of incident or exposure, for their information, investigation, and protection of the public health and safety. The information may also be disclosed to appropriate Federal, State, and local agencies in the event that the information indicates a violation or potential violation of law and in the course of an administrative or judicial proceeding. In addition, this information may be transferred to an appropriate Federal, State, or local agency to the extent relevant and necessary for an NRC decision or to an appropriate Federal agency to the extent relevant and necessary for that agency's decision about you.
4. **WHETHER DISCLOSURE IS MANDATORY OR VOLUNTARY AND EFFECT ON INDIVIDUAL OF NOT PROVIDING INFORMATION:** Disclosure of the requested information is voluntary. If the requested information is not furnished, however, the application for radioactive material license, or amendment thereof, will not be processed. A request that information be held from public inspection must be in accordance with the provisions of 10 CFR 2.790. Withholding from public inspection shall not affect the right, if any, of persons properly and directly concerned need to inspect the document.
5. **SYSTEM MANAGER(S) AND ADDRESS:** U.S. Nuclear Regulatory Commission
Director, Division of Fuel Cycle and Material Safety
Office of Nuclear Material Safety and Safeguards
Washington, D.C. 20555

1. Cannon U.S.A., Inc.
2. ATTN: Masanobu Tamada
3. Quality Assurance Specialist
4. One Cannon Plaza
5. Lake Success, New York 11042

6.
7.
8. Gentlemen:
9.

10. This refers to your application dated November 13, 1987, for a
11. license to distribute, pursuant to Section 32.14 of 10 CFR Part
12. 32, glow lamps containing radioactive material to persons exempt
13. from licensing pursuant to Section 30.15 of 10 CFR Part 30. We
14. find that the following additional information is needed in
15. support of your license request:

16.
17. 1. We note that your company is headquartered in Lake Success,
18. NY; that Mr. Tamada (who is named as the contact person for
19. the license) is located Jericho NY; and that your only
20. warehousing/distribution center under NRC jurisdiction is
21. located in New Jersey. Please clarify where records
22. concerning your distribution/possession activities are to be
23. maintained for NRC inspection. Also confirm that despite
24. the different address location for Mr. Tamada, information
25. mailed by NRC will be able to reach him without extensive

26. problems.

27.

28. 2. Appendix A to your application identifies various warehouse
29. locations and provides certain additional information
30. concerning these locations. We note that the names you
31. provided for these warehouses would appear to indicate that
32. they are not necessarily owned by or under Cannon U.S.A.'s
33. control. Please clarify this situation and completely
34. describe Cannon's importation, warehousing, and distribution
35. procedures.

36.

37. As indicated above, only the warehouse located in New Jersey
38. would be under NRC jurisdiction. In order for Cannon U.S.A.
39. to possess and warehouse the devices prior to distribution
40. at the other locations you will need to obtain a license
41. from the appropriate authorities in each state. What is the
42. status of your license applications in these states?

43.

44. 3. In item B on page 3 of Appendix B of the application, you
45. state, "The maximum amount will be possessed at any time is
46. 10,000." Does this mean 10,000 microcuries or units
47. (tubes)? Also, is this only at the New Jersey location or
48. total in the United States? You should only specify the
49. maximum amount (in microcuries) to be possessed at the New
50. Jersey facility at any one time.

51.
52. 4. On page 4 of Appendix B, in items F and G, you discuss
53. procedures for quality control testing of the glow lamps by
54. both Toshiba and Cannon. In both of these items you
55. indicate that, either now or in the future, only a random
56. sample will be subjected to certain tests. You should note
57. that paragraph 32.15(a)(2) requires that the sample size and
58. testing must be in accordance with the tables and
59. instructions specified in Section 32.110 of 10 CFR Part 32,
60. unless otherwise authorized pursuant to paragraph 32.15(b).
61. It is not apparent from the information you provided that
62. your quality control testing procedures are in accordance
63. with these requirements. Please clarify and/or describe
64. procedures to show you meet the requirements.

65.
66. 5. The information you provided concerning labeling indicates
67. that the contact sensor unit rather than the glow lamp
68. itself will be labeled. The exemption provided in paragraph
69. 30.15(a)(8) is for electron tubes (or glow lamps).
70. Paragraph 32.15(d) specifies that each unit (e.g., the glow
71. lamp) must be labeled. While we would consider alternative
72. labeling provisions, such alternatives must be justified and
73. shown to be equivalent to labeling the tube itself (e.g.,
74. separation of the tube from the unit is highly unlikely to
75. occur under reasonable circumstances). You should also

76. provide information to show that the label can be expected
77. to remain durable and legible ^{OVER} of the expected useful life of
78. the product and provide a sketch or drawing to show the
79. location of the label on the unit.

80.
81. 6. We note that the diagrams attached to your application are
82. marked "confidential." Please note that license
83. applications are available for review by the general public
84. in the NRC Public Document Rooms. You should do not submit
85. proprietary or confidential information unless it is
86. absolutely necessary. If submittal of such information is
87. necessary, you must follow the procedure specified in
88. Section 2.790 of 10 CFR Part 2. Failure to follow this
89. procedure may result in disclosure of the proprietary
90. information to the public. Please clarify.

91.
92. 7. Concerning disposal of the glow tubes by Cannon U.S.A., you
93. simply state on page 3 of Appendix B, "All waste disposal
94. will meet or exceed NRC and applicable state regulations"
95. and on page 4 of Appendix C, "Disposal merchandise may be
96. sent to a special agent at the company's discretion." To
97. the extent that Cannon U.S.A. possesses the glow tubes,
98. disposal must be carried out in accordance with the
99. requirements specified in 10 CFR Part 20. In general there
100. are two options; transfer to a licensed radioactive waste

101. disposal firm or return to the manufacturer for disposal.
102. Please specify how you intend to dispose of waste materials.
103. If you intend to transfer the materials to a licensed
104. disposal firm, you must identify the name and license number
105. of the firm.

106.
107. Our review of your application will continue upon receipt of the
108. above information. Please reply within 30 days, in duplicate,
109. and reference Mail Control No. 020361. If you have questions,
110. please feel free to call me at (301) 492-0634.

111.

112. Sincerely,

113.

114.

115.

116.

117.

118.

J. Bruce Carrico
Medical, Academic and Commercial

al

120.

Use Safety Branch

121.

Division of Industrial and

122.

Medical Nuclear Safety, NMSS

123.

124. Enclosures: 10 CFR Part 2

125. 10 CFR Part 30

- ① Licensing in agreement states
- ② p. 3 - item B - what does 10,000 mean μ l or units in NJ?
- ③ QC p-4 item F & G. testing must be done with 32.118 or otherwise justified as in 32.15(b)
- ④ labels on electron tube unless otherwise justified
- ⑤ location of label on sensor unit
- ⑥ glow lamp location in unit
- ⑦ Diagrams labeled confidential
- ⑧ Disposal - return to manufacturer

(FOR LFMS USE)
INFORMATION FROM LMS

BETWEEN:

LICENSE FEE MANAGEMENT BRANCH, ARM
AND
REGIONAL LICENSING SECTIONS

PROGRAM CODE: _____
STATUS CODE: 3
FEE CATEGORY: _____
EXP. DATE: 0
FEE COMMENTS: _____

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED
APPLICANT/LICENSEE: CANON U. S. A., INC.
RECEIVED DATE: 871117
DOCKET NO: 3030298
CONTROL NO.: 020361
LICENSE NO.:
ACTION TYPE: NEW LICENSEE

2. FEE ATTACHED
AMOUNT: \$ 230.00 + \$290
CHECK NO.: # 587339

3. COMMENTS
HPS is handling
the 3P (possession part)

SIGNED Glenn E. Barry
DATE 11/18/87

B. LICENSE FEE MANAGEMENT BRANCH (CHECK WHEN MILESTONE 03 IS ENTERED 1/1)

1. FEE CATEGORY AND AMOUNT: 3I at 3P \$290 + \$230

2. CORRECT FEE PAID. APPLICATION MAY BE PROCESSED FOR:
AMENDMENT _____
RENEWAL _____
LICENSE ✓ _____

3. OTHER _____

SIGNED A. Kimberly
DATE 11/19/87

Canon

CANON U.S.A., INC.
ONE CANON PLAZA, LAKE SUCCESS, N.Y. 11042-1113
TELEPHONE: (516) 488-6700
TELEX NO: 96-1333 CABLE: CANON USA LAKS
GENERAL FAX TELEPHONE
(516) 488-3623-1648

'87 NOV 17 A7:52

November 13, 1987

30-30298

NL 23700

U.S. Nuclear Regulatory Commission
Division of Fuel Cycle and Material Safety
Washington, D.C. 20555
Attn: Mr. Steven L. Baggett

Re: Application for the Specific and Possession Licenses

Dear Mr. Baggett:

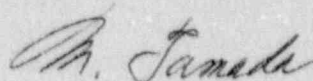
We are very pleased to have the opportunity of meeting with you and Mr. Don Mackenzie.

Enclosed please find the application for the Specific and Possession Licenses, in reference to exempt concentrations product (10 CFR §30.71)

Should you require any additional information, please contact me at my direct telephone number which is (516) 933-6327.

Your prompt attention on this matter would be greatly appreciated.

Sincerely yours,



Masanobu Tamada
Quality Assurance Specialist

U.S. NUC. REG. COM.
1.0 FEE MONTH BRANCH

'87 NOV 23 A9:42

Enclosures

MT:gs

RECEIVED

U.S. NUC. REG. COM.
1.0 FEE MONTH BRANCH

'87 NOV 19 A10:25

RECEIVED

License Fee Information
on Application.

020361

APPENDIX A

WAREHOUSE ADDRESS

&

PERSON IN CHARGE

Canon

CANON U.S.A., INC.
ONE CANON PLAZA, LAKE SUCCESS, N.Y. 11042-1113
TELEPHONE: (516) 488-6700
TELEX NO: 96-1333 CABLE: CANON USA LAKS
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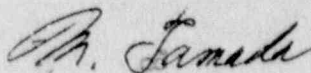
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MT:gs

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SIGNATURE—CERTIFYING OFFICER

TYPED/PRINTED NAME

TITLE

DATE

Kozaburo Uesugi
Kozaburo Uesugi

Vice President and
General Manager of Service
10/13/87

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YES

NO

FOR NRC USE ONLY

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

APPENDIX A

WAREHOUSE ADDRESS

&

PERSON IN CHARGE

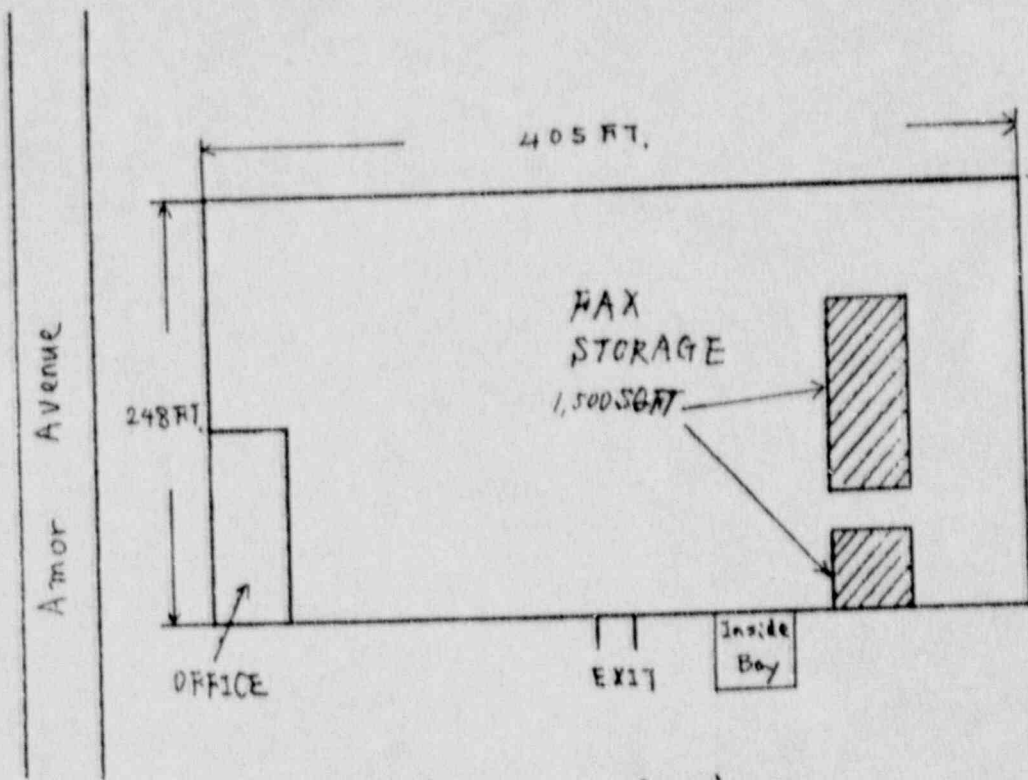
1. PUBLIC WAREHOUSE NAME: NIPPON EXPRESS U.S.A., INC.
2. ADDRESS: 850 N. Edgewood Avenue
Woodale, IL 60191
(312) 350-0202
3. SECURITY SYSTEM: WELLS FARGO
4. PERSONS IN CHARGE: TAKEO KAGIYAMA
General Manager

1. PUBLIC WARHOUSE NAME: NIPPON EXPRESS U.S.A., INC.
2. ADDRESS: 75 Amor Avenue
Carlstadt, N.J. 07072
(201) 935-0444
3. SECURITY SYSTEM: BURGLAR ALARM SYSTEM
(SONITROL SECURITY LINK)
4. PERSONS IN CHARGE: PHIL GRIECO
Senior Supervisor

1. PUBLIC WAREHOUSE NAME: INTERNATIONAL WAREHOUSE CORPORATION
2. ADDRESS: 400 West Artesia Boulevard
Compton, CA 90220
(213) 632-4111
3. SECURITY SYSTEM: CERTIFIED ELECTRONIC ALARM SYSTEM
AROUND THE CLOCK SECURITY GUARDS
5. PERSONS IN CHARGE: ARTHUR M. KAWADA
Assistant Manager

1. PUBLIC WAREHOUSE NAME: USCO DISTRIBUTION SERVICES, INC.
2. ADDRESS: 2271 Fench Settlement Road
Dallas, TX 75212
(214) 634-8726
3. SECURITY SYSTEM: WELLS FARGO
4. PERSONS IN CHARGE: C.L. (CHUCK) CANTRELL
Warehouse Manager

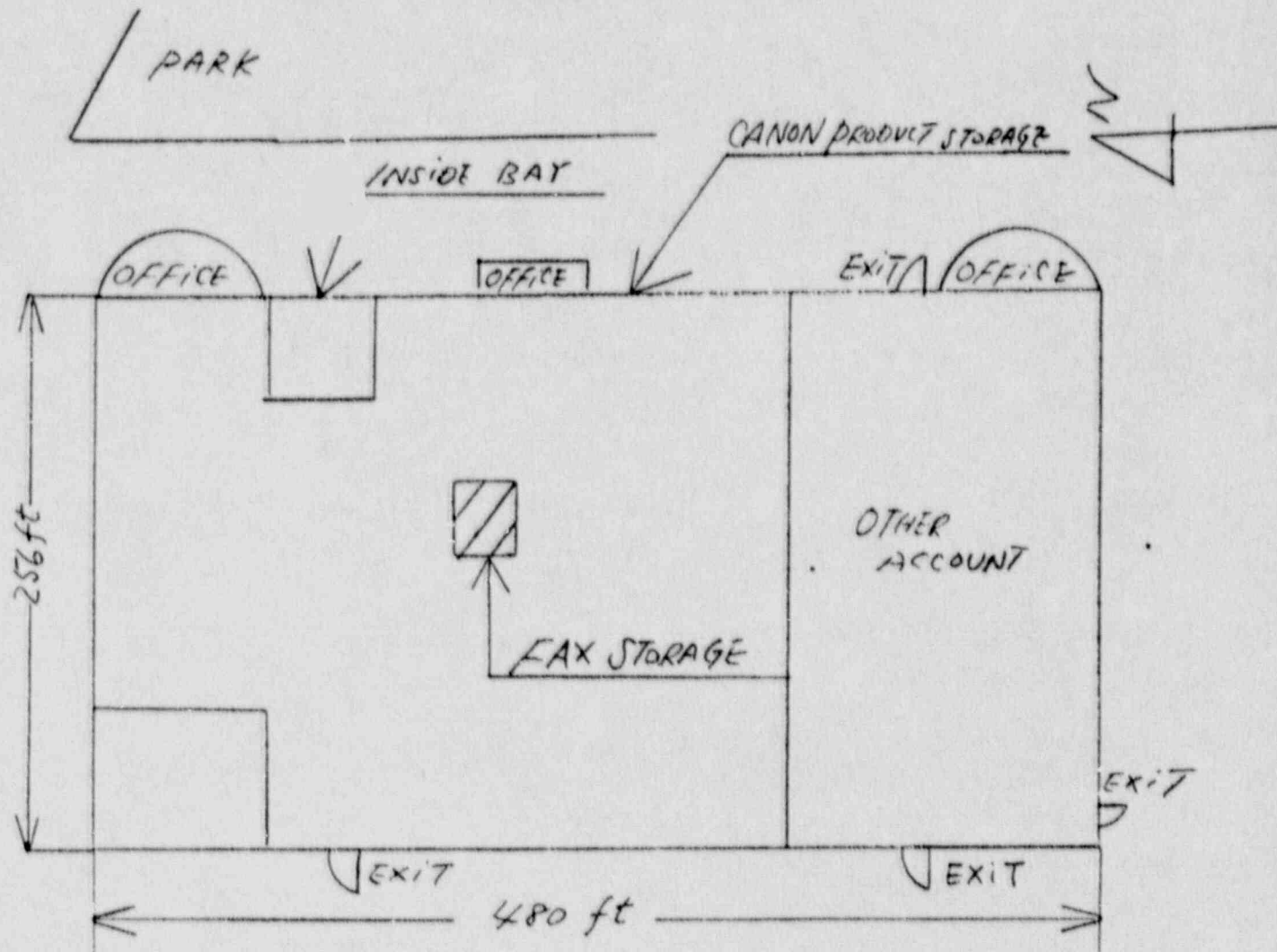
1. PUBLIC WAREHOUSE NAME: TRAMMELL CROW DISTRIBUTION CORPORATION
2. ADDRESS: 6485 Crescent Drive
Norcross, GA 30071
(404) 448-9082
3. SECURITY SYSTEM: WELLS FARGO
4. PERSONS IN CHARGE: NANCY A. BURDETTE



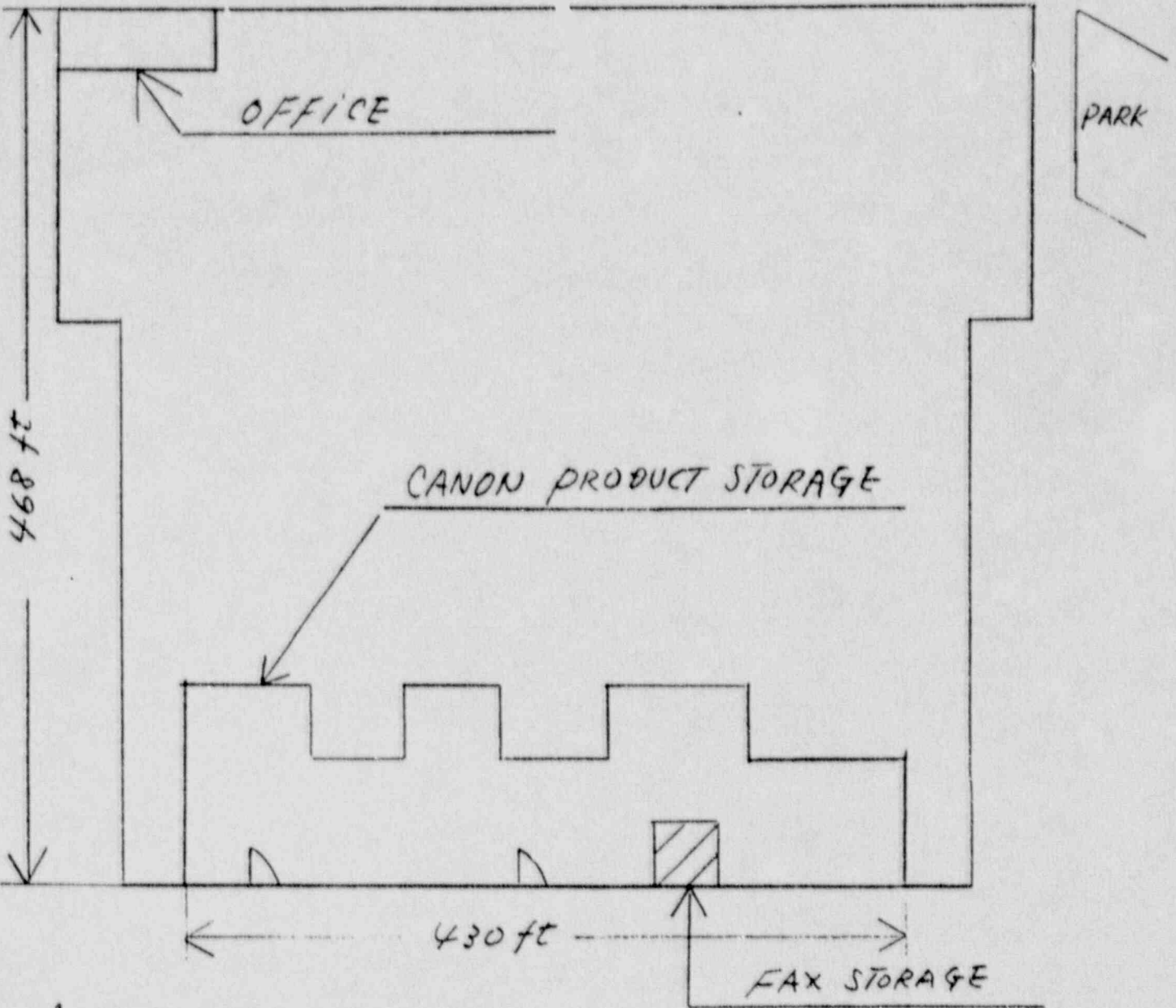
All Canon Warehouse

N.J.

N. Edgewood Avenue

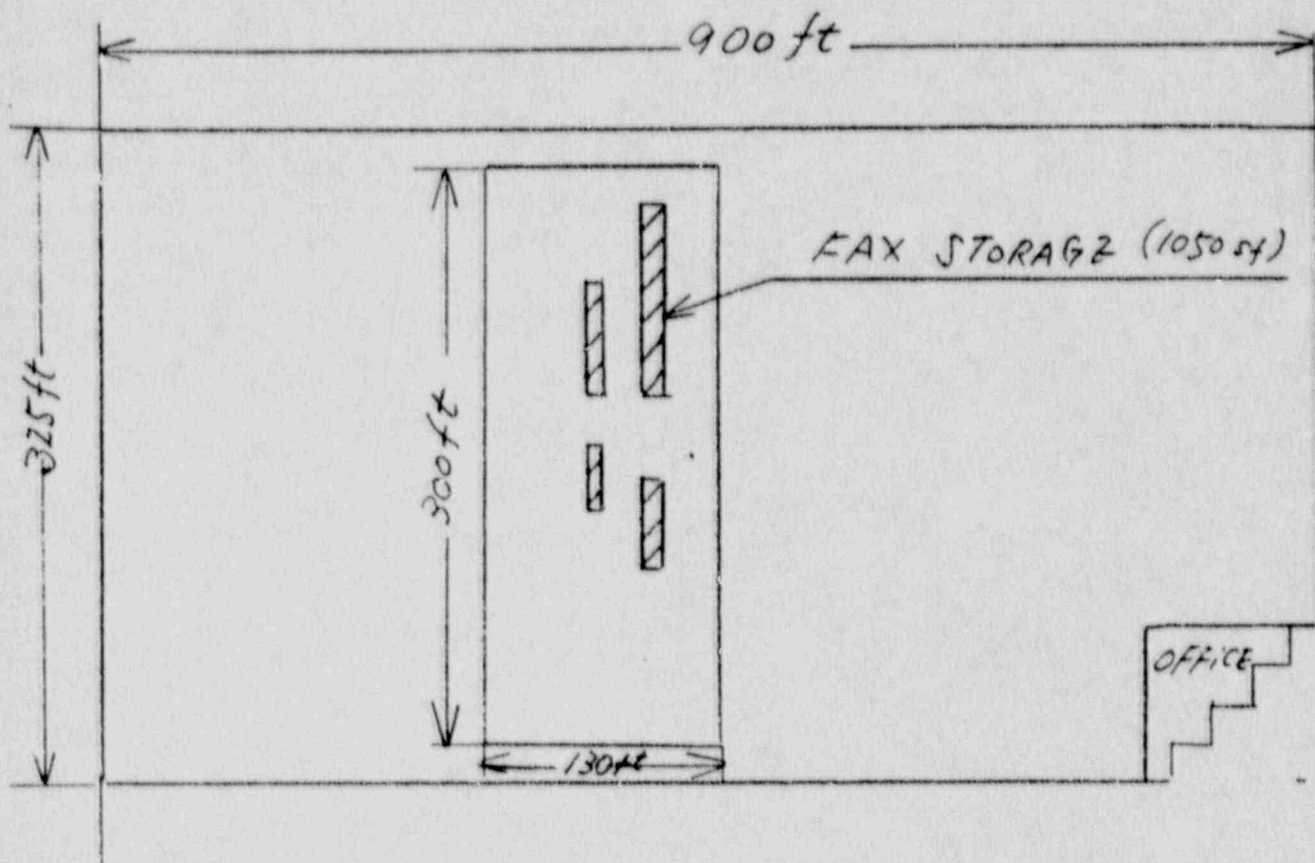


ASTEJIA BLVD

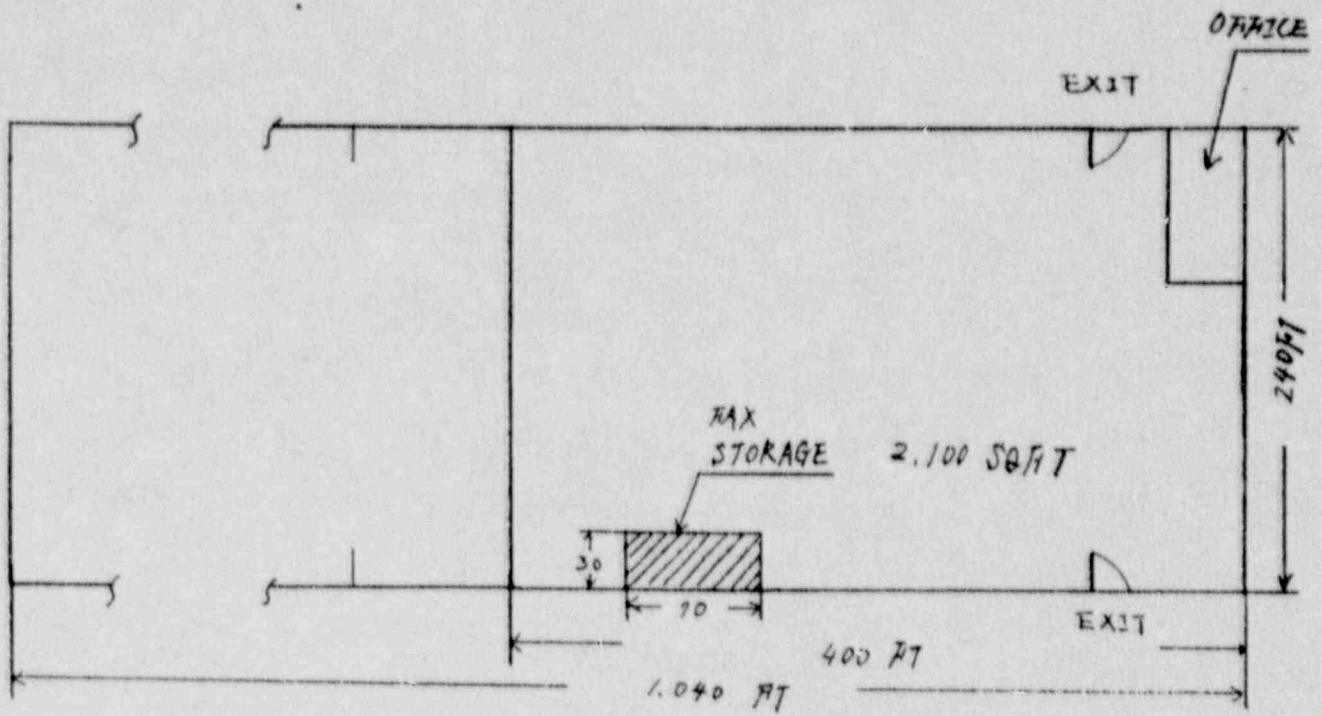


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CA



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CRESCENT DR.



GA

APPENDIX B

SPECIFIC LICENSE FOR
EXEMPT BY-PRODUCT MATERIAL

I. Background of Application

A. Type of Application

Canon U.S.A., Inc. is hereby formally requesting a specific license to initially transfer for sale or distribution in the United States products containing exempt by product material .

The subject of this license is an electron tube in the form of a glow lamp. The tube is with the class of products specifically exempted from certain licensing requirements by operation of 10 C.F.R. 30.15 (a)(8) because it contains less than 5 microcuries of nickel-63 (Ni-63) and radiation levels do not exceed 2 millirad per hour at a distance of 1 centimeter when measured through 7 milligrams per square centimeter of absorber.

Canon U.S.A., Inc. requests that this license encompass the contact sensor which containing the electron tube, and facsimile machine containing the electron tube assembly.

B. Products to be Licensed

1. Electron Tube (See Attachment #1)

(Mfr. by Toshiba)

The electron tube is designed to function as a glow lamp in a facsimile machine. Each tube contains a maximum of 0.32 microcuries of Ni-63. The Ni-63 is plated onto electrodes comprised mainly of nonradioactive nickel-58. There are two electrodes, one at each end of the tube. Each electrode contains a maximum of 0.16 microcuries Ni-63. The outer envelope of the electron tube consists of leaded glass, 0.49-0.61 mm. thick, which is fused to close each end and form a cylinder approximately 233 mm. long and 6 mm. in diameter. The electron tube will not operate if the seal is imperfect or the glass envelope is cracked or otherwise comprised. A hard plastic mounting cap, which nearly completely covers each electrode, is attached to each end of the tube. A wiring harness completes the tube assembly.

2. Contact Sensor Unit (See Attachment #2)

The tube is mounted in a subassembly called the contact sensor unit, which in turn is mounted as a unit into the facsimile machine. The Contact Sensor Unit is a plastic and metal structure, bearing the lamp, which functions as an assembly for storing the lamp and servicing the facsimile machine. The Contact Sensor Unit is constructed so as to surround and protect the electron tube.

3. Facsimile Machine (See Attachment #3)

The facsimile machine contains the Contact Sensor unit, including the electron tube. The facsimile encloses the tube within a hard plastic and metal shell comprised of the machine's outer casing and the Contact Sensor unit. This case further serves to protect the tube. When installed within the facsimile machine, the electron tube is visible only through narrow slits designed to accommodate single sheets of paper.

C. Production and Shipping

The Contact Sensor and facsimile machine are imported by the applicant, Canon U.S.A., Inc. The facsimile machine and Contact Sensor are built in Japan by Canon, Inc., Canon U.S.A.'s parent company. The electron tube is bought from Toshiba Corporation.

II. Section 32.14 -- Requirements for Issuance of a Specific License for Distribution of Certain Items Containing Exempt Byproduct Material

A. Section 32.14(a) -- General Requirements for Issuance of a Specific License (§30.33)

1. Adequate Equipment and Facilities

The applicant's electron tubes are tested individually by the manufacturer. They will not operate, and are rejected, if the glass envelope is not intact. The radiation emitted by the amount of Ni-63 on an electrode does not penetrate the intact glass tube.

The Contact Sensor unit and facsimile machines are packed for shipping in cardboard or other appropriate packaging designed to protect against breakage. As previously stated, the Contact Sensor unit and the facsimile increase the protection of the tube. A periodic random sample of electron tubes is subjected to vibration and shock tests designed to ensure the tubes will survive the conditions of shipping and handling by Manufacturer. No tube has been known to break during such testing.

Canon U.S.A.'s warehouses have in-rack sprinkler systems, which are in full compliance with insurers' standards and offer exceptional protection against fire. The warehouses also incorporate modern security systems to prevent theft or tampering.

2. Training and Experience for Handling of Electron Tubes

Canon U.S.A. has been in the electronics business for many years, and employees are experienced in the proper handling, shipping, and storage of electronic equipment requiring special care.

It should be noted that the Nuclear Regulatory Commission's (NRC) regulations recognize that electron tubes containing less than 5 microcuries of nickel-63 are items of relatively small concern in terms of health and safety. Nevertheless, all Canon U.S.A. personnel will be informed of the existence of byproduct material in the tubes and will receive instruction in proper handling of the tubes, including clean-up and disposal procedures in case of breakage (See Appendix C). All waste disposal will meet or exceed NRC and applicable state regulations.

B. Section 32.14(b)(1) -- (Application Item 5) -- Radioactive Material

The radioactive material contained in the electron tube is nickel-63. The nickel-63 is a solid plated on an electrode composed of nickel-58 (non-radioactive). The maximum quantity per glow lamp is 0.32 microcuries. The maximum amount which will be possessed at anytime is 10,000.

C. Section 32.14(b)(2) -- (Application Item 6) -- Purpose for which Licensed Material will be Used

The licensed material will be contained in an electron tube which will function as glow lamp. The tube will be contained in a Contact Sensor unit that will in turn be contained in a facsimile machine.

D. Section 32.14(b)(2) -- Details of Construction

A drawing of the glow lamp is attached hereto as Attachment 1.

Glass:	Lead glass
Dimension:	As shown in drawing
Glass Thickness:	0.49 - 0.61 mm

Sealing is achieved by fusing the ends of the glass of each tube together utilizing heat followed by an annealing process.

A separate drawing of the Contact Sensor unit containing the glow lamp is attached as Attachment 2.

A separate drawing of the tube as contained in the facsimile unit is attached as Attachment 3.

E. Section 32.14(b)(3) -- Method of Containment or Binding

The nickel-63 is bound to the nickel-58 by means of electroplating.

For the details of the method of containment by means of the glass bulb, see Section D above.

When contained in the facsimile machine or the Contact Sensor unit, the electron tubes are enclosed by the hard plastic and metal material of the finished facsimile product. This enclosure would minimize or prevent any exposure to the environment in the extremely unlikely event of breakage of the bulb.

F. Section 32.14(b)(4) -- Procedures for and Results of Prototype Testing

By Toshiba (See Appendix D page 1-3)

A random sample of glow lamps are subject to both a vibration test and a shock test. These tests are designed to replicate the most severe conditions likely to be encountered, i.e., shipping of the equipment. No break in the glow lamp has been experienced as a result of these tests, and, consequently, there has been no release of the nuclear product material to the environment.

Every lamp is test lighted. A lamp will not light if there is any brek in the glass container.

With respect to the electrode itself, a random sample is undertaken of 10 in every 10,000 units to determine the amount of nickel-63 per electrode.

G. Section 32.14(b)(5) -- Quality Control Procedures to be Followed in the Fabrication of Production Lots and Quality Control Standards

1. By Canon (See Appendix D page 4)

At receipt of lamps, Canon, Inc. performs receiving test on each glow lamp, which include check of appearance, light-up condition under fluctuated supply voltage, luminance and illumination. Receiving tests are performed on each glow lamp at present, but at random in future.

After the glow lamps have been incorporated in the Contact Sensor Units by Canon, all the Contact Sensor units are checked about appearance and function before assembling into the facsimile equipment.

2. By Canon U.S.A.

Canon U.S.A. keeps the record concerning of the Canon, Inc. test results.

H. Section 32.14(b)(6) -- Labeling

Each Contact Sensor Unit will be labeled as follows:

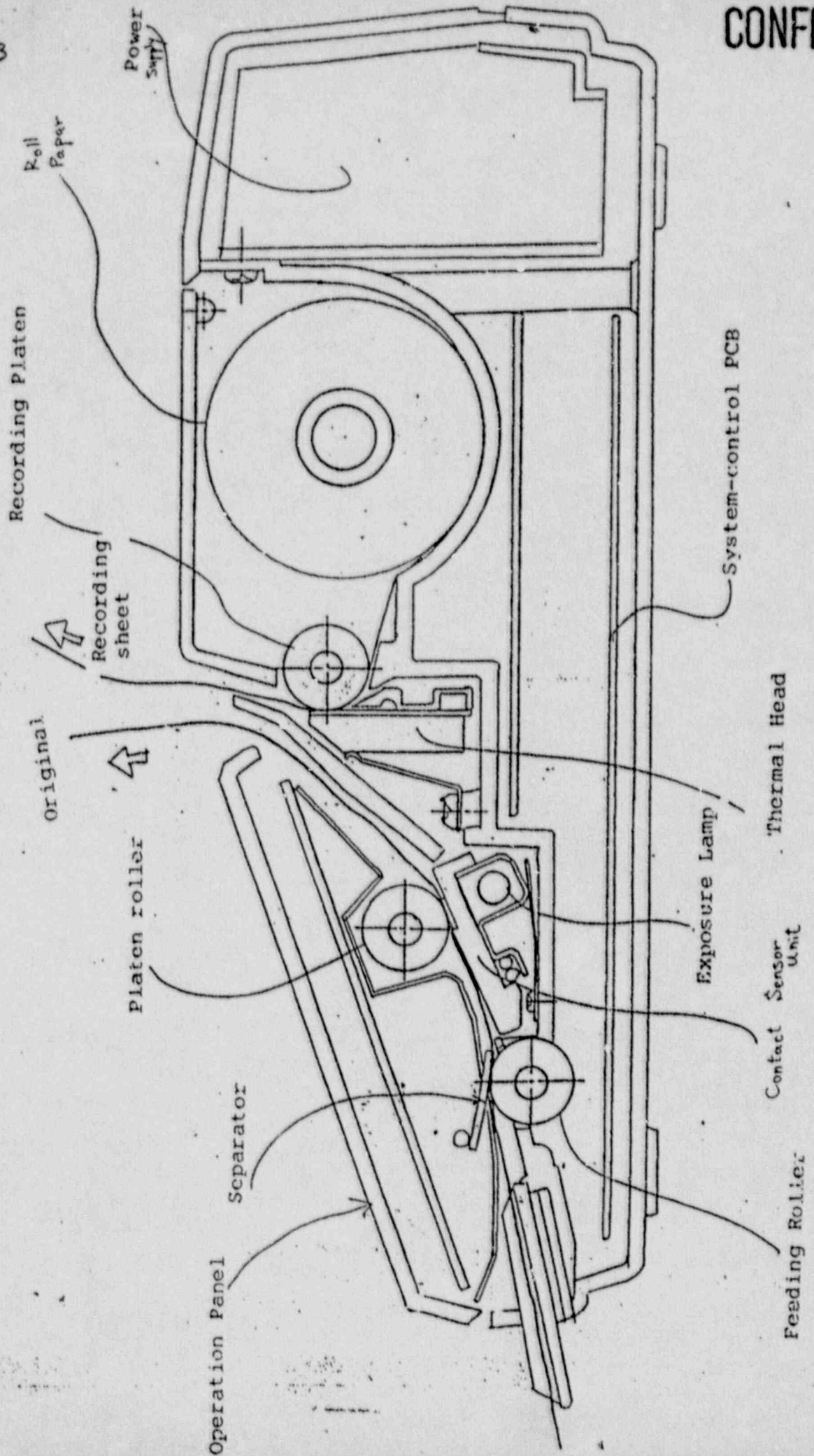
Labeling Size = 30 mm by 8 mm
Word Size = Point 6
Labeling Material = Adhesive paper label

Include following word: .i63 Distributed by Canon U.S.A., Inc.

I. Section 32.14(b)(6) -- Radiation Level and Method of Measurement

The level of radiation from the electron tube both individually and as contained within each facsimile unit or within each Contact Sensor Unit is zero.

The level is measured by Lamp Mfr.



APPENDIX C

TRAINING AND EXPERIENCE
FOR HANDLING PROCEDURES

I. WAREHOUSE CONDITIONS

- 1) Keep the warehouse properly lighted.
- 2) Keep the temperature, humidity and ventilation properly and evenly adjusted throughout the warehouse.
- 3) Repair any tools and/or machinery in proper working order. Repair anything that is broken immediately.
- 4) Keep the forklifts and tools in their proper places and areas when not in use, so that they can be easily located by anyone when needed.
- 5) Keep the warehouse clean by sweeping and dusting whenever necessary.
- 6) Organize the warehouse properly and maintain order by keeping all aisles, stairs and exits clear for safety.
- 7) Keep all merchandise in its proper area, so as to be visible and easily accessible.

II. Warehouse Operations Procedures

A. Receiving procedure for new merchandise

By Air shipment from Japan
Ocean Container shipment from Japan
Warehouse Transfer shipment

1. Make sure that merchandise being received are consigned or addressed to us. (Receiving clerk must have pre-knowledge of all merchandise or things he is authorized to receive).
2. Receiving must insure that he is signing the proper Delivery Receipt.
3. Count of pieces or cartons must always agree with the Delivery Receipt.
4. When receiving clerk is confronted with overage, shortage, and damage (concealed damage) problems, the foregoing must be taken:
 - a. Overage He must report it immediately to Warehouse Manager through his supervisor so that necessary action can be taken.
 - b. Shortage He must sign for only what is actually received. He must note the number of pieces or cartons short and identify them on Delivery Receipt.
 - c. Damage He must note on Delivery Receipt the number and description, and note "subject to inspection" before he signs the Delivery Receipt. He should ask the driver or the deliverer to initial exceptions noted. In case of suspicion of concealed damage, he should note on Delivery Receipt, "Subject to count and inspection" and then sign for it. If there is strong indication of damage, request driver or deliverer to open the carton(s) for inspection before signing it.

B. Storage and Inventory

After receiving all merchandise, put in stock. Each item is placed on the proper location. The clerk logs receiving quantity on a clipboard. Some merchandise is stored at the same place, on the floor or rack. We often take inventory at least one at the beginning of each month. Merchandise is always handled with care.

C. Shipping Procedures

1. Picking procedure

- a. The picker is assigned a particular shipping order(s) to be picked by his supervisor, who determines the picking priorities.
- b. The picker then proceeds to the picking area with a cart in the case of a large truck order with a fork-lift and pallet. He goes to each stock location, logsout the quantity to be picked on a particular inventory control sheet (clipboard), pulls or picks the correct quantity.
- c. When all the shippable items are picked, a fast re-count is made to ensure that all the items are physically picked.

2. Checking procedure

- a. Checker checks each item quantity and verifies at the same time the description of the item on the order picked.
- b. Checker releases order(s) to packer for packing.

3. Packing Procedure (small loose itmes. Big cartons are just attached labels.

- a. The packer selects the size of the carton to be used. He fills sufficient foam pac for innter cushioning protection, rechecks each item being packed and puts them inside and then fills the carton with foam pac.
- b. The packer closes the cartons and seals it and attaches the proper labels.

4. Loading procedure

- a. Small packages are shipped by UPS.
- b. Truck orders prior to loading into carriers trailer proper bill of lading is made on each shipment. Shipping Clerk checks for the number of cartons and compares it with bill of lading. If everything is in order, he loads merchandise into trailer.
- c. After loading, checker insures that all bills of lading are properly signed.

III. In case of the following troubles:

1) MERCHANDISE DAMAGED BY HANDLING OR BEING FOUND DAMAGED.

When the damage is caused or discovered, the Warehouse Manager should be immediately informed so that proper action can be taken.

2) MERCHANDISE MISSING

When merchandise is found to be missing, report the facts to the Warehouse Manager immediately.

3) FIRE

In case of fire, if it is small enough to handle safely, do so and report the the Warehouse Manager as soon as possible. If the fire is too large, notify the Warehouse Manager and then the fire department. If the Warehouse Manager is not immediately available, notify the fire department first and then try to notify the Warehouse Manager.

4) DISPOSAL

No physical destruction of merchandise is to be taken without the Warehouse and Accounting Managers. Disposal merchandise may be sent to a special agent at the company's discretion.

1. PUBLIC WAREHOUSE NAME: TRAMMELL CROW DISTRIBUTION CORPORATION
2. ADDRESS: 6485 Crescent Drive
Norcross, GA 30071
(404) 448-9082
3. SECURITY SYSTEM: WELLS FARGO
4. PERSONS IN CHARGE: NANCY A. BURDETTE

APPENDIX D

MANUFACTURER'S TEST LIST

Test on the Assenbling line of the Glow Lamp

Tester: Manufacturer - Toshiba Subcontract Company

<u>Assembling operation</u>	<u>Checked Item</u>	<u>Method</u>	<u>Sampling</u>	<u>Remarks</u>
Phosphor Application	Temperature	Dial	At the initial operation	
	Transmissivity	Transmissivity meter	2/day	
Baking	Heater temperature		At the initial operation	
Emitter application				
Sealing	Baking condition	Magnifier	2/day	
	Dimension	Scale	2/day	
Emitter application				
Beads baking	Form	Magnifier	2/day	
	Dimension	Scale	2/day	
	Baking condition	Magnifier	2/day	
Exhaust	Vacuum degree	Vacume gauge	At the initial operation	
	Heater temperature		At the initial operation	
Emitter decomposition	Annode current	Ammeter	At the initial operation	
	Decomposition time	Timer	At the initial operation	
	Electrode temperature	Radiation thermometer	At the initial operation	
Gas enclosing	Gas pressure		At the initial operation	
Lighting check	Lighting condition	Seeing	100 %	
Sub-electrode printing	Printing width	Scale	At the initial operation	
	Application condition	Microscope	At the initial operation	

<u>Assembling operation</u>	<u>Checked Item</u>	<u>Method</u>	<u>Sampling</u>	<u>Remarks</u>
Sub-electrode dry	Drying temperature	Thermometer	At the initial operation	
	Term	Timer	At the initial operation	
Finishingcheck	Structure, Look	Seeing	100 %	
	Dimention	Check-jig	100 %	
	Lighting	Check-jig	100 %	
Primer application	Application condition check	Microscope	100 %	
Shipping test	Initial properties	Check instrument	MIL-STD-105D	
	Dimention	Scale	level II common-1	
	Look, Structure			
	Life test	Test instrument	1 lot/week	
	Illumination intensity	Lumeter		
Package	Package condition	Seeing		
	Indication contents	Seeing		

Tests on the Assembling Line of the Glow Lamp Ass'y

Tester: Manufacturer - Toshiba Subcontract Company

<u>Assembling operation</u>	<u>Checked Item</u>	<u>Method</u>	<u>Sampling</u>	<u>Remarks</u>
Receiving of Lamp	Appearance	Visual	50/every lot	
	Application of auxiliary electrodes	Removal strength	10/every lot	
	Glow discharge	Glow tester	50/every lot	
Fixing of Leads	Location	Jig	100 %	
Receiving of Holder	Appearance	Visual	20/every lot	
	Dimentions	Calipers	3/every lot	
Finishing	Dimentions	Calipers	3/every lot	
	Short-circuit test	Dielectric strength tester	100 %	
	Lighting test	Light-up equipment	100 %	
	Holder fitting	Torque gauge	100 %	
	Appearance	Visual	100 %	
Glow discharge test	Light-up condition	Glow tester	100 %	
Shipping test	Appearance & Const- ruction	Visual	Not serious faulty: AQL 2.5, every lot Serious faulty: AQL 0.25, every lot	
	Dimentions	Calipers, Gauge	5/every lot	
	Dielectric strength	Dielectric strength tester	5/every lot	
	Light-up	Light-up equipment	5/every lot	
	Glow discharge	Glow tester	100 %	
	Auxiliary electrode, location & application	Gauge & removal strength	20/every lot	
			5/every lot	

Testing at Canon Inc.

<u>Type of Test</u>	<u>Checked Item</u>	<u>Method</u>	<u>Sampling</u>
Receiving Test of Glow Lamp	No smudge and no crack in tubing	Visual	AQL=0.4%
	Fitting of auxiliary electrode	Removal test with plastic tape	10 / lot
<u>Shipping test of CS II Unit</u>			
Check of Glow Lamp	Electrode twisted	Visual	100 %
	Electrode removal	Visual	100 %
	Electrode shorted	Visual	100 %
Check of Waveforms	100mV Output 300mV	Specific tester	100 %
	30% Output 70% fluctuation	Specific tester	100%
Function test	White line/black line	Specific equipment	100%
	Resolution ability	Specific equipment	100%

TOSHIBA Xe Glow Lamp QUALITY CONTROL PROCEDURES

Flow Chart	Process	Control Item	Sampling	Testing Measure
	Glass Tube Methanol			
	Tube Washing			
	Phosphor			
	Phosphor Coating	Dryng Temp	At m/c start in morning	Thermometer
	Coating Inspection	Transmission	2 pcs per 4 hour	Transmission device
	Baking	Oven Temp Bulb Temp	At m/c start in morning	Thermometer Tempilag
	Electrode			
	Sealing	Appearance Shape Dimensions	2 pcs per 4 hour 2 pcs per 4 hour 2 pcs per 4 hour	Visual Visual Scale
	Electrode			
	Glass Bead			
	Bead Mount Making	Appearance Shape Dimensions	2 pcs per 4 hour 2 pcs per 4 hour 2 pcs per 4 hour	Visual Visual Scale
	Exhausting	Manifold Vacuum	At m/c start in morning	Vacuum Gauge
	Filling Gas			
	Gas Filling	Gas Pressure	At m/c start in morning	Pressure Gauge
	Aging	Voltage Aging Time	At m/c start in morning	Voltmeter Timer
	Aging Bulb Inspection	lighting Status	All	Visual
	Electric Conductive Adhesive			
	Printing	Appearance Dimensions	2 pcs at m/c start in morning	Visual Scale
Inspection	Appearance Starting Voltage	All All	Visual Testing Device	
Outo going Inspection & Test	Lamp Current Lamp Voltage Starting Voltage Dimensions Lighting Distribution	5 pcs per lot 5 pcs per lot 5 pcs per lot 5 pcs per lot 5 pcs per lot	Characteristics Testing Device Scale lighting Distribution Testing Device	
Packing	Life	3 pcs per week	Life Tester	
Delivery				

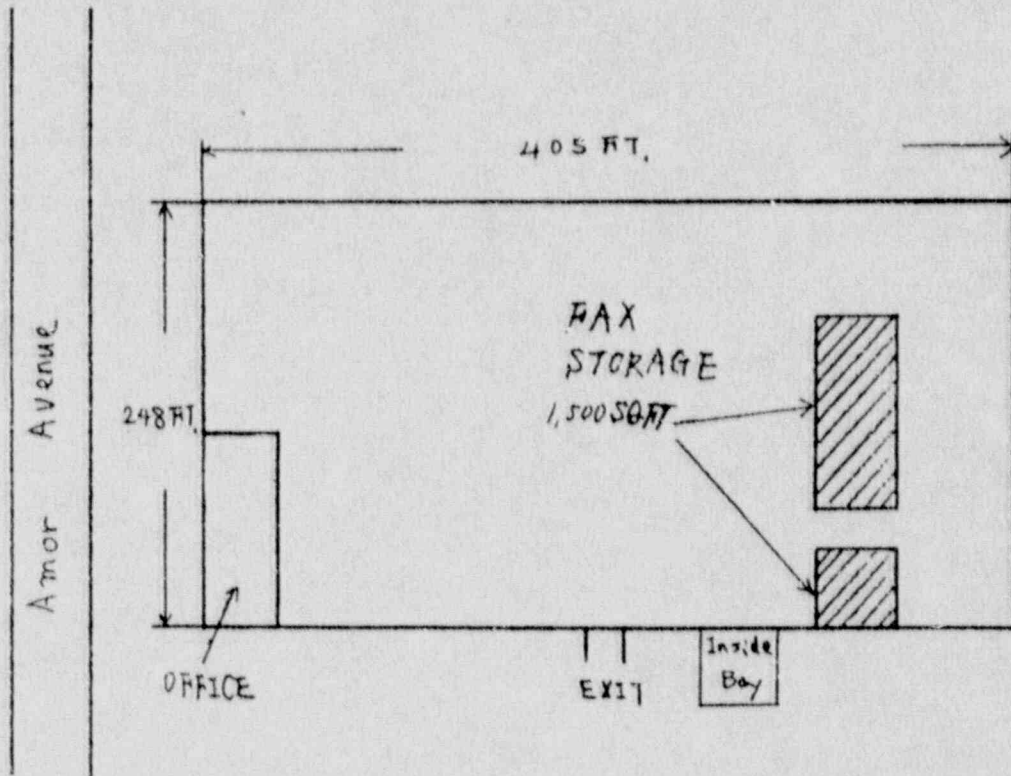
1. PUBLIC WARHOUSE NAME: NIPPON EXPRESS U.S.A., INC.
2. ADDRESS: 75 Amor Avenue
Carlstadt, N.J. 07072
(201) 935-0444
3. SECURITY SYSTEM: BURGLAR ALARM SYSTEM
(SONITROL SECURITY LINK)
4. PERSONS IN CHARGE: PHIL GRIECO
Senior Supervisor

1. PUBLIC WAREHOUSE NAME: INTERNATIONAL WAREHOUSE CORPORATION
2. ADDRESS: 400 West Artesia Boulevard
Compton, CA 90220
(213) 632-4111
3. SECURITY SYSTEM: CERTIFIED ELECTRONIC ALARM SYSTEM
AROUND THE CLOCK SECURITY GUARDS
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2. ADDRESS: 850 N. Edgewood Avenue
Woodale, IL 60191
(312) 350-0202
3. SECURITY SYSTEM: WELLS FARGO
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General Manager

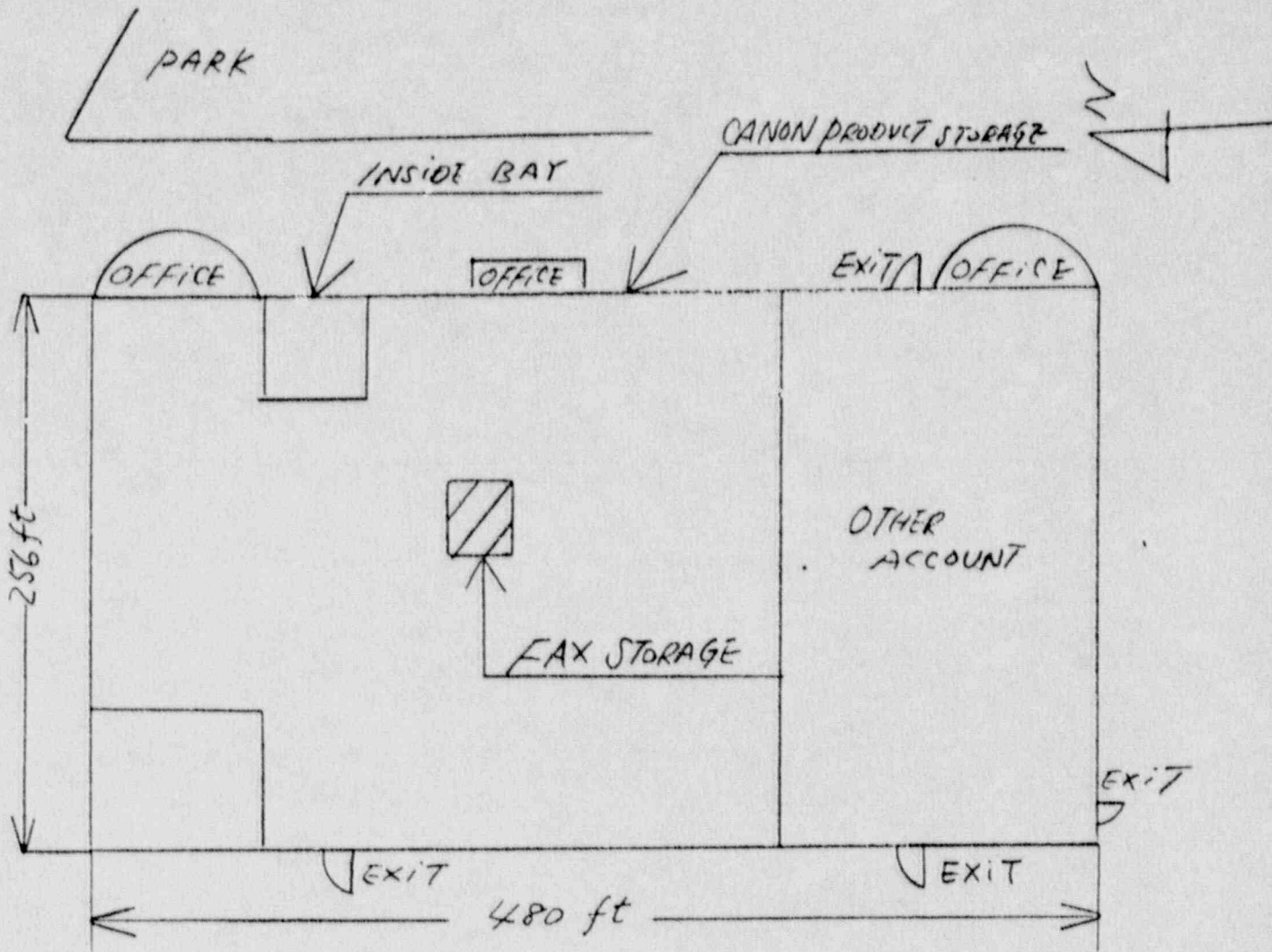
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All Canon Warehouse

N.J.

N. Edgewood Avenue



ASTEJIA BLVD.

PARK

OFFICE

CANON PRODUCT STORAGE

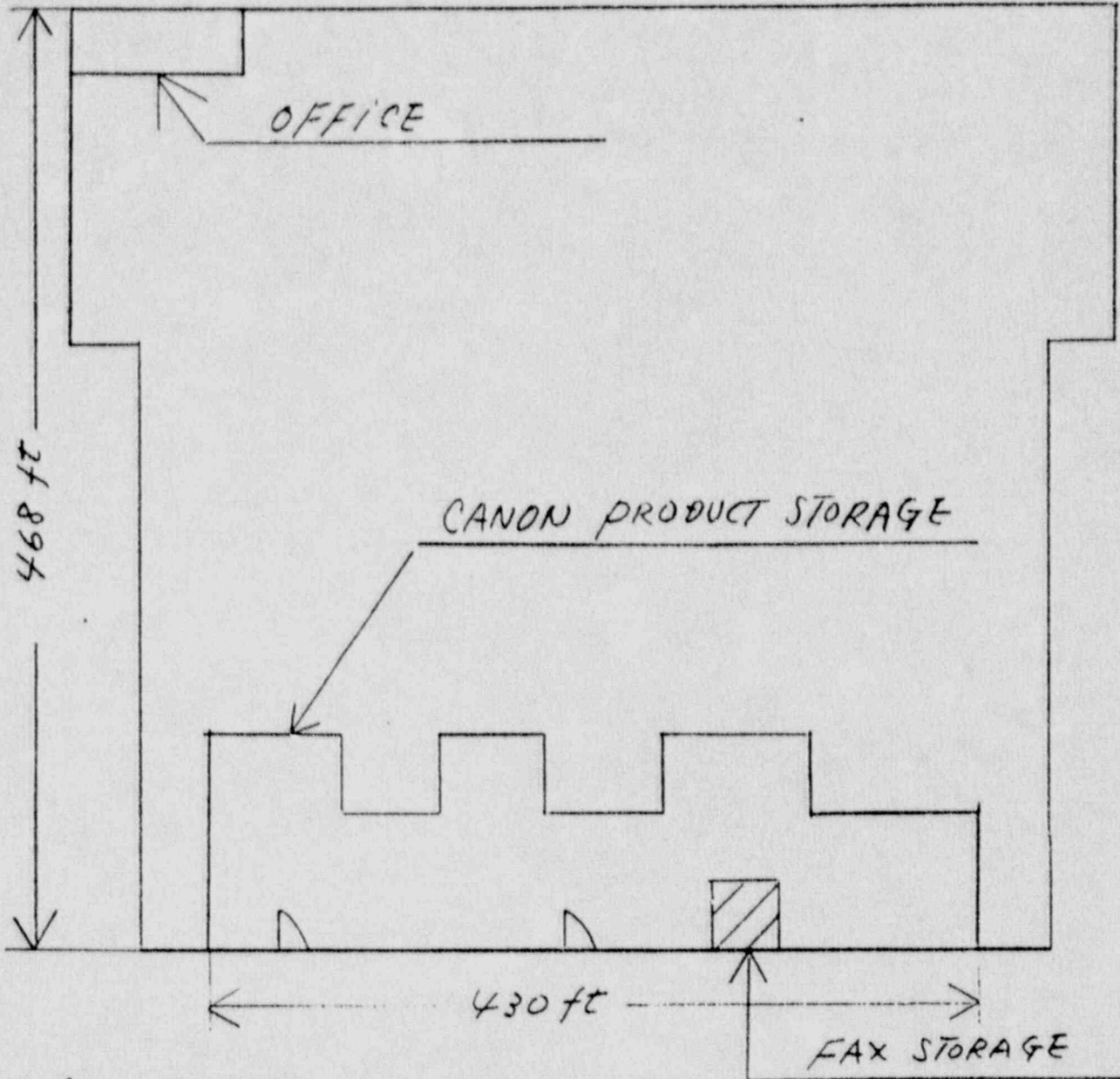
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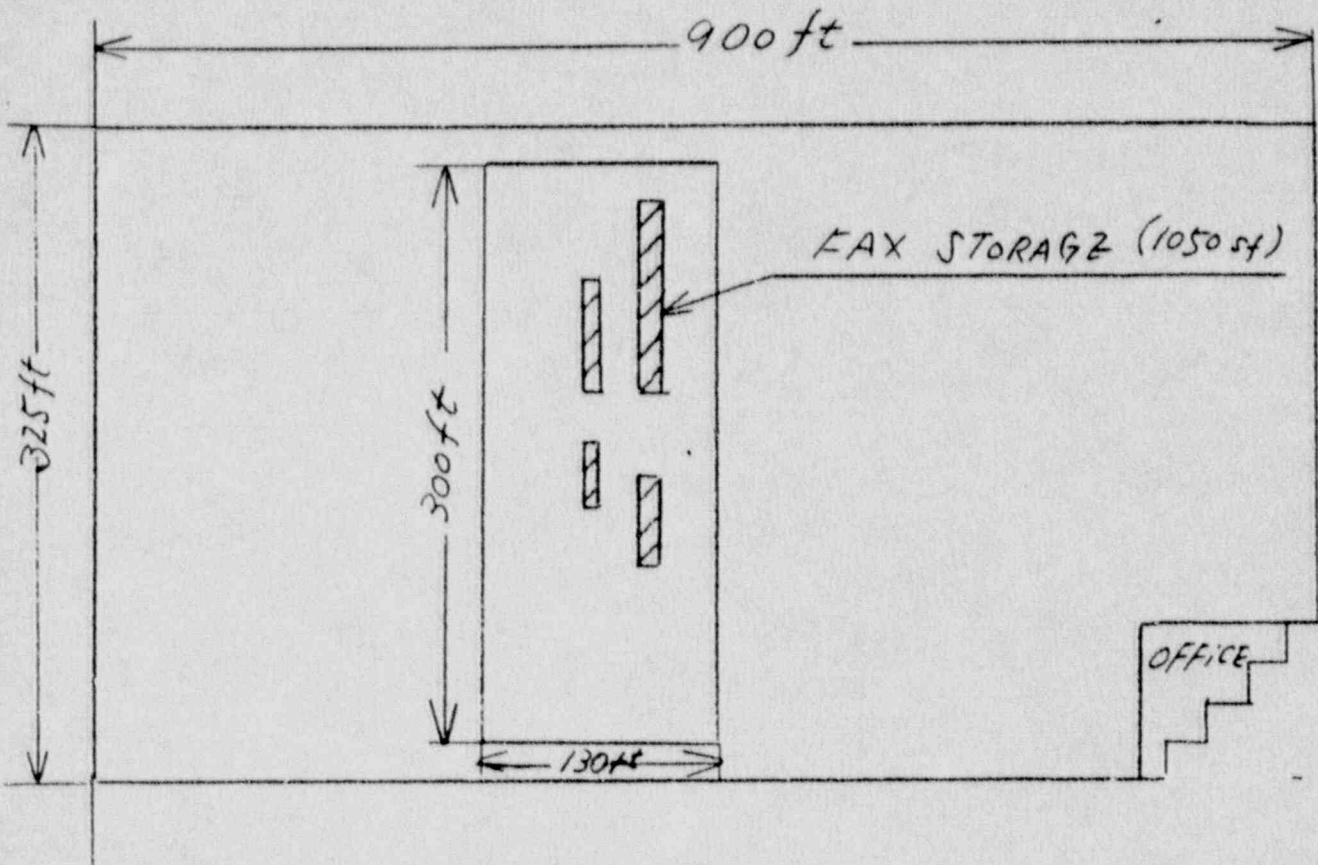
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FAX STORAGE

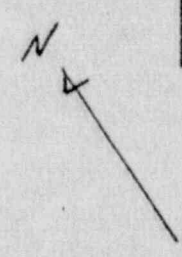
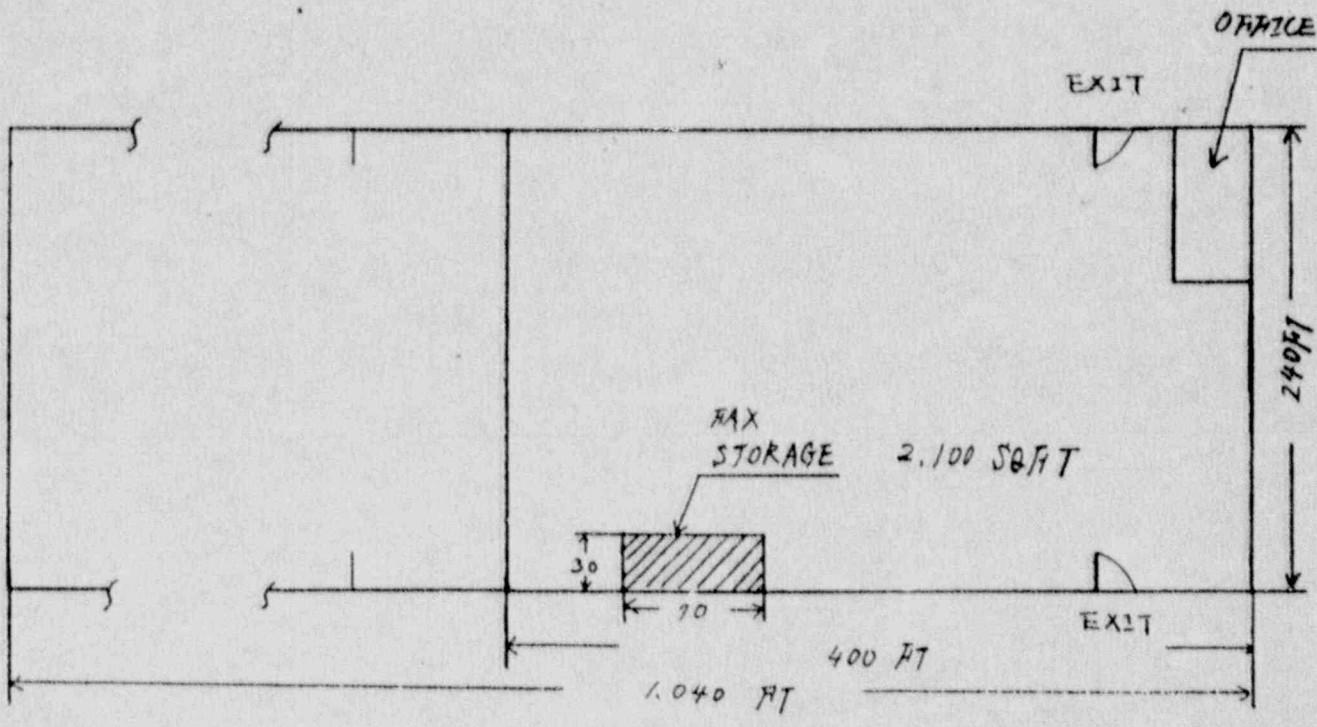


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Glass Thickness:	0.49 - 0.61 mm

Sealing is achieved by fusing the ends of the glass of each tube together utilizing heat followed by an annealing process.

A separate drawing of the Contact Sensor unit containing the glow lamp is attached as Attachment 2.

A separate drawing of the tube as contained in the facsimile unit is attached as Attachment 3.

E. Section 32.14(b)(3) -- Method of Containment or Binding

The nickel-63 is bound to the nickel-58 by means of electroplating.

For the details of the method of containment by means of the glass bulb, see Section D above.

When contained in the facsimile machine or the Contact Sensor unit, the electron tubes are enclosed by the hard plastic and metal material of the finished facsimile product. This enclosure would minimize or prevent any exposure to the environment in the extremely unlikely event of breakage of the bulb.

F. Section 32.14(b)(4) -- Procedures for and Results of Prototype Testing

By Toshiba (See Appendix D page 1-3)

A random sample of glow lamps are subject to both a vibration test and a shock test. These tests are designed to replicate the most severe conditions likely to be encountered, i.e., shipping of the equipment. No break in the glow lamp has been experienced as a result of these tests, and, consequently, there has been no release of the nuclear product material to the environment.

Every lamp is test lighted. A lamp will not light if there is any brek in the glass container.

With respect to the electrode itself, a random sample is undertaken of 10 in every 10,000 units to determine the amount of nickel-63 per electrode.

G. Section 32.14(b)(5) -- Quality Control Procedures to be Followed in the Fabrication of Production Lots and Quality Control Standards

1. By Canon (See Appendix D page 4)

At receipt of lamps, Canon, Inc. performs receiving test on each glow lamp, which include check of appearance, light-up condition under fluctuated supply voltage, luminance and illumination. Receiving tests are performed on each glow lamp at present, but at random in future.

After the glow lamps have been incorporated in the Contact Sensor Units by Canon, all the Contact Sensor units are checked about appearance and function before assembling into the facsimile equipment.

2. By Canon U.S.A.

Canon U.S.A. keeps the record concerning of the Canon, Inc. test results.

H. Section 32.14(b)(6) -- Labeling

Each Contact Sensor Unit will be labeled as follows:

Labeling Size = 30 mm by 8 mm
Word Size = Point 6
Labeling Material = Adhesive paper label

Include following word: Ni63 Distributed by Canon U.S.A., Inc.

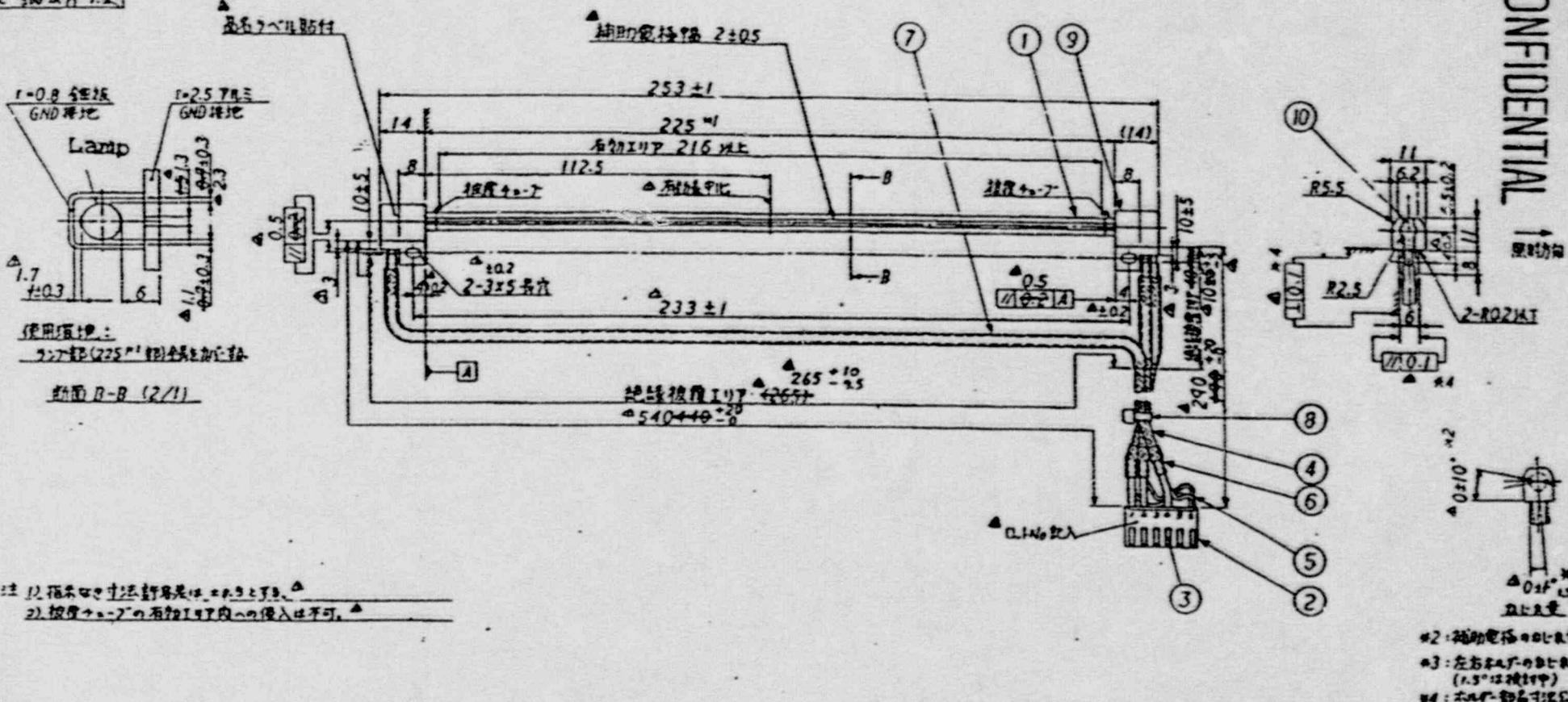
I. Section 32.14(b)(6) -- Radiation Level and Method of Measurement

The level of radiation from the electron tube both individually and as contained within each facsimile unit or within each Contact Sensor Unit is zero.

The level is measured by Lamp Mfr.

Attachment #1
CONFIDENTIAL

寸法単位	mm
6.4mm	0.25
12.7mm	0.5
19.0mm	0.75
25.4mm	1.0
31.7mm	1.25



GLOW LAMP

Manufacturer: Toshiba Cooperation
 Mfr. type no: FC5G54.246T6/U-CN
 Rating: 1200 Vac, 4.2 W

- Adhesive
- Holder
- Connector
- Insulation tube
- Insulation tube
- Insulated wire
- Shielding wire
- Terminal
- Housing
- Xenon lamp

10	接着剤	本数	仕様	注記
9	ホルダ	2	ホルダ-ホルダ	三菱電機 2-500-N-3
8	結束バンド	1	6-6740>	
7	絶縁チューブ	3	軟質PVC樹脂	2.5mm径 厚0.2mm
6	絶縁チューブ	3	軟質PVC樹脂	2.5mm径 厚0.2mm
5	ビニル絶縁電線	3	塩化ビニル	VL1007 4mmφ 260°C
4	絶縁シールド電線	3	塩化ビニル	絶縁径φ2.78-32 4mmφ
3	ワイヤ	4	鋼線	絶縁径φ2.78-32 4mmφ
2	ハウジング	1	6-6740>	三菱電機 VHR-6N
1	キセノンランプ	1		P5.8 1206

承認者 承認日 承認場所 承認者 承認日 承認場所	承認者 承認日 承認場所 承認者 承認日 承認場所	承認者 承認日 承認場所 承認者 承認日 承認場所	承認者 承認日 承認場所 承認者 承認日 承認場所	承認者 承認日 承認場所 承認者 承認日 承認場所	承認者 承認日 承認場所 承認者 承認日 承認場所
--	--	--	--	--	--

縮尺 1/1
 単位 mm
 承認者 東芝
 承認日 77.2.10
 承認場所 77.2.10
 承認者 東芝
 承認日 77.2.10
 承認場所 77.2.10

部品名 図数 材料 備考
 FC5G54.246T6/U-CN
 承認者 承認日 承認場所

CONFIDENTIAL

標準寸法規格 JIS

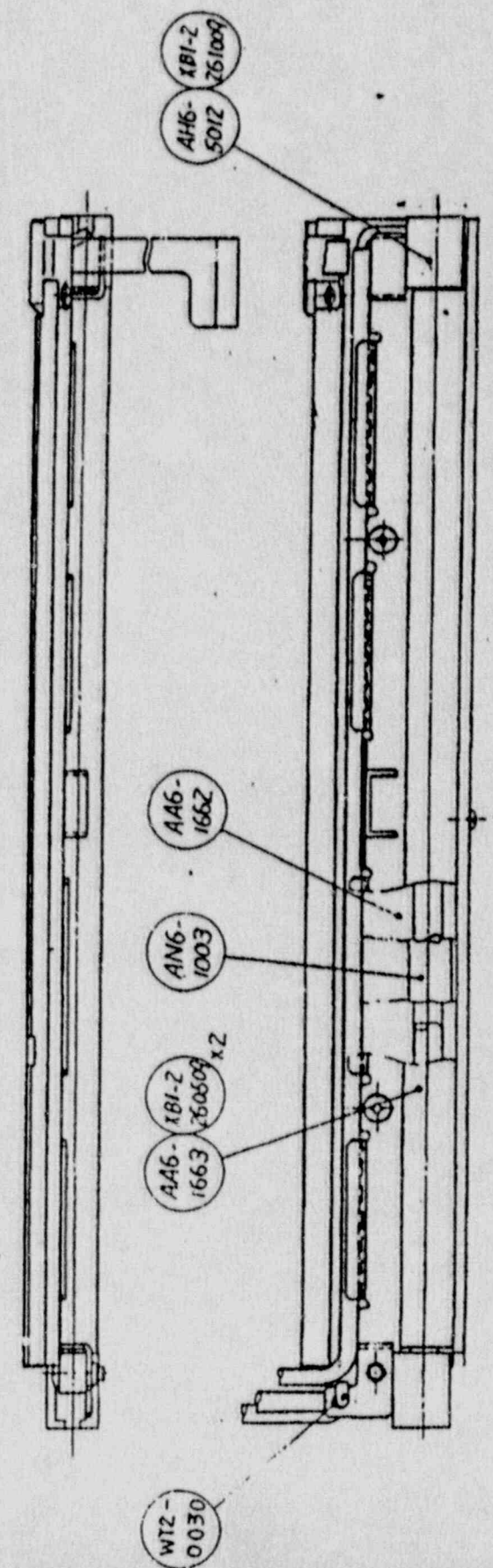
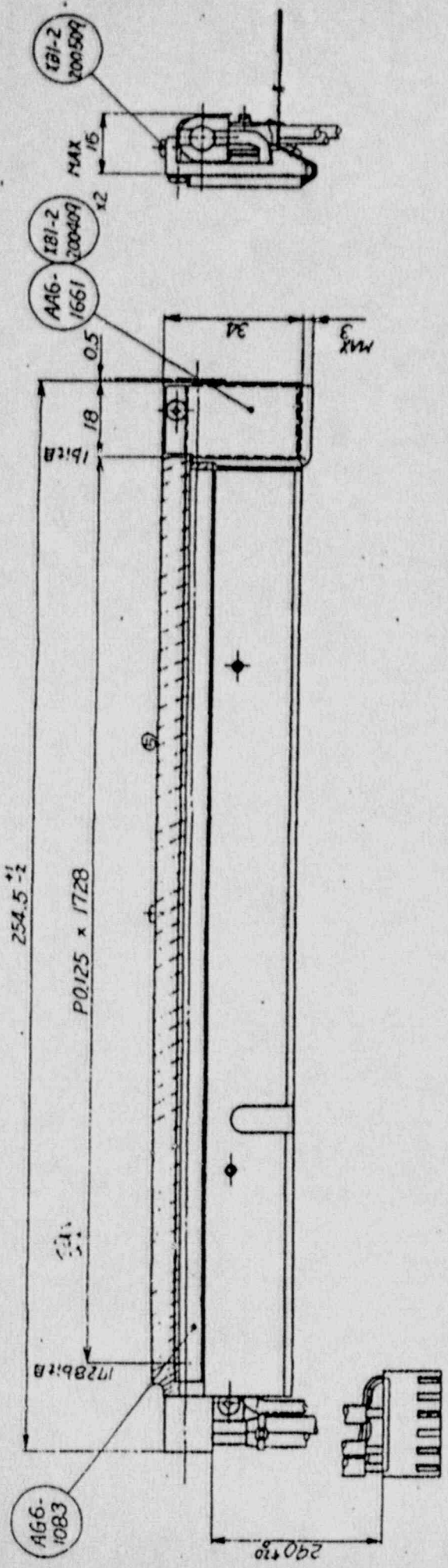
訂定日期	訂定標準	相當	制定記号	規格	標準寸法規格 JIS
3 87.5.27	11.3.1987	11.3.1987			
4 87.7.30	11.3.1987 (改正)	11.3.1987			
5 87.8.31	11.3.1987 (改正)	11.3.1987			

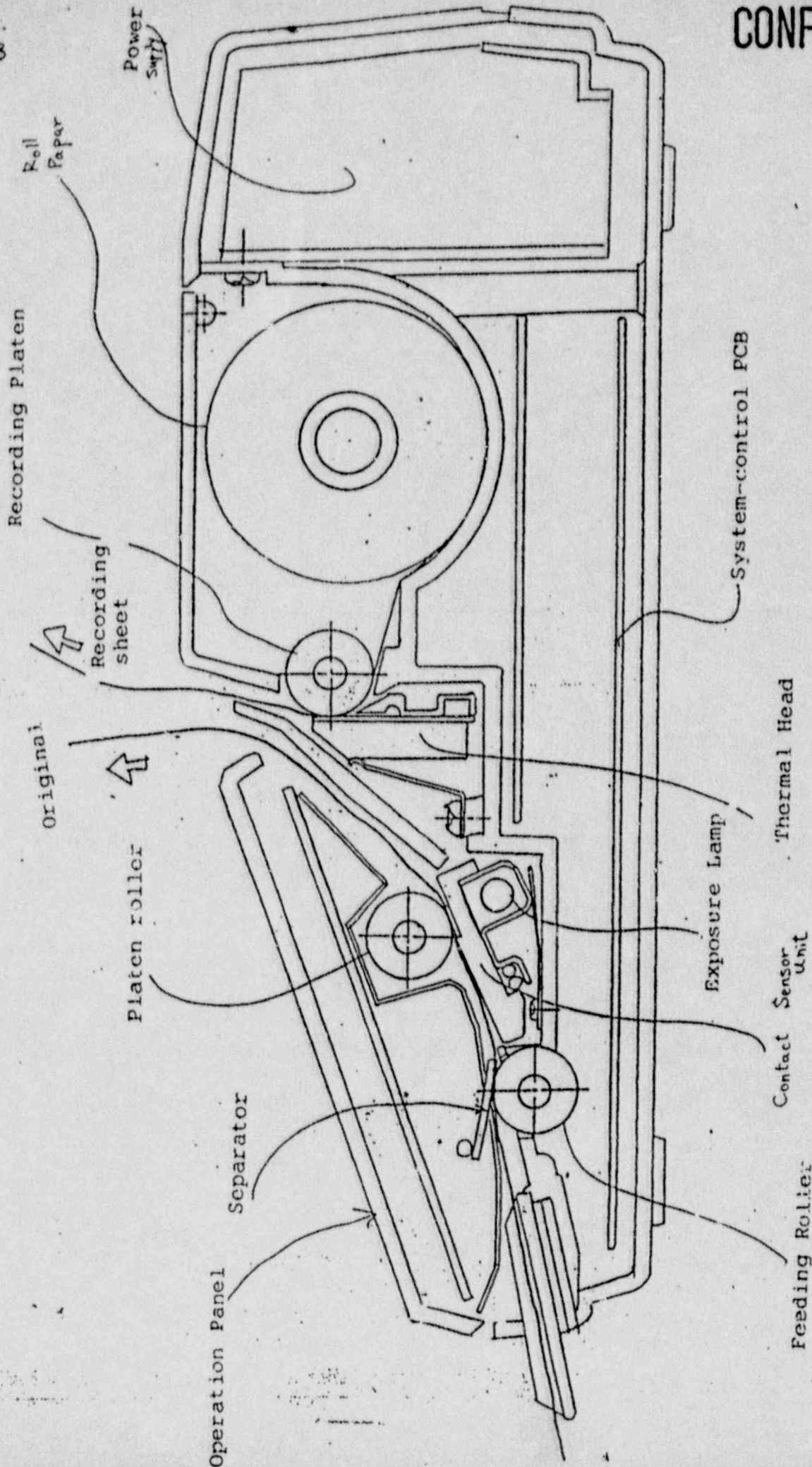
Contact Sensor Unit

BM 87.2.27

CS UNIT

三角法





APPENDIX C

TRAINING AND EXPERIENCE
FOR HANDLING PROCEDURES

I. WAREHOUSE CONDITIONS

- 1) Keep the warehouse properly lighted.
- 2) Keep the temperature, humidity and ventilation properly and evenly adjusted throughout the warehouse.
- 3) Repair any tools and/or machinery in proper working order. Repair anything that is broken immediately.
- 4) Keep the forklifts and tools in their proper places and areas when not in use, so that they can be easily located by anyone when needed.
- 5) Keep the warehouse clean by sweeping and dusting whenever necessary.
- 6) Organize the warehouse properly and maintain order by keeping all aisles, stairs and exits clear for safety.
- 7) Keep all merchandise in its proper area, so as to be visible and easily accessible.

II. Warehouse Operations Procedures

A. Receiving procedure for new merchandise

By Air shipment from Japan
Ocean Container shipment from Japan
Warehouse Transfer shipment

1. Make sure that merchandise being received are consigned or addressed to us. (Receiving clerk must have pre-knowledge of all merchandise or things he is authorized to receive).
2. Receiving must insure that he is signing the proper Delivery Receipt.
3. Count of pieces or cartons must always agree with the Delivery Receipt.
4. When receiving clerk is confronted with overage, shortage, and damage (concealed damage) problems, the foregoing must be taken:
 - a. Overage He must report it immediately to Warehouse Manager through his supervisor so that necessary action can be taken.
 - b. Shortage He must sign for only what is actually received. He must note the number of pieces or cartons short and identify them on Delivery Receipt.
 - c. Damage He must note on Delivery Receipt the number and description, and note "subject to inspection" before he signs the Delivery Receipt. He should ask the driver or the deliverer to initial exceptions noted. In case of suspicion of concealed damage, he should note on Delivery Receipt, "Subject to count and inspection" and then sign for it. If there is strong indication of damage, request driver or deliverer to open the carton(s) for inspection before signing it.

B. Storage and Inventory

After receiving all merchandise, put in stock. Each item is placed on the proper location. The clerk logs receiving quantity on a clipboard. Some merchandise is stored at the same place, on the floor or rack. We often take inventory at least one at the beginning of each month. Merchandise is always handled with care.

C. Shipping Procedures

1. Picking procedure

- a. The picker is assigned a particular shipping order(s) to be picked by his supervisor, who determines the picking priorities.
- b. The picker then proceeds to the picking area with a cart in the case of a large truck order with a fork-lift and pallet. He goes to each stock location, logsout the quantity to be picked on a particular inventory control sheet (clipboard), pulls or picks the correct quantity.
- c. When all the shippable items are picked, a fast re-count is made to ensure that all the items are physically picked.

2. Checking procedure

- a. Checker checks each item quantity and verifies at the same time the description of the item on the order picked.
- b. Checker releases order(s) to packer for packing.

3. Packing Procedure (small loose itmes. Big cartons are just attached labels.

- a. The packer selects the size of the carton to be used. He fills sufficient foam pac for innter cushioning protection, rechecks each item being packed and puts them inside and then fills the carton with foam pac.
- b. The packer closes the cartons and seals it and attaches the proper labels.

4. Loading procedure

- a. Small packages are shipped by UPS.
- b. Truck orders prior to loading into carriers trailer proper bill of lading is made on each shipment. Shipping Clerk checks for the number of cartons and compares it with bill of lading. If everything is in order, he loads merchandise into trailer.
- c. After loading, checker insures that all bills of lading are properly signed.

III. In case of the following troubles:

1) MERCHANDISE DAMAGED BY HANDLING OR BEING FOUND DAMAGED.

When the damage is caused or discovered, the Warehouse Manager should be immediately informed so that proper action can be taken.

2) MERCHANDISE MISSING

When merchandise is found to be missing, report the facts to the Warehouse Manager immediately.

3) FIRE

In case of fire, if it is small enough to handle safely, do so and report the the Warehouse Manager as soon as possible. If the fire is too large, notify the Warehouse Manager and then the fire department. If the Warehouse Manager is not immediately available, notify the fire department first and then try to notify the Warehouse Manager.

4) DISPOSAL

No physical destruction of merchandise is to be taken without the Warehouse and Accounting Managers. Disposal merchandise may be sent to a special agent at the company's discretion.

APPENDIX D

MANUFACTURER'S TEST LIST

Test on the Assenbling line of the Glow Lamp

Tester: Manufacturer - Toshiba Subcontract Company

<u>Assembling operation</u>	<u>Checked Item</u>	<u>Method</u>	<u>Sampling</u>	<u>Remarks</u>
Phosphor Application	Temperature	Dial	At the initial operation	
	Transmissivity	Transmissivity meter	2/day	
Baking	Heater temperature		At the initial operation	
Emitter application				
Sealing	Baking condition	Magnifier	2/day	
	Dimension	Scale	2/day	
Emitter application				
Beads baking	Form	Magnifier	2/day	
	Dimension	Scale	2/day	
	Baking condition	Magnifier	2/day	
Exhaust	Vacuum degree	Vacume gauge	At the initial operation	
	Heater temperature		At the initial operation	
Emitter decomposition	Annode current	Ammeter	At the initial operation	
	Decomposition time	Timer	At the initial operation	
	Electrode temperature	Radiation thermometer	At the initial operation	
Gas enclosing	Gas pressure		At the initial operation	
Lighting check	Lighting condition	Seeing	100 %	
Sub-electrode printing	Printing width	Scale	At the initial operation	
	Application condition	Microscope	At the initial operation	

<u>Assembling operation</u>	<u>Checked Item</u>	<u>Method</u>	<u>Sampling</u>	<u>Remarks</u>
Sub-electrode dry	Drying temperature	Thermometer	At the initial operation	
	Term	Timer	At the initial operation	
Finishingcheck	Structure, Look	Seeing	100 %	
	Dimension	Check-jig	100 %	
	Lighting	Check-jig	100 %	
Primer application	Application condition check	Microscope	100 %	
Shipping test	Initial properties	Check instrument	MIL-STD-105D	
	Dimension	Scale	level II common-1	
	Look, Structure			
	Life test	Test instrument	1 lot/week	
	Illumination intensity	Lumeter		
Package	Package condition	Seeing		
	Indication contents	Seeing		

Tests on the Assembling Line of the Glow Lamp Ass'y

Tester: Manufacturer - Toshiba Subcontract Company

<u>Assembling operation</u>	<u>Checked Item</u>	<u>Method</u>	<u>Sampling</u>	<u>Remarks</u>
Receiving of Lamp	Appearance	Visual	50/every lot	
	Application of auxiliary electrodes	Removal strength	10/every lot	
	Glow discharge	Glow tester	50/every lot	
Fixing of Leads	Location	Jig	100 %	
Receiving of Holder	Appearance	Visual	20/every lot	
	Dimentions	Calipers	3/every lot	
Finishing	Dimentions	Calipers	3/every lot	
	Short-circuit test	Dielectric strength tester	100 %	
	Lighting test	Light-up equipment	100 %	
	Holder fitting	Torque gauge	100 %	
	Appearance	Visual	100 %	
Glow discharge test	Light-up condition	Glow tester	100 %	
Shipping test	Appearance & Const- ruction	Visual	Not serious faulty: AQL 2.5, every lot Serious faulty: AQL 0.25, every lot	
	Dimentions	Calipers, Gauge	5/every lot	
	Dielectric strength	Dielectric strength tester	5/every lot	
	Light-up	Light-up equipment	5/every lot	
	Glow discharge	Glow tester	100 %	
	Auxiliary electrode, location & application	Gauge & removal strength	20/every lot	
			5/every lot	

Testing at Canon Inc.

<u>Type of Test</u>	<u>Checked Item</u>	<u>Method</u>	<u>Sampling</u>
Receiving Test of Glow Lamp	No smudge and no crack in tubing	Visual	AQL=0.4%
	Fitting of auxiliary electrode	Removal test with plastic tape	10 / lot
<u>Shipping test of CS II Unit</u>			
Check of Glow Lamp	Electrode twisted	Visual	100 %
	Electrode removal	Visual	100 %
	Electrode shorted	Visual	100 %
Check of Waveforms	100mV Output 300mV	Specific tester	100 %
	30% Output 70% fluctuation	Specific tester	100%
Function test	White line/black line	Specific equipment	100%
	Resolution ability	Specific equipment	100%

TOSHIBA Xe Glow Lamp QUALITY CONTROL PROCEDURES

Flow Chart	Process	Control Item	Sampling	Testing Measure
	Glass Tube Methanol			
	Tube Washing			
	Phosphor			
	Phosphor Coating	Dryng Temp	At m/c start in morning	Thermometer
	Coating Inspection	Transmission	2 pcs per 4 hour	Transmission device
	Baking	Oven Temp Bulb Temp	At m/c start in morning	Thermometer Tempilag
	Electrode			
	Sealing	Appearance Shape Dimensions	2 pcs per 4 hour 2 pcs per 4 hour 2 pcs per 4 hour	Visual Visual Scale
	Electrode			
	Glass Bead			
	Bead Mount Making	Appearance Shape Dimensions	2 pcs per 4 hour 2 pcs per 4 hour 2 pcs per 4 hour	Visual Visual Scale
	Exhausting	Manifold Vacuum	At m/c start in morning	Vacuum Gauge
	Filling Gas			
	Gas Filling	Gas Pressure	At m/c start in morning	Pressure Gauge
	Aging	Voltage Aging Time	At m/c start in morning	Voltmeter Timer
	Aging Bulb Inspection	Lighting Status	All	Visual
	Electric Conductive Adhesive			
	Printing	Appearance Dimensions	2 pcs at m/c start in morning	Visual Scale
	Inspection	Appearance Starting Voltage	All All	Visual Testing Device
	Out going Inspection & Test	Lamp Current Lamp Voltage Starting Voltage Dimensions Lighting Distribution	5 pcs per lot 5 pcs per lot 5 pcs per lot 5 pcs per lot 5 pcs per lot	Characteristics Testing Device Scale Lighting Distribution Testing Device
Packing	Life	3 pcs per week	Life Tester	
Delivery				

Canon

CANON U.S.A., INC.
ONE CANON PLAZA, LAKE SUCCESS, N.Y. 11042-1113
TELEPHONE: (516) 488-6700
TELEX NO: 96-1333 CABLE: CANON USA LAKS
GENERAL FAX TELEPHONE
(516) 488-3623-1648

NL 23700
30-30305

November 13, 1987

U.S. Nuclear Regulatory Commission
Division of Fuel Cycle and Material Safety
Washington, D.C. 20555
Attn: Mr. Steven L. Baggett

Re: Application for the Specific and Possession Licenses

Dear Mr. Baggett:

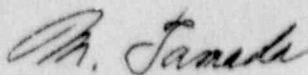
We are very pleased to have the opportunity of meeting with you and Mr. Don Mackenzie.

Enclosed please find the application for the Specific and Possession Licenses, in reference to exempt concentrations product (10 CFR §30.71)

Should you require any additional information, please contact me at my direct telephone number which is (516) 933-6327.

Your prompt attention on this matter would be greatly appreciated.

Sincerely yours,



Masanobu Tamada
Quality Assurance Specialist

Enclosures

MT:gs

U.S. NUCLEAR REGULATORY COMMISSION

NOV 19 10:26

RECEIVED

120358

APPLICATION FOR MATERIAL LICENSE

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.

FEDERAL AGENCIES FILE APPLICATIONS WITH:

U.S. NUCLEAR REGULATORY COMMISSION
DIVISION OF FUEL CYCLE AND MATERIAL SAFETY, NMSS
WASHINGTON, DC 20555

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS, IF YOU ARE LOCATED IN:

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

U.S. NUCLEAR REGULATORY COMMISSION, REGION I
NUCLEAR MATERIAL SECTION 8
631 PARK AVENUE
KING OF PRUSSIA, PA 19408

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

U.S. NUCLEAR REGULATORY COMMISSION, REGION II
MATERIAL RADIATION PROTECTION SECTION
101 MARIETTA STREET, SUITE 2900
ATLANTA, GA 30323

IF YOU ARE LOCATED IN:

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

U.S. NUCLEAR REGULATORY COMMISSION, REGION III
MATERIALS LICENSING SECTION
799 ROOSEVELT ROAD
GLEN ELLYN, IL 60137

ARKANSAS, COLORADO, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, SOUTH DAKOTA, TEXAS, UTAH, OR WYOMING, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
MATERIAL RADIATION PROTECTION SECTION
811 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TX 76011

ALASKA, ARIZONA, CALIFORNIA, HAWAII, NEVADA, OREGON, WASHINGTON, AND U.S. TERRITORIES AND POSSESSIONS IN THE PACIFIC, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION V
MATERIAL RADIATION PROTECTION SECTION
1480 MARIA LANE, SUITE 210
WALNUT CREEK, CA 94598

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 JURISDICTION.

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

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

2. NAME AND MAILING ADDRESS OF APPLICANT (Include ZIP Code)

CANON U.S.A., INC.
ONE CANON PLAZA
LAKE SUCCESS, NY 11042

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

SEE APPENDIX A

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

MASANOBU TAMADA, ONE JERICHO PLAZA, JERICHO, NY 11753

TELEPHONE NUMBER

(516) 933-6327

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 Appendix B P. 3

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED. See Appendix B P. 3

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE. Not Applicable

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS. See Appendix B P. 3

9. FACILITIES AND EQUIPMENT. See Appendix B P. 2, 3

10. RADIATION SAFETY PROGRAM. See Appendix B P. 3

11. WASTE MANAGEMENT. See Appendix B P. 3

12. LICENSEE FEES (See 10 CFR 170 and Section 170.31)
FEE CATEGORY 3-1, 3-P AMOUNT EMPLOYED \$ 520.00
App. New License

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, 36, 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.

SIGNATURE-CERTIFYING OFFICER

TYPED/PRINTED NAME

TITLE

DATE

Kozaburo Uesugi
Kozaburo Uesugi

Vice President and
General Manager of Service
Nov 13 '87

14. VOLUNTARY ECONOMIC DATA

a. ANNUAL RECEIPTS

<\$250K	\$1M-3.5M
\$250K-500K	\$3.5M-7M
\$500K-750K	\$7M-10M
\$750K-1M	>\$10M

b. NUMBER OF EMPLOYEES (Total for entire facility excluding outside contractors)

c. NUMBER OF BEDS

d. WOULD YOU BE WILLING TO FURNISH COST INFORMATION (Dollar and/or staff hours) ON THE ECONOMIC IMPACT OF CURRENT NRC REGULATIONS OR ANY FUTURE PROPOSED NRC REGULATIONS THAT MAY AFFECT YOU? (NRC regulations permit it to protect confidential commercial or financial--proprietary--information furnished to the agency in confidence.)

YES

NO

FOR NRC USE ONLY

To be voided --
Pass. (3P) to be
handled with # 020361.

120358

J. Kerhuly
11/23/87

APPENDIX A

WAREHOUSE ADDRESS

&

PERSON IN CHARGE

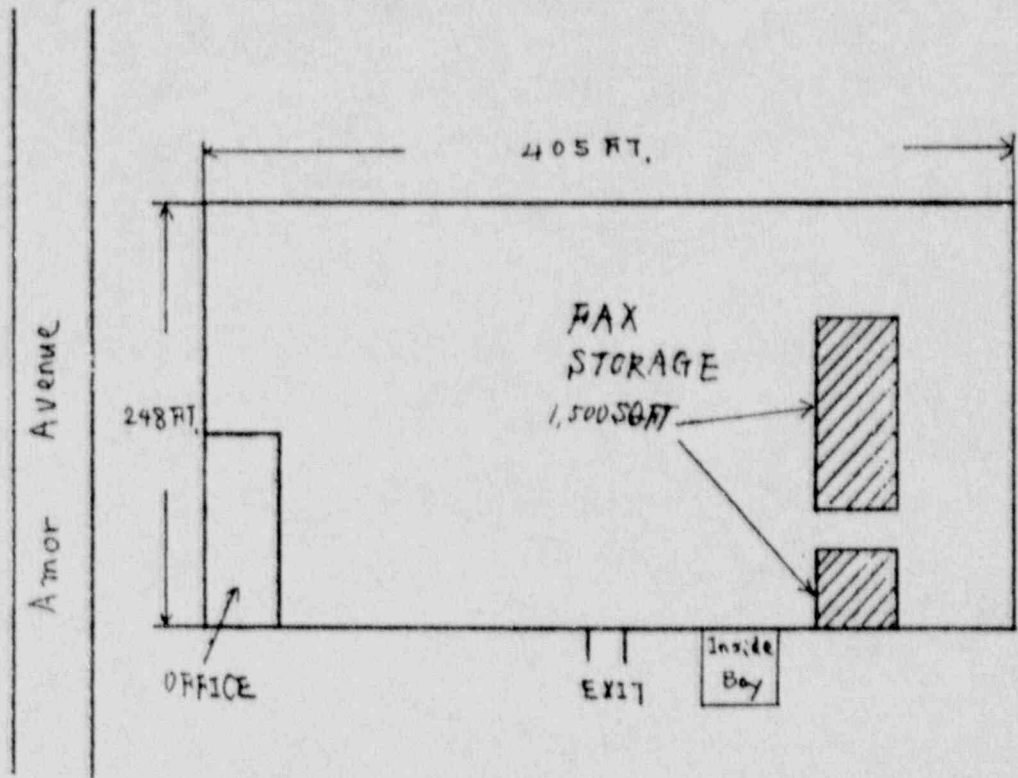
1. PUBLIC WAREHOUSE NAME: TRAMMELL CROW DISTRIBUTION CORPORATION
2. ADDRESS: 6485 Crescent Drive
Norcross, GA 30071
(404) 448-9082
3. SECURITY SYSTEM: WELLS FARGO
4. PERSONS IN CHARGE: NANCY A. BURDETTE

1. PUBLIC WAREHOUSE NAME: NIPPON EXPRESS U.S.A., INC.
2. ADDRESS: 850 N. Edgewood Avenue
Woodale, IL 60191
(312) 350-0202
3. SECURITY SYSTEM: WELLS FARGO
4. PERSONS IN CHARGE: TAKEO KAGIYAMA
General Manager

1. PUBLIC WARHOUSE NAME: NIPPON EXPRESS U.S.A., INC.
2. ADDRESS: 75 Amor Avenue
Carlstadt, N.J. 07072
(201) 935-0444
3. SECURITY SYSTEM: BURGLAR ALARM SYSTEM
(SONITROL SECURITY LINK)
4. PERSONS IN CHARGE: PHIL GRIECO
Senior Supervisor

1. PUBLIC WAREHOUSE NAME: INTERNATIONAL WAREHOUSE CORPORATION
2. ADDRESS: 400 West Artesia Boulevard
Compton, CA 90220
(213) 632-4111
3. SECURITY SYSTEM: CERTIFIED ELECTRONIC ALARM SYSTEM
AROUND THE CLOCK SECURITY GUARDS
5. PERSONS IN CHARGE: ARTHUR M. KAWADA
Assistant Manager

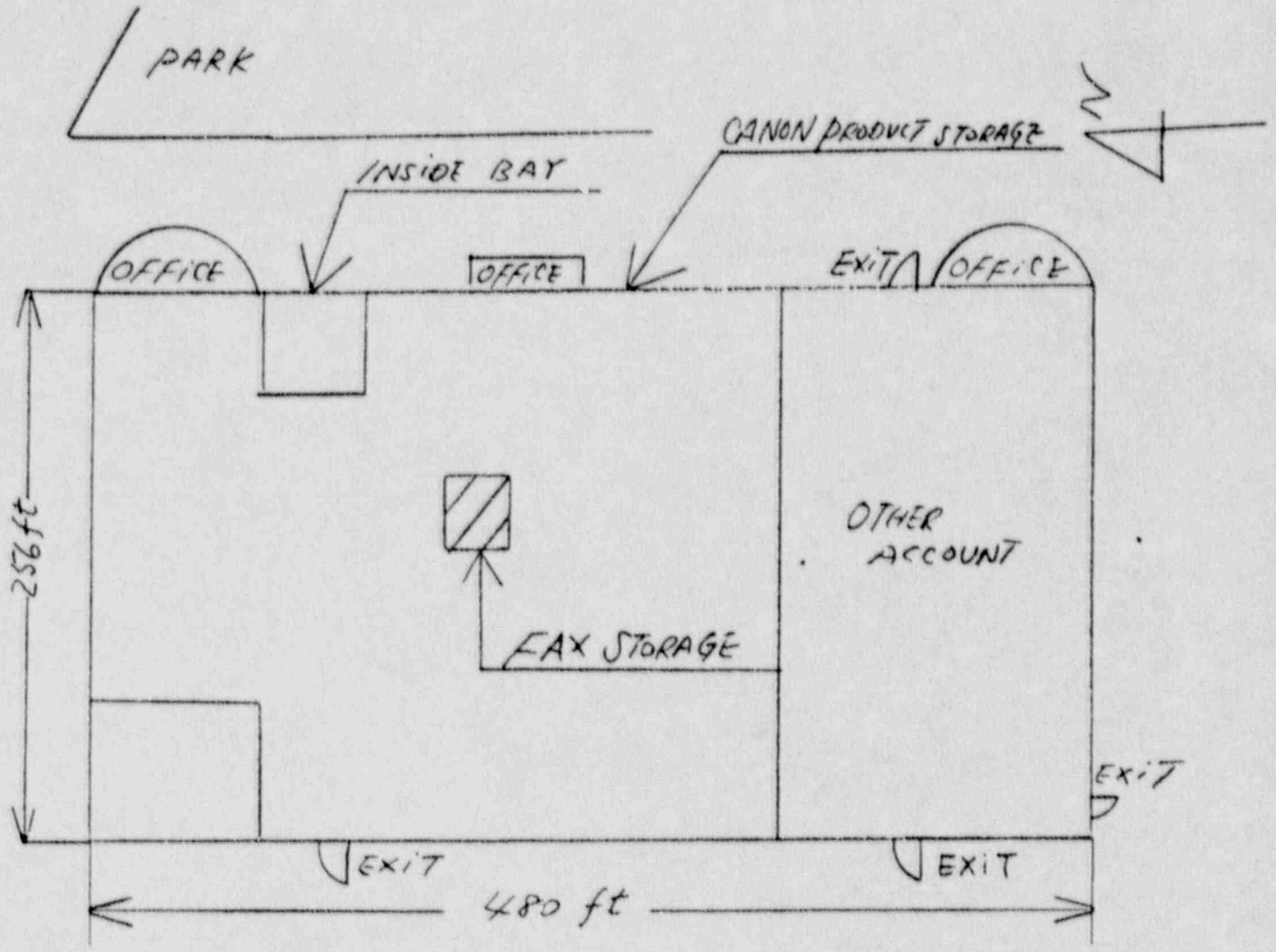
1. PUBLIC WAREHOUSE NAME: USCO DISTRIBUTION SERVICES, INC.
2. ADDRESS: 2271 Fench Settlement Road
Dallas, TX 75212
(214) 634-8726
3. SECURITY SYSTEM: WELLS FARGO
4. PERSONS IN CHARGE: C.L. (CHUCK) CANTRELL
Warehouse Manager



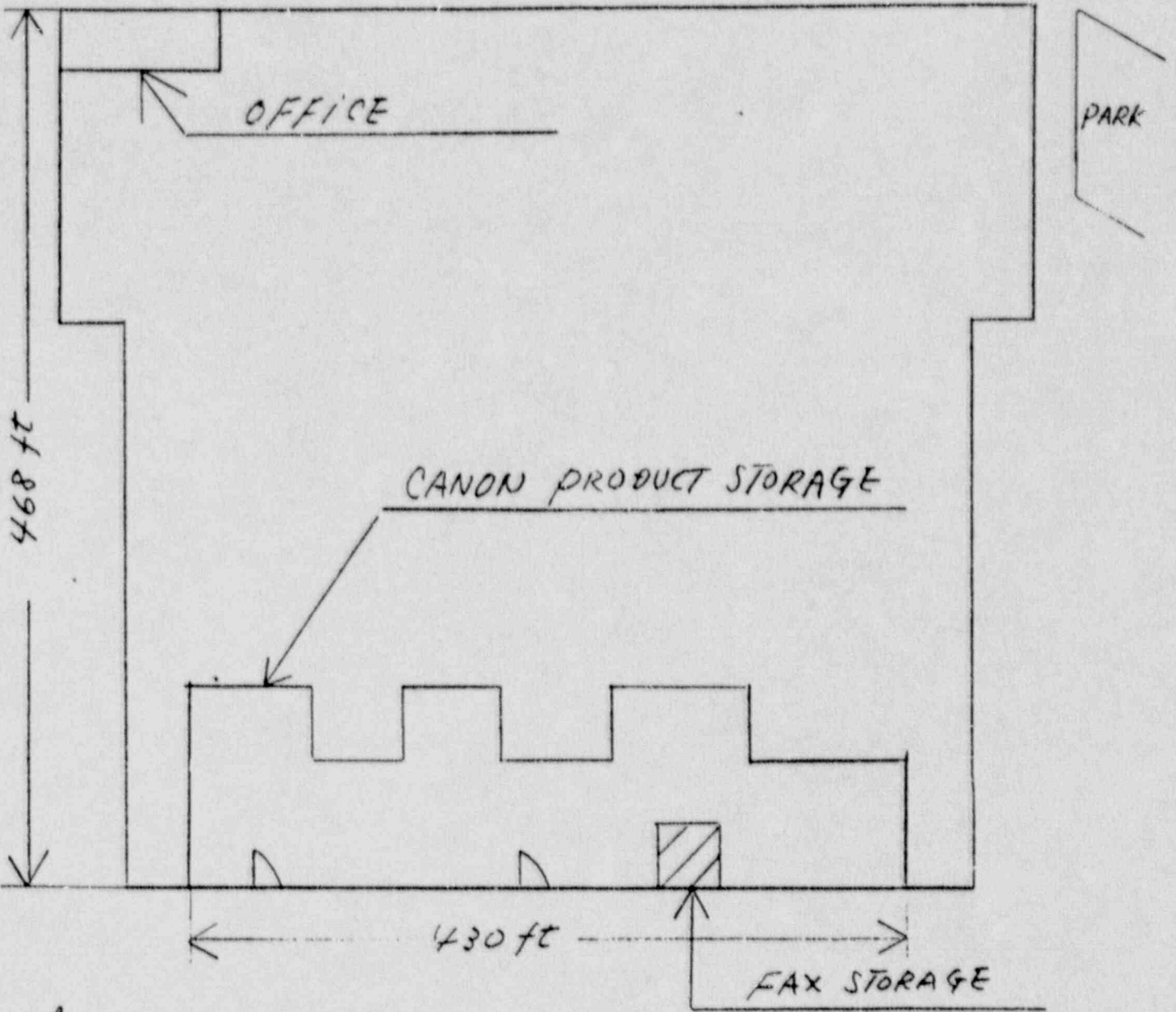
All Canon Warehouse

N.J.

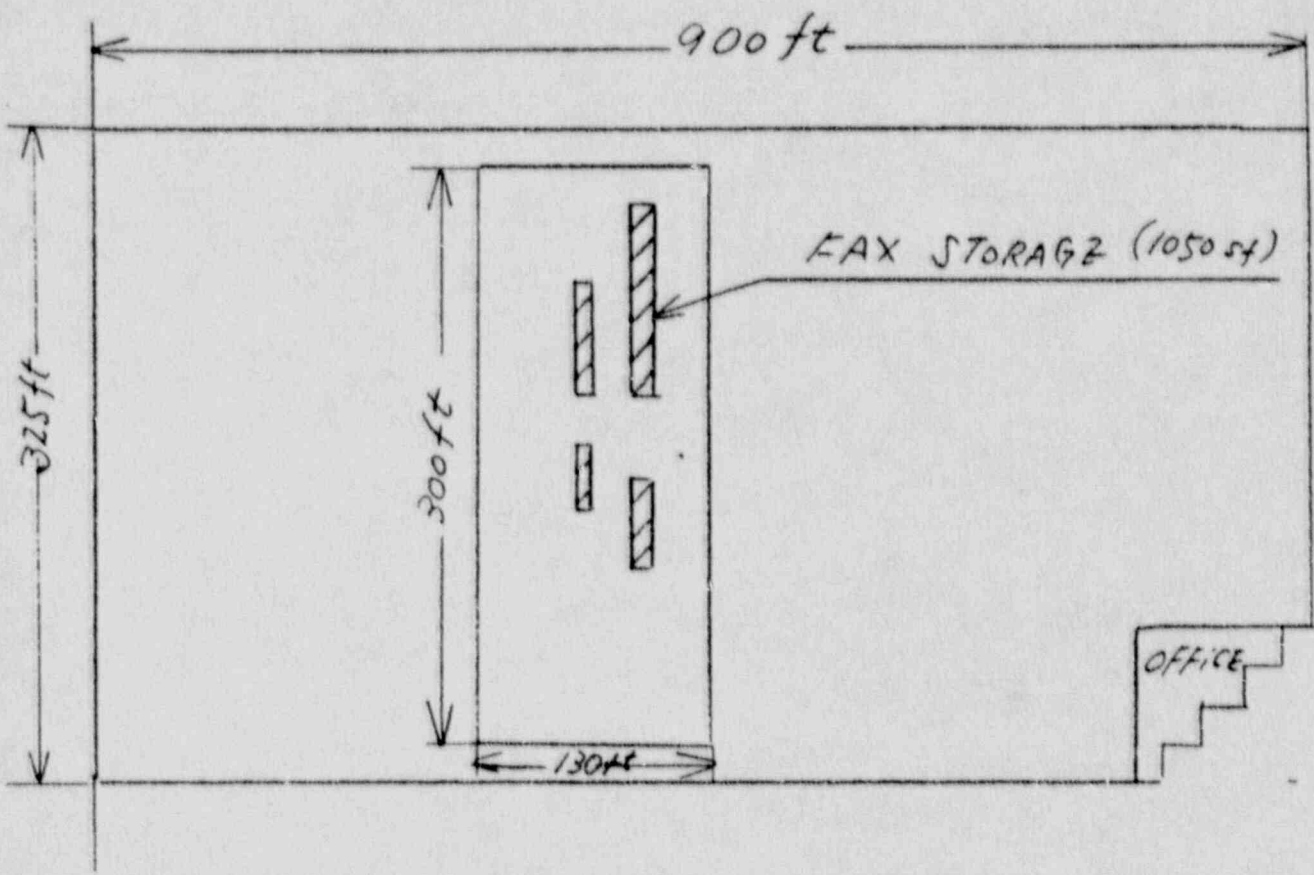
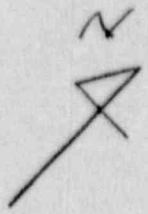
N. Edgewood Avenue



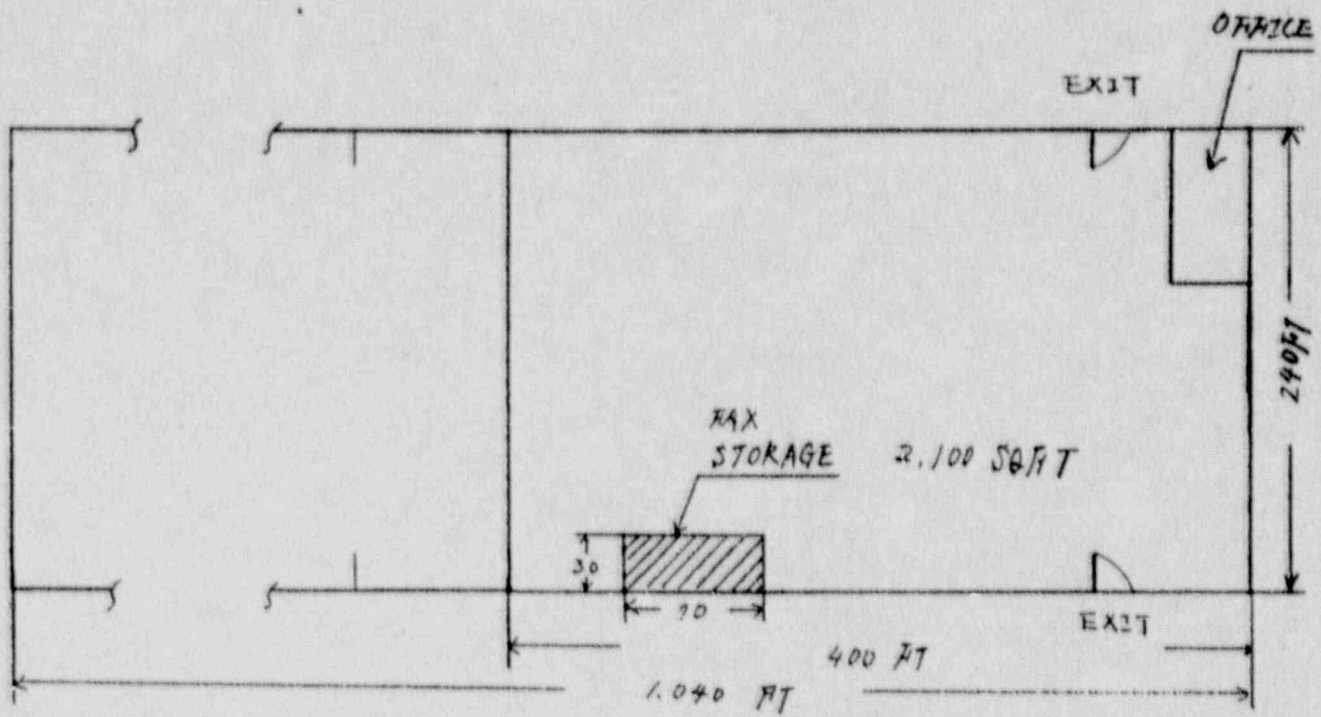
ASTEJIA BLVD.



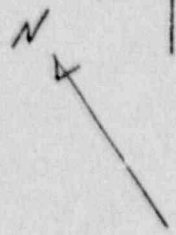
CA.



TX



CRESCENT DR.



GA

APPENDIX B

SPECIFIC LICENSE FOR
EXEMPT BY-PRODUCT MATERIAL

I. Background of Application

A. Type of Application

Canon U.S.A., Inc. is hereby formally requesting a specific license to initially transfer for sale or distribution in the United States products containing exempt by product material .

The subject of this license is an electron tube in the form of a glow lamp. The tube is with the class of products specifically exempted from certain licensing requirements by operation of 10 C.F.R. 30.15 (a)(8) because it contains less than 5 microcuries of nickel-63 (Ni-63) and radiation levels do not exceed 2 millirad per hour at a distance of 1 centimeter when measured through 7 milligrams per square centimeter of absorber.

Canon U.S.A., Inc. requests that this license encompass the contact sensor which containing the electron tube, and facsimile machine containing the electron tube assembly.

B. Products to be Licensed

1. Electron Tube (See Attachment #1)

(Mfr. by Toshiba)

The electron tube is designed to function as a glow lamp in a facsimile machine. Each tube contains a maximum of 0.32 microcuries of Ni-63. The Ni-63 is plated onto electrodes comprised mainly of nonradioactive nickel-58. There are two electrodes, one at each end of the tube. Each electrode contains a maximum of 0.16 microcuries Ni-63. The outer envelope of the electron tube consists of leaded glass, 0.49-0.61 mm. thick, which is fused to close each end and form a cylinder approximately 233 mm. long and 6 mm. in diameter. The electron tube will not operate if the seal is imperfect or the glass envelope is cracked or otherwise comprised. A hard plastic mounting cap, which nearly completely covers each electrode, is attached to each end of the tube. A wiring harness completes the tube assembly.

2. Contact Sensor Unit (See Attachment #2)

The tube is mounted in a subassembly called the contact sensor unit, which in turn is mounted as a unit into the facsimile machine. The Contact Sensor Unit is a plastic and metal structure, bearing the lamp, which functions as an assembly for storing the lamp and servicing the facsimile machine. The Contact Sensor Unit is constructed so as to surround and protect the electron tube.

3. Facsimile Machine (See Attachment #3)

The facsimile machine contains the Contact Sensor unit, including the electron tube. The facsimile encloses the tube within a hard plastic and metal shell comprised of the machine's outer casing and the Contact Sensor unit. This case further serves to protect the tube. When installed within the facsimile machine, the electron tube is visible only through narrow slits designed to accommodate single sheets of paper.

C. Production and Shipping

The Contact Sensor and facsimile machine are imported by the applicant, Canon U.S.A., Inc. The facsimile machine and Contact Sensor are built in Japan by Canon, Inc., Canon U.S.A.'s parent company. The electron tube is bought from Toshiba Corporation.

II. Section 32.14 -- Requirements for Issuance of a Specific License for Distribution of Certain Items Containing Exempt Byproduct Material

A. Section 32.14(a) -- General Requirements for Issuance of a Specific License (§30.33)

1. Adequate Equipment and Facilities

The applicant's electron tubes are tested individually by the manufacturer. They will not operate, and are rejected, if the glass envelope is not intact. The radiation emitted by the amount of Ni-63 on an electrode does not penetrate the intact glass tube.

The Contact Sensor unit and facsimile machines are packed for shipping in cardboard or other appropriate packaging designed to protect against breakage. As previously stated, the Contact Sensor unit and the facsimile increase the protection of the tube. A periodic random sample of electron tubes is subjected to vibration and shock tests designed to ensure the tubes will survive the conditions of shipping and handling by Manufacturer. No tube has been known to break during such testing.

Canon U.S.A.'s warehouses have in-rack sprinkler systems, which are in full compliance with insurers' standards and offer exceptional protection against fire. The warehouses also incorporate modern security systems to prevent theft or tampering.

2. Training and Experience for Handling of Electron Tubes

Canon U.S.A. has been in the electronics business for many years, and employees are experienced in the proper handling, shipping, and storage of electronic equipment requiring special care.

It should be noted that the Nuclear Regulatory Commission's (NRC) regulations recognize that electron tubes containing less than 5 microcuries of nickel-63 are items of relatively small concern in terms of health and safety. Nevertheless, all Canon U.S.A. personnel will be informed of the existence of byproduct material in the tubes and will receive instruction in proper handling of the tubes, including clean-up and disposal procedures in case of breakage (See Appendix C). All waste disposal will meet or exceed NRC and applicable state regulations.

B. Section 32.14(b)(1) -- (Application Item 5) -- Radioactive Material

The radioactive material contained in the electron tube is nickel-63. The nickel-63 is a solid plated on an electrode composed of nickel-58 (non-radioactive). The maximum quantity per glow lamp is 0.32 microcuries. The maximum amount which will be possessed at anytime is 10,000.

C. Section 32.14(b)(2) -- (Application Item 6) -- Purpose for which Licensed Material will be Used

The licensed material will be contained in an electron tube which will function as glow lamp. The tube will be contained in a Contact Sensor unit that will in turn be contained in a facsimile machine.

D. Section 32.14(b)(2) -- Details of Construction

A drawing of the glow lamp is attached hereto as Attachment 1.

Glass:	Lead glass
Dimension:	As shown in drawing
Glass Thickness:	0.49 - 0.61 mm

Sealing is achieved by fusing the ends of the glass of each tube together utilizing heat followed by an annealing process.

A separate drawing of the Contact Sensor unit containing the glow lamp is attached as Attachment 2.

A separate drawing of the tube as contained in the facsimile unit is attached as Attachment 3.

E. Section 32.14(b)(3) -- Method of Containment or Binding

The nickel-63 is bound to the nickel-58 by means of electroplating.

For the details of the method of containment by means of the glass bulb, see Section D above.

When contained in the facsimile machine or the Contact Sensor unit, the electron tubes are enclosed by the hard plastic and metal material of the finished facsimile product. This enclosure would minimize or prevent any exposure to the environment in the extremely unlikely event of breakage of the bulb.

F. Section 32.14(b)(4) -- Procedures for and Results of Prototype Testing

By Toshiba (See Appendix D page 1-3)

A random sample of glow lamps are subject to both a vibration test and a shock test. These tests are designed to replicate the most severe conditions likely to be encountered, i.e., shipping of the equipment. No break in the glow lamp has been experienced as a result of these tests, and, consequently, there has been no release of the nuclear product material to the environment.

Every lamp is test lighted. A lamp will not light if there is any break in the glass container.

With respect to the electrode itself, a random sample is undertaken of 10 in every 10,000 units to determine the amount of nickel-63 per electrode.

G. Section 32.14(b)(5) -- Quality Control Procedures to be Followed in the Fabrication of Production Lots and Quality Control Standards

1. By Canon (See Appendix D page 4)

At receipt of lamps, Canon, Inc. performs receiving test on each glow lamp, which include check of appearance, light-up condition under fluctuated supply voltage, luminance and illumination. Receiving tests are performed on each glow lamp at present, but at random in future.

After the glow lamps have been incorporated in the Contact Sensor Units by Canon, all the Contact Sensor units are checked about appearance and function before assembling into the facsimile equipment.

2. By Canon U.S.A.

Canon U.S.A. keeps the record concerning of the Canon, Inc. test results.

H. Section 32.14(b)(6) -- Labeling

Each Contact Sensor Unit will be labeled as follows:

Labeling Size = 30 mm by 8 mm
Word Size = Point 6
Labeling Material = Adhesive paper label

Include following word: Ni63 Distributed by Canon U.S.A., Inc.

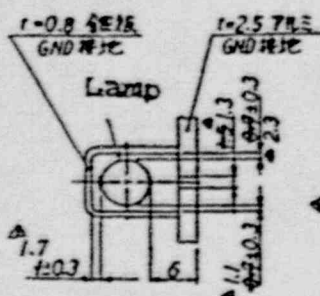
I. Section 32.14(b)(6) -- Radiation Level and Method of Measurement

The level of radiation from the electron tube both individually and as contained within each facsimile unit or within each Contact Sensor Unit is zero.

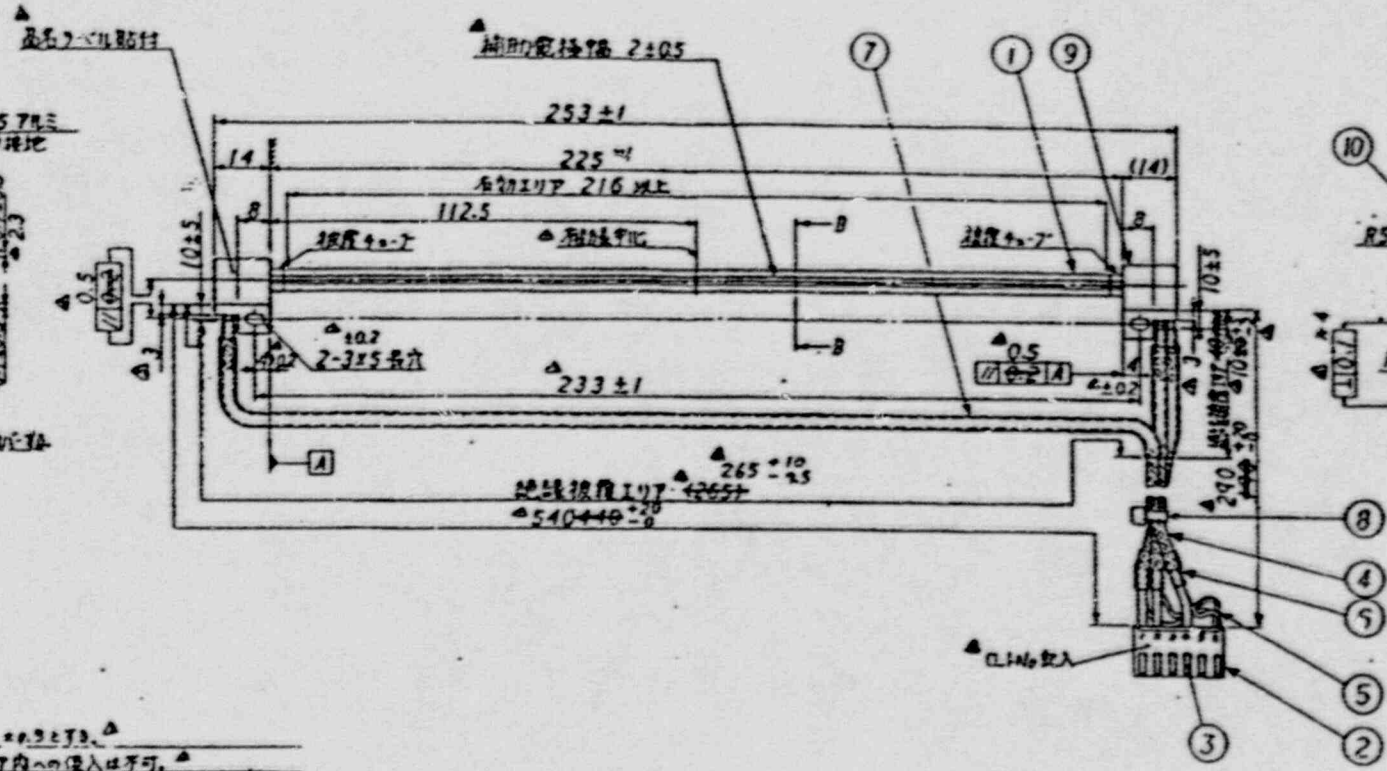
The level is measured by Lamp Mfr.

Attachment #1
CONFIDENTIAL

寸法記号	寸
φ1.0	0.2
φ1.5	0.3
φ2.0	0.4
φ2.5	0.5
φ3.0	0.6
φ4.0	0.8
φ5.0	1.0



使用注意:
1. 2.5φの穴に全長を挿入する。
断面 D-D (2/1)



注 1. 箔材の寸法許容差は ±0.3以下。
2. 箔材の両面に樹脂の侵入は不可。

※2: 補助電極の寸法
※3: 左右の穴の寸法 (1.5は中心)
※4: 箔材の寸法 (1.5)

GLOW LAMP

Manufacturer: Toshiba Cooperation
Mfr. type no: FC5G54.246T6/U-CN
Rating: 1200 Vac, 4.2 W

- Adhesive Holder Connector
- Insulation tube
- Insulation tube
- Insulated wire
- Shielding wire
- Terminal Housing
- Xenon lamp

10	接合剤	数量	寸法	仕様
9	ホルダ	2	27×10-6.24	三菱化成工業 3-C-10-N-2
8	絶縁管	1	6-6.710	
7	絶縁管	3	2.5×1.7	2.5×1.7 絶縁管 透明 0.1
6	絶縁管	3	2.5×1.7	2.5×1.7 絶縁管 透明 0.1
5	ビニール電線	3	2.5	UL1007 AWG 26 2.5
4	シールド線	3	2.5	UL1007 AWG 26 2.5
3	ターミナル	4		0.5×0.5×1.1
2	ハウジング	1	6-6.710	0.5×0.5×1.1
1	キセノンランプ	1		φ3.0 1.246

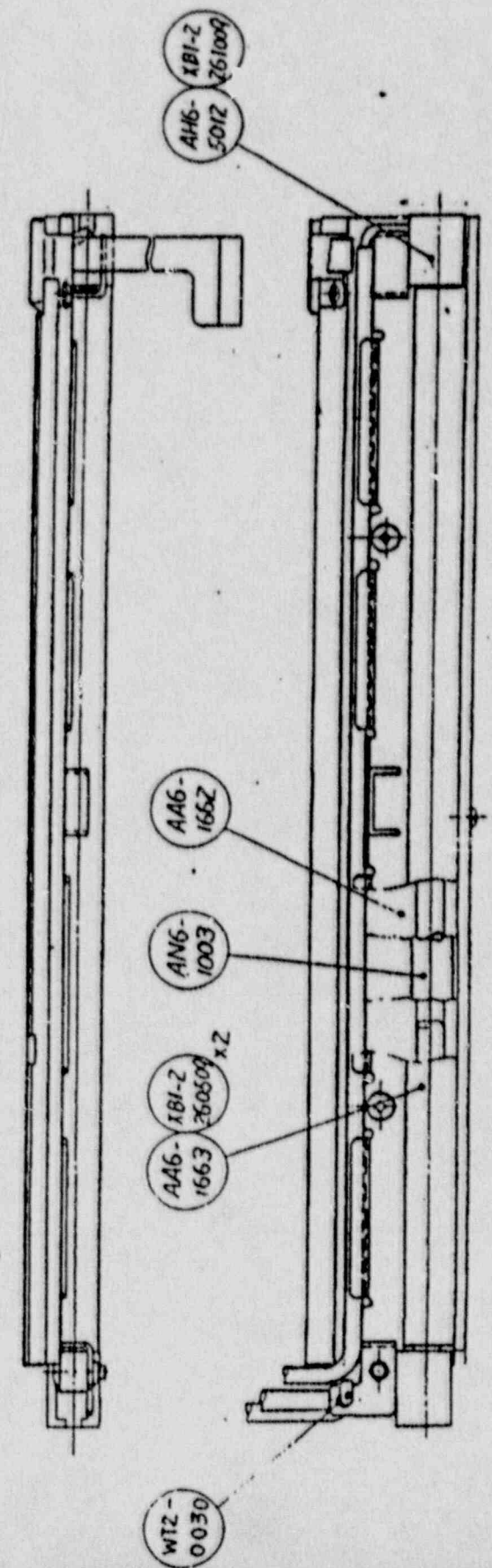
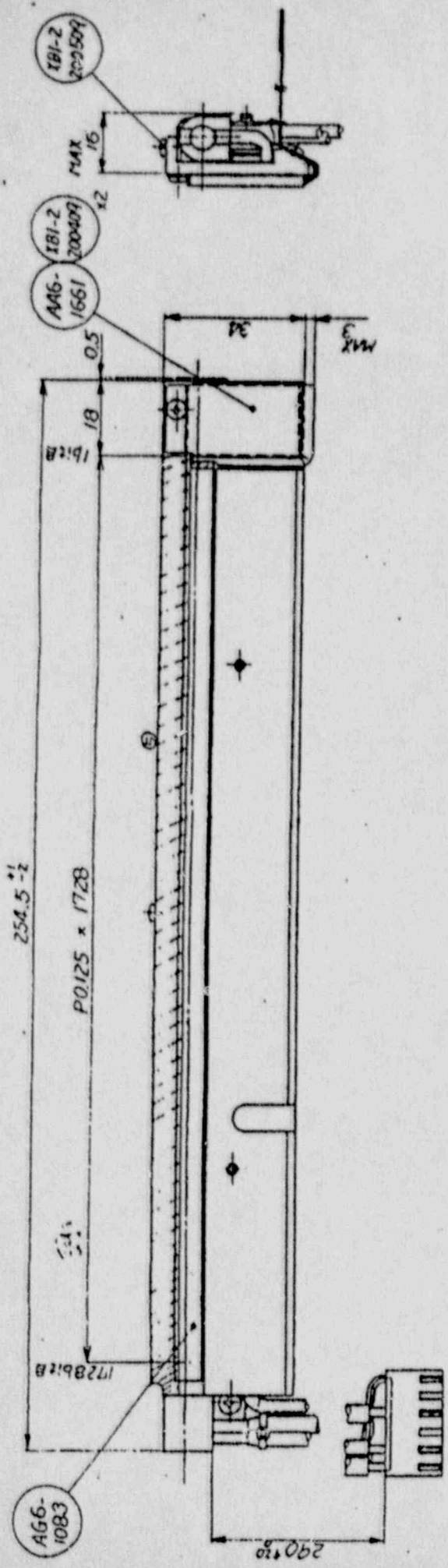
承認 1/1 mm	縮尺 1/1 mm	図名 FC5G54.246T6/U-CN	図番 1/1
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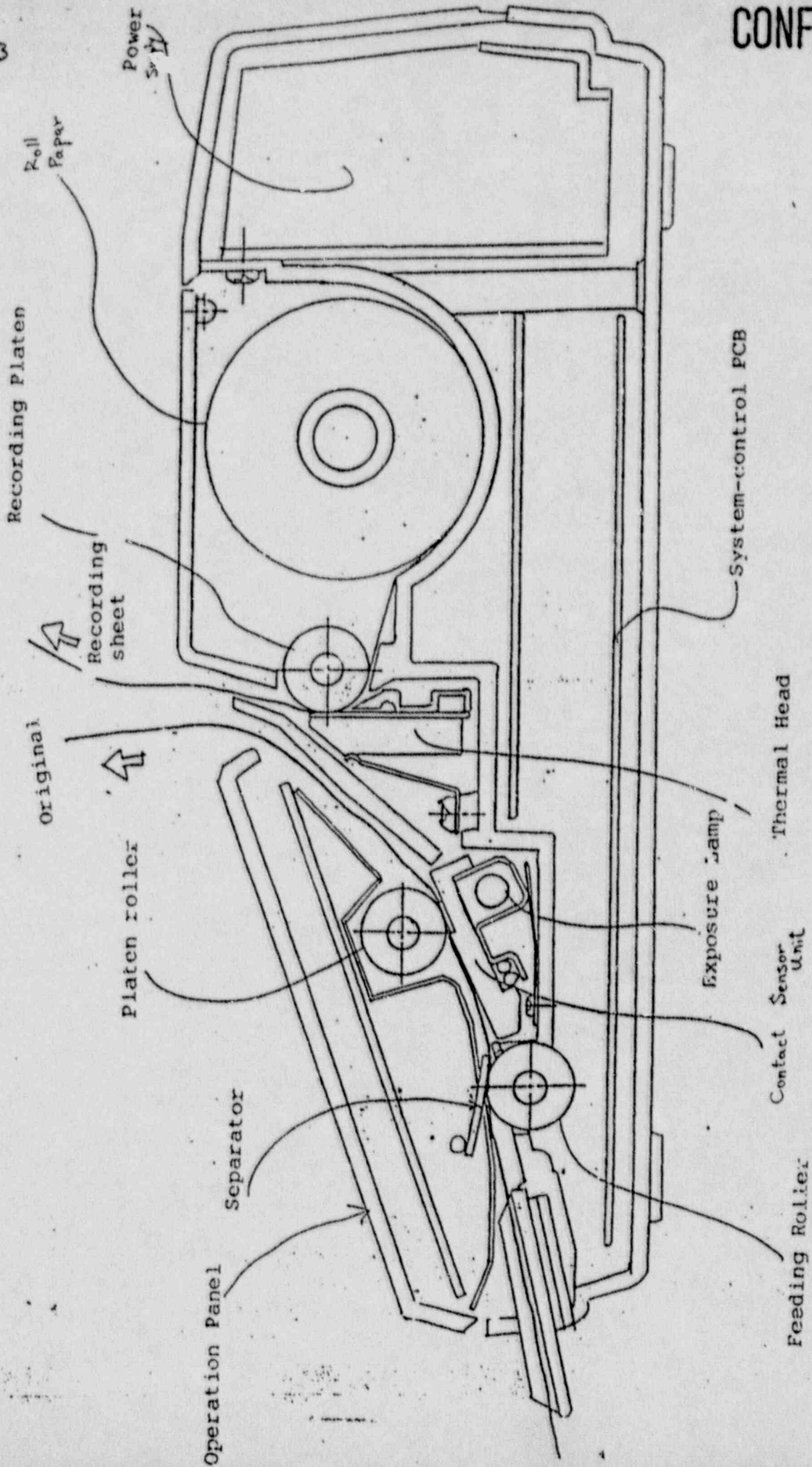
CONFIDENTIAL

製造寸法管理番号 303

図号・BM	訂正記号	図名	部品記号	数量	単位	備考
3 875.27	M1.1	接触センサーユニット	CS 3	UNIT	BM 87.2.27	三角法
4 875.27						
5 875.27						

Contact Sensor Unit





APPENDIX C

TRAINING AND EXPERIENCE
FOR HANDLING PROCEDURES

I. WAREHOUSE CONDITIONS

- 1) Keep the warehouse properly lighted.
- 2) Keep the temperature, humidity and ventilation properly and evenly adjusted throughout the warehouse.
- 3) Repair any tools and/or machinery in proper working order. Repair anything that is broken immediately.
- 4) Keep the forklifts and tools in their proper places and areas when not in use, so that they can be easily located by anyone when needed.
- 5) Keep the warehouse clean by sweeping and dusting whenever necessary.
- 6) Organize the warehouse properly and maintain order by keeping all aisles, stairs and exits clear for safety.
- 7) Keep all merchandise in its proper area, so as to be visible and easily accessible.

II. Warehouse Operations Procedures

A. Receiving procedure for new merchandise

By Air shipment from Japan

Ocean Container shipment from Japan

Warehouse Transfer shipment

1. Make sure that merchandise being received are consigned or addressed to us. (Receiving clerk must have pre-knowledge of all merchandise or things he is authorized to receive).
2. Receiving must insure that he is signing the proper Delivery Receipt.
3. Count of pieces or cartons must always agree with the Delivery Receipt.
4. When receiving clerk is confronted with overage, shortage, and damage (concealed damage) problems, the foregoing must be taken:
 - a. Overage He must report it immediately to Warehouse Manager through his supervisor so that necessary action can be taken.
 - b. Shortage He must sign for only what is actually received. He must note the number of pieces or cartons short and identify them on Delivery Receipt.
 - c. Damage He must note on Delivery Receipt the number and description, and note "subject to inspection" before he signs the Delivery Receipt. He should ask the driver or the deliverer to initial exceptions noted. In case of suspicion of concealed damage, he should note on Delivery Receipt, "Subject to count and inspection" and then sign for it. If there is strong indication of damage, request driver or deliverer to open the carton(s) for inspection before signing it.

B. Storage and Inventory

After receiving all merchandise, put in stock. Each item is placed on the proper location. The clerk logs receiving quantity on a clipboard. Some merchandise is stored at the same place, on the floor or rack. We often take inventory at least one at the beginning of each month. Merchandise is always handled with care.

C. Shipping Procedures

1. Picking procedure

- a. The picker is assigned a particular shipping order(s) to be picked by his supervisor, who determines the picking priorities.
- b. The picker then proceeds to the picking area with a cart in the case of a large truck order with a fork-lift and pallet. He goes to each stock location, logsout the quantity to be picked on a particular inventory control sheet (clipboard), pulls or picks the correct quantity.
- c. When all the shippable items are picked, a fast re-count is made to ensure that all the items are physically picked.

2. Checking procedure

- a. Checker checks each item quantity and verifies at the same time the description of the item on the order picked.
- b. Checker releases order(s) to packer for packing.

3. Packing Procedure (small loose itmes. Big cartons are just attached labels.

- a. The packer selects the size of the carton to be used. He fills sufficient foam pac for innter cushioning protection, rechecks each item being packed and puts them inside and then fills the carton with foam pac.
- b. The packer closes the cartons and seals it and attaches the proper labels.

4. Loading procedure

- a. Small packages are shipped by UPS.
- b. Truck orders prior to loading into carriers trailer proper bill of lading is made on each shipment. Shipping Clerk checks for the number of cartons and compares it with bill of lading. If everything is in order, he loads merchandise into trailer.
- c. After loading, checker insures that all bills of lading are properly signed.

III. In case of the following troubles:

1) MERCHANDISE DAMAGED BY HANDLING OR BEING FOUND DAMAGED.

When the damage is caused or discovered, the Warehouse Manager should be immediately informed so that proper action can be taken.

2) MERCHANDISE MISSING

When merchandise is found to be missing, report the facts to the Warehouse Manager immediately.

3) FIRE

In case of fire, if it is small enough to handle safely, do so and report the the Warehouse Manager as soon as possible. If the fire is too large, notify the Warehouse Manager and then the fire department. If the Warehouse Manager is not immediately available, notify the fire department first and then try to notify the Warehouse Manager.

4) DISPOSAL

No physical destruction of merchandise is to be taken without the Warehouse and Accounting Managers. Disposal merchandise may be sent to a special agent at the company's discretion.

1. PUBLIC WAREHOUSE NAME: TRAMMELL CROW DISTRIBUTION CORPORATION
2. ADDRESS: 6485 Crescent Drive
Norcross, GA 30071
(404) 448-9082
3. SECURITY SYSTEM: WELLS FARGO
4. PERSONS IN CHARGE: NANCY A. BURDETTE

APPENDIX D

MANUFACTURER'S TEST LIST

Test on the Assenbling line of the Glow Lamp

Tester: Manufacturer - Toshiba Subcontract Company

<u>Assembling operation</u>	<u>Checked Item</u>	<u>Method</u>	<u>Sampling</u>	<u>Remarks</u>
Phosphor Application	Temperature	Dial	At the initial operation	
	Transmissivity	Transmissivity meter	2/day	
Baking	Heater temperature		At the initial operation	
Emitter application				
Sealing	Baking condition	Magnifier	2/day	
	Dimension	Scale	2/day	
Emitter application				
Beads baking	Form	Magnifier	2/day	
	Dimension	Scale	2/day	
	Baking condition	Magnifier	2/day	
Exhaust	Vacuum degree	Vacume gauge	At the initial operation	
	Heater temperature		At the initial operation	
Emitter decomposition	Annode current	Ammeter	At the initial operation	
	Decomposition time	Timer	At the initial operation	
	Electrode temperature	Radiation thermometer	At the initial operation	
Gas enclosing	Gas pressure		At the initial operation	
Lighting check	Lighting condition	Seeing	100 %	
Sub-electrode printing	Printing width	Scale	At the initial operation	
	Application condition	Microscope	At the initial operation	

<u>Assembling operation</u>	<u>Checked Item</u>	<u>Method</u>	<u>Sampling</u>	<u>Remarks</u>
Sub-electrode dry	Drying temperature	Thermometer	At the initial operation	
	Term	Timer	At the initial operation	
Finishingcheck	Structure, Look	Seeing	100 %	
	Dimension	Check-jig	100 %	
	Lighting	Check-jig	100 %	
Primer application	Application condition check	Microscope	100 %	
Shipping test	Initial properties	Check instrument	MIL-STD-105D level II common-1	
	Dimension	Scale		
	Look, Structure			
	Life test	Test instrument	1 lot/week	
	Illumination intensity	Lumeter		
Package	Package condition	Seeing		
	Indication contents	Seeing		

Tests on the Assembling Line of the Glow Lamp Ass'y

Tester: Manufacturer - Toshiba Subcontract Company

<u>Assembling operation</u>	<u>Checked Item</u>	<u>Method</u>	<u>Sampling</u>	<u>Remarks</u>
Receiving of Lamp	Appearance	Visual	50/every lot	
	Application of auxiliary electrodes	Removal strength	10/every lot	
	Glow discharge	Glow tester	50/every lot	
Fixing of Leads	Location	Jig	100 %	
Receiving of Holder	Appearance	Visual	20/every lot	
	Dimensions	Calipers	3/every lot	
Finishing	Dimensions	Calipers	3/every lot	
	Short-circuit test	Dielectric strength tester	100 %	
	Lighting test	Light-up equipment	100 %	
	Holder fitting	Torque gauge	100 %	
	Appearance	Visual	100 %	
Glow discharge test	Light-up condition	Glow tester	100 %	
Shipping test	Appearance & Construction	Visual	Not serious faulty: AQL 2.5, every lot Serious faulty: AQL 0.25, every lot	
	Dimensions	Calipers, Gauge	5/every lot	
	Dielectric strength	Dielectric strength tester	5/every lot	
	Light-up	Light-up equipment	5/every lot	
	Glow discharge	Glow tester	100 %	
	Auxiliary electrode, location & application	Gauge & removal strength	20/every lot 5/every lot	

Testing at Canon Inc.

<u>Type of Test</u>	<u>Checked Item</u>	<u>Method</u>	<u>Sampling</u>
Receiving Test of Glow Lamp	No smudge and no crack in tubing	Visual	AQL=0.4%
	Fitting of auxiliary electrode	Removal test with plastic tape	10 / 100
<u>Shipping test of CS II Unit</u>			
Check of Glow Lamp	Electrode twisted	Visual	100 %
	Electrode removal	Visual	100 %
	Electrode shorted	Visual	100 %
Check of Waveforms	100mV Output 300mV	Specific tester	100 %
	30% Output 70% fluctuation	Specific tester	100%
Function test	White line/black line	Specific equipment	100%
	Resolution ability	Specific equipment	100%

TOSHIBA Xe Glow Lamp QUALITY CONTROL PROCEDURES

Flow Charat	Process	Control Item	Sampling	Testing Measure
	Glass Tube Methanol			
	Tube Washing			
	Phosphor			
	Phosphor Coating	Drying Temp	At m/c start in morning	Thermometer
	Coating Inspection	Transmission	2 pcs per 4 hour	Transmission device
	Baking	Oven Temp Bulb Temp	At m/c start in morning	Thermometer Tempilaq
	Electrode			
	Sealing	Appearance Shape Dimensions	2 pcs per 4 hour 2 pcs per 4 hour 2 pcs per 4 hour	Visual Visual Scale
	Electrode			
	Glass Bead			
	Bead Mount Making	Appearance Shape Dimensions	2 pcs per 4 hour 2 pcs per 4 hour 2 pcs per 4 hour	Visual Visual Scale
	Exhausting	Manifold Vacuum	At m/c start in morning	Vacuum Gauge
	Filling Gas			
	Gas Filling	Gas Pressure	At m/c start in morning	Pressure Gauge
	Aging	Voltage Aging Time	At m/c start in morning	Voltmeter Timer
	Aging Bulb Inspection	Lighting Status	All	Visual
	Electric Conductive Adhesive			
	Printing	Appearance Dimensions	2 pcs at m/c start in morning	Visual Scale
	Inspection	Appearance Starting Voltage	All All	Visual Testing Device
	Out going Inspection & Test	Lamp Current Lamp Voltage Starting Voltage Dimensions Lighting Distribution	5 pcs per lot 5 pcs per lot 5 pcs per lot 5 pcs per lot 5 pcs per lot	Characteristics Testing Device Scale Lighting Distribution Testing Device
	Packing	Life	3 pcs per week	Life Tester
	Delivery			