

EG&G FLORIDA, INC.
OCCUPATIONAL MEDICINE
AND ENVIRONMENTAL
HEALTH SERVICES

P.O. BOX 21296
KENNEDY SPACE CENTER, FL 32815

September 11, 1997

E310-97-607

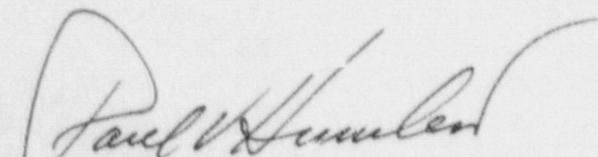
David J. Collins, Health Physicist
Division of Nuclear Material Safety
United States Nuclear Regulatory Commission
101 Marietta Street N.W. Suite 2900
Atlanta, Georgia 30323-0199

**AUTHORIZATION TO USE CUSTOM RIGID GUIDE TUBES/STOPS ON
CCAS NRC JURISDICTIONAL AREAS**

REF: 1) USNRC letter to Paul V. Humbert, M.D., Request for Approval of Rigid
Guide Tube/Stops, dated June 18, 1996
2) EGG Florida Inc. letter to State of Florida, E310-96-679, Authorization
to Use Custom Rigid Guide Tubes/Stops, dated October 24, 1996

Enclosed, as requested, is the State of Florida Radioactive Materials License Number
1219-1 Amendment 26 providing approval for use of the custom rigid guide tubes/stops
during source radiography operations. Also enclosed is the referenced letter to the State
of Florida requesting such approval for use.

Concurrent approval for use of the subject rigid guide tube/stops on Cape Canaveral Air
Station NRC jurisdictional areas is requested from your office.



Paul V. Humbert, M.D.
Chairman, EG&G Florida, Inc.
Radiation Protection Committee

APK:rea

Attachments a/s

cc: w/o attachments
G. M. Marmaro, JJ-C-2
M. E. McDaniel, BOC-321
R. E. Nickell, BOC-022
Lt. Col. Scott, 45 AMDS/SGPS

9711250133 971112
PDR STPRG ESQFL
PDR

Lawton Chiles
Governor



James T. Howell, M.D., M.P.H.
Secretary

January 10, 1997

Paul V. Humbert, M.D.
RPC Chairman
EG&G FLORIDA, INC.
P.O. Box 21267
Kennedy Space Center, FL 32315

RE: State of Florida Radioactive
Materials License Number 1219-1

Dear Mr. Humbert:

Enclosed is Amendment Number 26 to the above referenced license, which approves your 10/24/96 request for an exemption to authorize use in your industrial radiographic operations of custom rigid guide tubes/stops that have not been demonstrated to meet the specifications of ANSI N432-1980. Your procedures are adequate to compensate for the regulatory requirements of subsections 10D-91.5031(g) and (i), Florida Administrative Code. In addition, this amendment address the requests described in your second letter dated 10/24/96 regarding changes to Items 6, 7, 8 and 9 of your license.

Be advised that we were unable to approve your new exposure cell. Insufficient information was provided as evidence of the cell's ability to meet the requirements for permanent radiographic installations (a commitment to comply with applicable requirements is inadequate). Enclosed is a checklist which described all of the required information. You must also demonstrate that use of the installation will not cause public dose limits to be exceeded, so a MOP study must be submitted as well. A review of your license file found that your company has not yet submitted a MOP study related to your radiographic operations, so a comprehensive study is needed. Guidance on MOP compliance studies is enclosed. When the information has been gathered, you may resubmit your request.

Subitems C and D of your license have been consolidated as requested. Be advised that the reason AC Model 660 B or 660 BE radiographic exposure devices have been listed separately from Model 660 A and 660 AE cameras was because the 660 B and 660 BE are approved for higher activity sources than the 660 A and 660 AE (116 Ci vs. 100 Ci +/- 20%). Combining the models negates your authorization to possess higher activity (~140 Ci vs. ~120 Ci) sources.

Please note that we corrected the source model number for Subitem 7.A, but according to the Registry of Radioactive Sealed Sources and Devices, the "A" prefixes do not include a dash ("-") between the "A" and the rest of the model number, so they were not included as requested. In addition, we have listed "AC" as the manufacturer of the Gamma Industries (GI) products because Amersham Corp. bought out GI years ago. For clarification, we have changed the "AC" to "AC/GI."

Our evaluation of your amendment requests included a review of your inspection file, in which we noted that the inventory information did not provide a clear description of the source and device models in your possession. Enclosed is a radioactive material inventory form that may either be used to document your inventory of authorized sources and devices, or used as a guide for developing an equivalent form.

For future reference, please avoid submitting separate amendment requests bearing the same date; this creates potential record-keeping and tracking problems.

Please review the enclosed document carefully and be sure that you understand its terms and conditions. You must conduct your program involving radioactive materials in accordance with the conditions of your Florida license, representations made in your license application, and Florida regulations. In particular, note that you must:

1. Operate in accordance with "Florida Control of Radiation Hazards," Chapter 10D-91, F.A.C.;
2. Possess radioactive material only in the quantity and form indicated in your license;
3. Use radioactive material only for the purpose(s) indicated in your license;
4. Notify this office in writing of any change in mailing address;
5. Notify this office in writing immediately if there is a change in ownership or controlling interest in the organization;
6. Request and obtain an appropriate amendment prior to a change in location of radioactive material, or any other changes in your facility or program which are contrary to your license conditions or representations made in your license application and any subsequent correspondence with this office;
7. Submit a complete renewal application or termination request at least 30 days before the expiration date on your license. You should receive a reminder notice approximately 90 days before the expiration date. Possession of radioactive material after your license expires is a violation of Florida regulations; and

Paul V. Humbert, M.D.

January 10, 1997

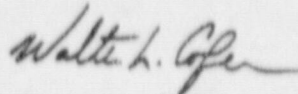
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8. Request termination of your license if you plan to permanently discontinue activities involving radioactive material prior to your expiration date.

You will be periodically inspected by this office. Failure to conduct your program in accordance with Florida regulations, license conditions and representations in your license application will result in enforcement action.

Please notify this office immediately if you find anything in the enclosed amendment you consider to be in error. If you have any questions or require further clarification of any of the above stated information, contact us at (904) 487-2437.

Sincerely,



Walter L. Cofer
Senior Health Physicist

WLC

Enclosure: As stated

STATE OF FLORIDA
DEPARTMENT OF HEALTH
BUREAU OF RADIATION CONTROL

RADIOACTIVE MATERIALS LICENSE
SUPPLEMENTAL SHEET

EG&G FLORIDA, INC.
ATTN: P.V. Humphart, M.D.
P.O. Box 21267
Kennedy Space Center, FL 32315

With reference to correspondence dated October 24, 1996, State of Florida Radioactive Materials License Number 1219-1 is hereby amended as follows:

TO CHANGE ITEMS 6, 7, 8 AND 9 TO READ:

6.	Radioactive material (element and mass number)	7.	Chemical and/or physical form	8.	Maximum quantity licensee may possess at any one time
A.	Cobalt 60	A.	Sealed source [Amersham Corp. (AC) Model A424-14]	A.	3 sources; not to exceed 100 curies each
B.	Cobalt 60	B.	Sealed source [AC/Gamma Industries Model VD(HP)]	B.	2 sources; not to exceed 100 curies each
C.	Iridium 192	C.	Sealed source [AC Model A424-9, Industrial Nuclear Co. (INC) Model 7, RTS Technology, Inc. (RTS) Model 702, or Source Production and Equipment Co. (SPEC) Model T-5 or T-5F]	C.	5 sources; not to exceed 100 curies each

9.	Authorized Use
A.	For use in AC Model 680 A, 680 AE, 680 B or 680 BE radiographic exposure devices for industrial radiography, and in AC Model 770 or 771 source changers for source exchanges and storage.
B.	For use in AC Model 1006 A gamma ray tomography source holders as a component of Scientific Measurement Systems, Inc. Model 201 industrial tomographs for industrial radiography.

License Number: 1219-1
Amendment No.: 26
Control Number: 961105-1229

LICENSEE COPY
Page 1 of 3 Page(s)

Category: [3D]
Expiration Date: 6/30/1997

STATE OF FLORIDA
DEPARTMENT OF HEALTH
BUREAU OF RADIATION CONTROL

RADIOACTIVE MATERIALS LICENSE
SUPPLEMENTAL SHEET

9. Authorized Use (continued)

- C. For use in AC Model 660 A, 660 AE, 660 B or 660 BE radiographic exposure devices for industrial radiography, and in AC 650L, INC Model IR-50, or SPEC Model C-1 source changers for source exchanges and storage.

TO CHANGE CONDITIONS 10 AND 21 TO READ:

CONDITIONS

10. A. The authorized places of use and storage for licensed materials described in Items 6, 7, 8 and 9, Subitems A and C are at Building K7-569, Kennedy Space Center, FL 32815, and at temporary job sites of the licensee throughout the state of Florida. This condition does not prohibit use in other agreement states and states under the jurisdiction of the U.S. Nuclear Regulatory Commission (NRC) under reciprocity, which has been approved by an agreement state or the NRC.
- B. The authorized place of use for licensed materials described in Items 6, 7, 8 and 9, Subitem B is at Building K7-569, Kennedy Space Center, FL 32815.
21. A. Except as specifically provided otherwise by this license, the licensee shall possess and use licensed material described in Items 6, 7, 8, and 9 of this license in accordance with statements, representations and procedures contained in the licensee's application dated May 26, 1992, signed by E.B. Ferguson, M.D., Chairman, EG&G Florida Radiation Protection Committee, and correspondence dated:
- January 28, 1993, signed by J.R. Dubay, General Manager;
January 29, 1993;
March 19, 1993; and
April 12, 1993, all signed by Emmett B. Ferguson, M.D., Medical Director/Chairman, EG&G Florida Rad. Protection Committee;
July 25, 1994, signed by James R. Dubay, Project Manager;
April 24, 1995; and
April 1, 1996;
May 7, 1996,
October 24, 1996 (labeled E310-96-679); and
October 24, 1996 (labeled E310-96-680), all signed by Paul V. Humbert, M.D., Chairman, EG&G Florida Radiation Protection Committee.

License Number: 1219-1
Amendment No.: 26
Control Number: 961105-1229

LICENSEE COPY
Page 2 of 3 Page(s)

Category: [3D]
Expiration Date: 6/30/1997

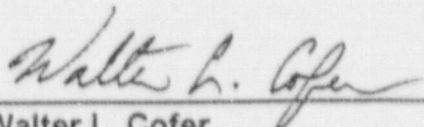
STATE OF FLORIDA
DEPARTMENT OF HEALTH
BUREAU OF RADIATION CONTROL

RADIOACTIVE MATERIALS LICENSE
SUPPLEMENTAL SHEET

21. B. The licensee shall comply with all applicable requirements of Chapter 10D-91, Florida Administrative Code, and these regulations shall supersede the licensee's statements in applications or correspondence, unless the statements are more restrictive than the regulations.

For the Bureau of Radiation Control

Issuance Date: JAN 09 1997


Walter L. Cofer
Senior Health Physicist
1317 Winewood Boulevard
Tallahassee, FL 32399-0700
(904) 487-2437

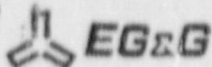
License Number: 1219-1
Amendment No. 26
Control Number: 961105-1229

LICENSEE COPY

Page 3 of 3 Page(s)

Category: [3D]

Expiration Date: 6/30/1997



EG&G FLORIDA, INC.
OCCUPATIONAL MEDICINE
AND ENVIRONMENTAL
HEALTH SERVICES

P.O. BOX 21296
KENNEDY SPACE CENTER, FL 32815

October 24, 1996

E310-96-679

State of Florida
Department of Health and
Rehabilitative Services
1317 Winewood Boulevard
Tallahassee, FL 32399-0700

ATT: Mr. Walter L. Cofer, PHP III, HSERM

AUTHORIZATION TO USE CUSTOM RIGID GUIDE TUBES/STOPS

- REF: 1) State of Florida, Office of Radiation
Control Ltr. dtd. June 4, 1996
2) State of Florida Radioactive Materials
License Number 1219-1

Enclosed is the response to your request for additional information in the consideration of authorizing use of custom fabricated rigid source guide tubes. In response to our telecon of August 29, 1996, rationale supporting EG&G NDE's recommendations for the type and frequency of equipment functional tests is addressed. The attached operating and emergency procedures have been revised, as requested, to provide specific instructions for radiographers to perform a daily inspection of the rigid source guide tube each shift prior to use. A visual and functional test will be conducted with an inert source to assure the source and drive cable assembly travel smoothly through the source guide tube(s), connections and return to the exposure device stored position without binding or application of excessive force. The rigid guide tubes will be labeled or tagged with instructions to test the tube prior to use.

EG&G recommends rigid guide tube inspections to be performed once each shift prior to use or at any other time the condition of the equipment may become suspect. The inspection should normally be conducted prior to transporting the equipment to a remote field site to assure marginal or unacceptable equipment is tagged and removed from service. This is in accordance with manufacturers' prescribed daily maintenance checks for isotope projection equipment and EG&G NDE's current practice. Checking equipment prior to transporting to the job site reduces any temptation to use questionable equipment, plus it eliminates the need to transport training devices or "dummy" sources to field sites.

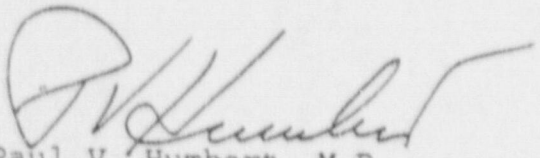
The concerns posed with using a dummy source for each setup prior to actual source exposure are numerous. First of all, it would

require twice as many setups which doubles the time personnel are working and the time a restricted area is established. This could pose significant impacts to productivity, accelerate personnel fatigue and decrease equipment longevity. In addition, other operations scheduled in the area may be delayed or effected by the extended times. Radiography operations are often conducted in areas which pose other safety hazards such as working at heights, in or adjacent to toxic materials or in confined spaces. The fact that most field radiography is accomplished at night or during other than normal working hours is sufficient to conclude that personnel would be subjected to increased and unwarranted safety risks.

The material and design of the proposed rigid source guide tubes makes them inherently less susceptible to kinking or crushing damage than flexible source guide tubes. Use of rigid source guide tubes also eliminates the potential for problems to occur in source retraction due to excessive bends sometimes encountered with flexible guide tubes. Although, the proposed rigid source guide tube design has not been tested in accordance with the requirements of ANSI N432-1980, it is believed that the design, materials and fabrication process demonstrate through previously submitted engineering analysis that the product exceeds the performance standards desired by ANSI.

Based on the previously submitted engineering analysis, the socioeconomic factors addressed above and the implementation of additional equipment inspection measures, EG&G Florida requests exemption of the rigid source guide tubes from 10D-91.5031(6)(g) FAC requirements. It appears likely, in view of the industries expressed concern, that the USNRC will also make special provisions for associated equipment to relieve the burden currently imposed by their interpretation and application of the regulations.

If there are any questions concerning the above, please contact the undersigned at (407) 867-2025 or R. E. Nickell at (407) 867-3540.


Paul V. Humbert, M.D.
Chairman, EG&G Florida, Inc.
Radiation Protection Committee

rec:rea

Attachments: a/s

cc: w/o attchs
G.M. Marmaro
M.E. McDaniel
R.K. Martin
R.E. Nickell
Lt. Col. Scott

(2)

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS
WASHINGTON, D.C. 20555

April 4, 1996

NRC INFORMATION NOTICE 96-20: DEMONSTRATION OF ASSOCIATED EQUIPMENT
COMPLIANCE WITH 10 CFR 34.20

Addressees

All industrial radiography licensees and radiography equipment manufacturers.

Purpose

The U.S. Nuclear Regulatory Commission is issuing this information notice to inform radiography licensees of acceptable methods to demonstrate that their associated equipment used in radiographic operations meets the regulations in 10 CFR 34.20. It is expected that recipients will review the information for applicability to their facilities and consider appropriate actions. However, this information notice does not contain any new requirements; therefore, no specific action nor written response is required.

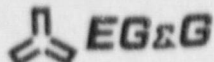
Description of Circumstances

Section 34.20 of 10 CFR Part 34 specifies performance requirements for radiography equipment. Paragraph (d) of 10 CFR 34.20 provided that all newly manufactured radiographic exposure devices and associated equipment (manufactured after January 10, 1992) acquired by NRC licensees must meet Section 34.20 requirements. Paragraph (e) of 10 CFR 34.20 provides that all radiographic exposure devices and associated equipment in use by NRC licensees after January 10, 1996, must comply with the requirements specified in 10 CFR 34.20. NRC amended the regulations in 10 CFR 34.20 to permit licensees to use an alternate value of torque for performance testing criteria and to allow licensees to use engineering analysis to demonstrate that a modest change in an already approved design is acceptable without the need to perform prototype testing. The changes were published in the Federal Register as a final rule on May 31, 1995.

NRC Information Notice (IN) 95-58: "10 CFR 34.20; Final Effective Date," issued on December 18, 1995, to all radiography licensees, reminded licensees of the final effective date implementing the regulations in 10 CFR 34.20. IN 95-58 also reminded licensees that associated equipment used with radiography cameras (i.e., source assemblies, drive cables, guide tubes, control tubes, source stops, etc.) were subject to 10 CFR 34.20 requirements. IN 95-58 went on to explain that, previously, certain associated equipment had not been independently registered and/or evaluated by the NRC or the Agreement States (AS). This includes drive cables, guide tubes, and source stops. Most new

~~9603290269~~

IN 96-20 Radiography Compliance - AS/6



EG&G FLORIDA, INC.
OCCUPATIONAL MEDICINE
AND ENVIRONMENTAL
HEALTH SERVICES

P.O. BOX 21296
KENNEDY SPACE CENTER, FL 32815

E310-96-310

May 7, 1996

United States Nuclear Regulatory Commission
Mr. David Collins / Region II
101 Marietta Street, N.W., Suite 2900
Atlanta, Georgia 30323-0199

**REQUEST FOR APPROVAL TO UTILIZE IN-HOUSE FABRICATED RIGID
GUIDETUBES/STOPS DURING RADIOGRAPHY OPERATIONS**

- REF: 1) Florida Materials License 1219-1
(Expires June 30, 1997)
2) 10D-91, F.A.C., "State of Florida Control
of Radiation Hazard Regulations"
3) 10 CFR Part 34, "Licenses for Radiography
and Radiation Safety Requirements for
Radiographic Operations"

EG&G Florida, Inc. requests concurrence to utilize rigid guide-
tubes/stops fabricated in-house and designed as stated in the
attached engineering analysis. This analysis includes equipment
design, mechanical tests and functional use as defined in 10CFR34.20
regulations (including ANSI N432-1980).

Your expeditious review and response to the above stated requests
would be greatly appreciated. Excessive delays will place EG&G
Florida, Inc. and NASA/KSC in a position of considering options that
will result in significant increases in program costs, potential
impacts to product quality and mission milestones, and unnecessary
radiation exposure to radiographic personnel (i.e. use of C0-60
instead of Ir-192).

As necessary, verbal consent or acknowledgement would be desired to
convey interim agreement to continue use of the above equipment. If
you have any questions concerning this transmittal, please contact
the undersigned at (407) 867-2025 or R. E. Nickell at (407) 867-3540.

ORIGINAL SIGNED BY

Paul V. Humbert, M.D.
Chairman, EG&G Florida, Inc.
Radiation Protection Committee

kak:rea

Attachments: a/s

1/0 attachments
E. McDaniel, BOC-321
M. Marmaro, MD-MED-R

R. Martin, BOC-321
Lt. Col. Scott, 45 AMDS/SGPS

9607030143

federal register

Wednesday
May 28, 1997

Part IV

Nuclear Regulatory Commission

10 CFR Parts, 30, 34, 71 and 150
Licenses for Industrial Radiography and
Radiation Safety Requirements for
Industrial Radiographic Operations; Final
Rule
Revision of the NRC Enforcement Policy;
Notice