#### NRC FORM 314 U.S. NUCLEAR REGULATORY COMMISSION APPROVED BY OMB: NO. 3150-0028 EXPIRES: 05/31/95 (343) 10 CFR 30.36(c)(1)(iv) 10 CFR 40.42(c)(1)(iv) ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 30 MINUTES. THIS MANDATORY SUBMITTAL IS USED BY NHC AS PART OF THE BASIS FOR ITS DETERMINATION THAT THE FACILITY HAS BEEN CLEARED OF RADIOACTIVE MATERIAL BEFORE THE FACILITY IS RELEASED CERTIFICATE OF DISPOSITION OF MATERIALS FOR UNRESTRICTED USE. FORWARD COMMENTS REGARDING SURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MINBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0028), OFFICE OF MANAGEMENT INSTRUCTIONS: ALL ITEMS MUST BE COMPLETED - PRINT OR TYPE SEND THE COMPLETED CERTIFICATE TO THE NRC OFFICE SPECIFIED ON THE REVERSE AND BUDGET, WASHINGTON, DC 20503. LICENSEE NAME AND ADDRESS LICENSE NUMBER 34-08558-01 B.F. Goodrich Moore & Walker Roads LICENSE EXPIRATION DATE Avon Lake, OH 44012-0134 November 30, 1993 A. MATERIALS DATA (Check one and complete as necessary) THE LICENSEE OR ANY INDIVIDUAL EXECUTING THIS CERTIFICATE ON BEHALF OF THE LICENSEE CERTIFIES THAT: (Check and/or complete the appropriate item(s) below.) NO MATERIALS HAVE EVER BEEN PROCURED OR POSSESSED BY THE LICENSEE UNDER THIS LICENSE. OR ALL MATERIALS PROCURED AND/OR POSSESSED BY THE LICENSEE UNDER THE LICENSE NUMBER CITED ABOVE HAVE BEEN DISPOSED OF IN THE FOLLOWING MANNER. (If additional space is needed, use the reverse side or provide attachments.) Describe specific material transfer actions and, if there were radioactive wastes generated in terminating this license, the disposal actions including the disposition of low-level radioactive waste, mixed waste, Greater-than-Class-C waste, and sealed sources, if applicable. Refer to accompanying letter and documentation. For transfers, specify the date of the transfer, the name of the licensed recipient, and the recipient's NRC license number or Agreement State name and license number. If materials were disposed of directly by the licensee rather than transferred to another licensee, licensed disposal site or waste contractor, describe the specific disposal procedures (e.g., decay in storage). 9903090154 990226 FOIA PDR POST98-341 PDR B. OTHER DATA OUR LICENSE HAS NOT YET EXPIRED: PLEASE TERMINATE IT 2. A RADIATION SURVEY WAS CONDUCTED BY THE LICENSEE TO CONFIRM THE ABSENCE OF LICENSED RADIOACTIVE MATERIALS AND TO DETERMINE WHETHER ANY CONTAMINATION REMAINS ON THE PREMISES COVERED BY THE LICENSE. (Check one) NO (Attach explanation) Refer to accompanying documentation of disposal or transfer of YES, THE RESULTS (Check one) units to general licenses. ARE ATTACHED, or WERE FORWARDED TO NRC ON (Date) TELEPHONE NUMBER THE PERSON TO BE CONTACTED REGARDING THE INFORMATION Richard D. Hardesty (216)933-0496 PROVIDED ON THIS FORM 4. MAIL ALL FUTURE CORRESPONDENCE REGARDING THIS LICENSE TO Richard D. Hardesty, L.F. Goodrich, Moore & Walker Rds. Avon Lake, OH 44012-0134 CERTIFYING OFFICIAL I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOINGLIS TRUE AND CORRECT PRINTED NAME AND TITLE SIGNATURE DATE David M. Shepard Plant Manager TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECTS. 18 U.S.C. SECTION 1001 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.

NRC FORM 314 (3-93) FENTED ON RECYCLED RABER.

#### FILE CERTIFICATES AS FOLLOWS:

IF YOU ARE A DISTRIBUTOR OF EXEMPT PRODUCTS, SEND TO:

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

ALL OTHERS, IF YOU ARE LOCATED IN:

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

LICENSING ASSISTANCE SECTION
NUCLEAR MATERIALS SAFETY BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
476 ALLENDALE ROAD
KING OF PRUSSIA, PA 18406-1415

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

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

#### IF YOU ARE LOCATED IN:

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

MATERIALS LICENSING SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, IL 60137-5927

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

MATERIAL RADIATION PROTECTION SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
600 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TX 76011-8064

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

NUCLEAR MATERIALS SAFETY SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION V
1450 MARIA LANE
WALNUT CREEK, CA 94596-5368

# A. Iron-55 ASOMA X-Ray Fluorescence Analyzer

Method to Remove From License: Transfer to Geon, Geon to put on ASOMA's general license.

Documentation: 1. Letter from BFG to ASOMA requesting transfer.

**BF**Goodrich

The BFGoodrich Company Avon Lake General Chemical Plant P.O. Box 134 Avon Lake, Ohio 44012 General Offices Cleveland, Ohio

October 12, 1993

Mr. Ray Fleming ASOMA Instruments Inc. 11675 Jollyville Road Austin, Texas 78759

Dear Mr. Fleming

#### RE: Fe-55 STABILIZER SOURCE TO GEON ON GENERAL PERMIT

As we discussed on the phone, B.F.Goodrich wishes to remove the ASOMA Fe-55 from our specific license #34-08558-01 and transfer it to The Geon Company as a generally licensed instrument. Both you and Ms. Sandy Frazier of the Glen Ellyn office of the NRC have agreed via phone to do this. This letter is meant to confirm this change in writing.

The B.F.Goodrich Company ("Goodrich") has established The Geon Company ("Geon"). Both are publicly traded companies on the NYSE. Geon acquired certain assets and liabilities of Goodrich's former Geon Vinyl Division, including certain real and personal property at the Avon Lake, Ohio facility.

The radiation safety officer for Geon is: Jim Griffin, The Geon Company, Moore & Walker Rds., Avon Lake, Ohio 44012-0122. Jim's phone is (216) 933-0380; or you may contact Mc ilyn Kelling, same address, phone (216) 933-1700.

The Geon Company intends to license their source as a general license and not obtain a specific license.

Sincerely,

Richard D. Hardesty The B.F. Goodrich Company

Richard D. Hardesty

Manager, Health, Safety & Environmental

RDH:drf Asoma.doc

# B. Cobalt-60

Method to Remove From License: BFGoodrich to request Berthold to put on their general license.

Documentation:

- 1. Copy of letter from BFG to Berthold requesting transfer.
- Copy of Berthold's faxed letter to BFG stating placement of source on General License.

t rthold systems. Return To: TeleFax # 412 378-1926 ATTN: Mary Dedola LICENSE RETURN FORM Berthold File Reference: 90-399 Customer: B.F. Goodrich Purchase Order #: 5011-16343 The following sources will be shipped in it's designated shielding.

Device #1: Quantity: 1

a) Device name: Continuous Level

b) Device Model #: LB 300 L

c) NRC Registration #: NR-112-D-106-B

d) Isotope Type: Co-60 [X]Rod Source

e) Up To Maximum Activity: 3 mCi f) Source Drawing #: P-2608-100/101

NOTE: For Belt Weigher devices, access to the primary beam will be prevented by a protective barrier (fence) or by conditions at a particular installation which cause access to the beam highly unlikely.

This is your responsibility: BSI is prepared to offer guidance.

The following License selection is to be received by Berthold Systems prior to shipment. PLEASE CHOOSE YOUR OPTION:

Customer request that the gauge(s) be shipped and installed under the following license:

1)		erred to in Section 31.5 of U.S. Nuclear Regulatory Equivalent Regulations of your Agreement
		OR
2)	Your Specific License	No.

NOTE: Please attach a copy of your Specific License showing the Berthold device.

Signature of Radiation Safety Officer/Authorized Person: Ruchard D. Handesty

Date: 10-18-93

October 11, 1993 BSI Log # 1204 Operator: Send To TeleFax # 216-933-1311 Page 1 of 2

BERTHOLD SYSTEMS, INC. Process Control Instruments

Hopewell Business & Industrial Park 101 Corporation Drive Aliquippa, Perinsylvania 15001-4863 Telephone [412] 378-1900

Telefax [412] 378-1926 Avon Lake General Chemical 988393 [89THLD SYST UD]

Mr. Richard Hardesty BF Goodrich

P.O. Box 134

Avon Lake, OH 44012

Ship to: B.F. Goodrich

Avon Lake, OH 44012-0134

Customer Purchase Order 5011-16343 - Berthold's File Reference 90-399

Subject: Pre-Shipment NRC Licensing Information

Dear Safety Officer:

We wish to inform you that Berthold Systems, Inc. (BSI) has received the above referenced purchase order from B.F. Goodrich, which requires installation of a radiation device at Avon Lake, OH. We require receipt of the attached license return form, completed and signed, prior to shipment.

All Berthold Systems, Inc. devices have been safety-registered with the Nuclear Regulatory Commission (NRC) for distribution under a "Specific" or "General" license.

- 1. If you receive your device under a General License (automatic licensing - no application required), please follow the "Guide for Receipt under General License."
- 2. If you receive your device under a Specific license, please follow the "Guide for Receipt under Specific License." In this case, BSI must have a copy of your Specific License before shipment of the radioactive source can be made.

Please complete the attached form selecting the type of NRC License your plant will use, and telefax or mail to us.

The guides will be mailed to you separately. Please follow guides to prepare you for receipt of your device(s). Telephone us if you have any questions, toll free at 800 274-9851, or 412/378-7877.

Sincerely,

Charles Ferrin

Radiation Safety Officer

Berthold Systems, Inc.

Fnc: 1 - License Return Form

> 11 - Guide for Receipt Under General License (with NRC Regulation 10cfr31.5)

111 - Guide for Receipt Under Specific License (please obtain your own personal copy of the "Code of Federal Regulations"). Refer to Section 10crf20.

berthold sustems

cc: Mary Dedola

# C. Nickel-63 Perkin-Elmer Detector Celi

Method to Remove From License: BFG has requested that Perkin Elmer put this detector on general license 06-02135-12G.

Documentation: 1. Copy of fax from PE completing transfer.

# PERKIN ELMER

FAX FAX FAX FAX FAX FAX FAX FAX FAX

OUR FAX NUMBER IS: (203) 762-6599 PERKIN-ELMER CORPORATION

PERKIN-ELMER CORPORATION NORWALK, CONNECTICUT 06859-0098

QUALITY ASSURANCE DEPARTMENT

T 0	1 2 3 4	Name Pamela S. Lane.  1 216-447-5527 Location (If Perkin-Elmer, provide M/S #)  Name  Name 3 Location (If Perkin-Elmer, provide M/S #)  Hams 4 Location (If Perkin-Elmer, provide M/S #)
FROM	SUB	Sharon Mezes 9-9-93 MS TELEEXT.  Sharon Mezes 9-9-93 MS TELEEXT.  PAGE Requested Transfer TO General License.  PAGE 1 94
,	T	Am
-		ATTAChed is the information you nee to
	el	Iminate your Specific NRC License.
		Origionals TO Follow in The MAIL
		Sharon Mezes
	-	RADIATION SAFETY OFFICER
	Owner Sayor	203-762-6504
	***	ORIGINALS RECEIVED & ON FILE  W/ P. LANE
name of the same o		

# PERKIN ELMER

The Perkin-Elmer Corporation 761 Main Avenue Norwalk, CT 06859-0001

September 9, 1993

Pamela S. Lane

The BFGoodrich Company Research & Development Center 9921 Brecksville Road Brecksville, Ohio 44141

Dear Pamela:

This is to verify your letter of September 9, 1993 requesting transfer to the Perkin-Elmer NRC general license 06-02135-12G. My files indicate everything is in order and therefore I find no reason to deny your request. I will inform the NRC of the change in my next quarterly report (October 93). Transfer date will be the date of your letter.

Cell Part Number: Model N600-0113 assembly containing a model N600-0204 detector cell.

Serial Number: 127

If you have any further questions please don't hesitate calling me.

Sincerely,

Sharon Mezes

Radiation Safety Officer

Sharon Mazes

#### MRC FORMATA (742-89)

U.S. MUCLEAR REGULATORY COMMISSION

CORRECTED COPY

### MATERIALS LICENSE

Amendment No. 04

Airsuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10. ode of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 39, 40 and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special

nuclear material designated below; to use such material for the purpose to persons authorized to receive it in accordance with the regulations of	(s) and at the place(s) designated below; to deliver or transfer such material the applicable Part(s). This license shall be deemed to contain the conditions it, and is subject to all applicable rules, regulations and orders of the Nuclear ons specified below.
Licensee  1. Perkin-Elmer Corporation	In accordance with application dated February 5, 1992, 3. License number 06-02135-12G is amended in its entirety to read as follows:
2. 761 Main Avenue Norwalk, Connecticut 06859-0184	4. Expiration date April 30, 1998
Charles Charles	5. Docket or 7030-17474
6. Byproduct, source, and/or 7. Chemical an special nuclear material form	The state of the s
A. Nickel 63 A. See Cond	ition 10 A. Not Applicable
9. Authorized use	((())) (())
the devices containing licensed material license to persons generally licensed pequivalent provisions of the regulation	TENDLAN CO
COND	ITIONS

Each device distributed pursuant to the terms and conditions of this license shall be in accordance with the following table:

Device Model	Source	Maximum Ctivity Per Source Isotope	or Foil (Millicuries)
Model 330-0119	Foil	Nickel 63	15
Model N600-0113 Assembly containing a Model N600-0204 detector cell	Foil	Nickel 63	15
Model L413-0128 Assembly containing a Model N600-0204 detector cell	Foil .	Nickel 63	15

9306010339

CLEAR REGULATORY COMMISSION U.S. NRC Form 374A (\*\* 84) 06-02135-12G MATERIALS LICENSE Docket or Reference number SLIPPLEMENTARY SHEET 030-17474 Amendment No. 04 CORRECTED COPY CONDITIONS (10. continued) Maximum Activity Per or foil Device Model Source (Millicuries) Source Isotope 15 Nickel 63 Foil Model N610-0063 Detector Cell Assembly REG/ 15 Foil Model N610-0134 Detector Cell Assembly The licensee is authorized to distribute the devices specified in Condition 10 from 11. facilities located at 761-Main Street, Norwalk, Connecticut; This license does not authorize possession or use of licensed material. 12. Except as specifically provided otherwise in this attense, the licensee shall conduct 13. its program in accordance with the statements, representations, and procedures contained in the documents including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern Asaless the statements, representations and procedures for the licensee's application and correspondence are more restrictive than the regulations Application received March 28, 1980: A. Application dated December 16, 19801 В. Letter dated June 16, 1981 C. Application dated December 30, 1981 D. Letter dated April 2, 1982 E. Telegram dated April 16, 1982 F. Application dated June 9, 1986 G. Letter dated February 13, 1987 Letter dated February 23, 1987 H. I.

Application dated January 17, 1990 J.

Letter dated February 5, 1992 K.

vate

For the U.S. Nuclear Regulatory Commission

JUN 1 1 1993

Materials Region /I Kind of Prussia, Pennsylvania 19406

# D. Nickel-63

Method to Remove From License: Returned to Hewlett-Packard.

## Documentation:

- 1. Copy of BFG Shipping Order 00558 with UPS shipment imprint.
- 2. Copy of BFG Purchase Order for disposal.
- 3. Copy of Hewlett-Packard's license verification and disposal form.

SHIPPING ORDER	DIT CO	poaric	n Compai	ny			
Orm Find Officer						SHIPP	ING ORDER NUMBER
AUTHORIZED BY	OUR PURCHASE ORDER NO.		YOUR INVOICE NO				00558
PURCHASING DEPT APPROVAL	SHIPPED FROM		YOUR INVOICE DATE		_		USE THE ABOVE NUMBER EN CORRESPONDING
PLANT LOCATION Avon hake, Ohio DEPT NO P/2376  ACCOUNT			Hewlett-Po Avondale D Route 41 + S Avondale	ivision Starr Road		BILL OF LADING	
CHECK REASON FOR SHIPMENT  REJECTED - RETURNED FOR CREDIT		SHIP VIA		OD DELIVERY DATE			
REJECTED - RETURNED FOR REPLACEMENT	DES	CRIPTION		SHIPPED	UNIT	PRICE	TOTAL
TO BE REPAIRED AND RETURNED TO	Hewlett-Packard	15 mci	Nickel 63	1			•
	Foil Source S	erial# S	10217				•
	Dated 1-86						
CONTAINER - RETURNED FOR CREDIT     SALE OF PROPERTY	DOT - Ratio as	tive In	strument				
LOAN OF PROPERTY					UP	TE 10/0	11/92
X Return for Disposal				UPS	8256	62:60	L.5 \$ 02.84
	HP Contact Jim	Flannigar	215-268	-5613			
8°G 15040 F2 6/90			-				PRINTED IN U.S.A

EŜT. PR	ICE	RE	DUE DATE		SUGGE	s )	VENDO	R		
0011 11		RDER - REQUISIT			REQ.		ANTONIA PROMOTORIA SALAGORA	NO. 36	-32 -	22705
BF	Goodric	ch Chemic	al Group					Chemical G	oup	705
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D	Hewle Avono Route Avono	etector Exchar ett-Packard Co lale Division e 41 & Starr F lale, Pennsylv	ompany	1		AT TE	CHNICAL P. O. B	CENTER X 122 OHIO 440	EPT. }	
BHIPPING OF P.O.B.	UR ORDER PER THE	A- TERMS, CONDITIONS AN RELATION CHARGES ON INV SHIPMENTS OR DECU	CHARG D SPECIFICATIONS SE	PORTATION ES ET FORTH OR R TEO BY PAID TRA	V/A		N/s	ISE SIDE, ACKM		(140) 
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	Hewlett	-Packard 15 M	ICI Nickel 6	3 foil s	ource Mod	el HP	19303			
	Serial	n.mber S10217	Dated 1/8	6						
	Hewlett	· ickard is t	o provide B	FGoodric	h with wr	itten	certifi	cation		-
	of disp	os uate and	location.							
	BFGoodr	ich has this	source list	ed on ou	r NRC Lice	ense #	34-0855	8-06		
R SIDES OF REIGHT BILL JMBER, REQU CH OF YOUR ODUCED AN ANDARDS AN	R BAGS. S. BILLS OF LACTURE TO HUMBE: R INVOICES SHA! D/OR PERFORM CT OF 1938, AS A SECTION 14 THE	DING. QUALITY REPRESENTED IN COMPLIANCE IN COMPLIANCE MENDED, AND OF REOF."  TO BE ADDED UNLE PERMITS 26421 (LOU	OWING STATEMI WITH ALL API REGULATIONS A	ENT: "WE HE PLICABLE R IND ORDERS	REBY CERTIFE MURICIPAL REPORT THE ADM	FY THAT	THESE GOTTON 6.	OODS AND/S 7 AND 12 OF THE WAGE A	PURCHA OR SERVI F THE FA	CES WERE
L TO DEPT	BLDG	CHARGE DEPT	ACCT AND 204	NOTIFY	Titt, TEAM				to 9-2	2-92
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					<b>BFGood</b>	drich	Chemical	Group		

By Habrynich 9/23/93
Title of duly authorized official:



# HEWLETT-PACKARD COMPANY BYPRODUCT MATERIALS (RADIOACTIVE) LICENSE VERIFICATION

For new purchase and return for exchange of specific Boense radioactive electron capture detectors HP 18713A, HP G1224A. HP part number 18803-60520, HP 19235, and HP 19303. Also for return for exchange of general license detectors HP 19282, HP 19233, HP G1223A, and HP 19312, for purchase of conversion kts HP 18742E, HP 19393, and HP 19235D, for use within the U.S. only.

For new purchase of general license detectors HP 19282, HP 19233, HP 19312, or G1223A oustomer certification card in HP publication number 43-5953-1798 or part number 5953-1798 must be completed. Hewlett-Packard distributes under NRC license numbers 37-07002-03G (General) and 37-07002-02 (Specific).

#### INSTRUCTIONS:

- Complete section A below. Read section B and complete the appropriate certification statement (specific license below, general license on reverse side).
- 2. For new purchase, mall this form to your local Hewlett-Packard sales office.
- 3. For returns for exchange/servicing of used detectors, see section C reverse side.

CUSTOMER INFORMATION				
Avon Lake OHIO44012-0134	CUSTOME HEWLETT	R P.O. NO PACKARD SA	ALES OFFICE	EXEMPT X
LICENSE VERIFICATION	AND DESCRIPTION OF THE PARTY OF		e programme planting partier of programmers problems of state. No solid	
Failure to comply with scensing requirements can cause serious Having a designated scensee read and complete the applicable on reverse side) will serve as a check that you are properly scens SPECIFIC LICENSE CERTIFICATION  The Nuclear Regulatory Commission Regulators require Hewiett-(or State Scense if you sive in an "Agreement" state) before stimust apply to the type, quantity, and form being purchased on form 313 and Regulatory Guide 10.7 for scensing information).	certification nsed to rec - Packard to pping your	n statement (incelve the mate or have on file of detector. The	specific license be erial indicated. vertfication of you als license must be	alow, general floense  r NRC floense e current and it
This is to certify that our NRC or Agreement State License is or		permits us to	receive the type.	quantity, and
form of radioactive materials for the use specified as described QTY	below.	NEW PURCHASE	EXCHANGE	DETECTOR SERIAL NO.
HP 19235 EC Detector, 15 mOl NI 63-plated part, for us HP 5890A Series Gas Chromatographs.	no es			Adult - Homeland and American
HP 18713A EC Detector, 15 mCl NI 63-plated part, for s HP 5700 and HP 5790 Series Gas Chromatographs.	use on			
Hewlett-Packard EC Detector, part number 18803-60520 15 mCl Ni 63-piated part, for use on HP 5830/5840 Sene Gas Chromatographs.	0. es			gger hand produced produced delices
HP 19303 EC Detector, 15 mCl Ni 63-plated part, for us HP 5880 Series Gas Chromatograph.	e on	D Dis	posalo	SN-510217 Dated 1/86
HP 18742E Accessory, for converting general license EC (HP 19282) to specific license (HP 18713A).	00			Manager Species and Control of Special
HP 19393 Accessory, for converting general license ECC (HP 19312) to specific license (HP 19303).				Market Control Control Andrews
HP 19235D Accessory, for converting general license (HP 19233) to specific license (HP 19235).				Manage and Associated Services
HP ECD Detector no. G1224A, 15 mCl for use on HP 58 Series Gas Chromatographs	190			allow College and Aller an
LICENSE NUMBER 34-08558-06	SIGNATU	RE OF AUTH	0 11 1	OR LICENSED USER
ISSUING AGENCY NRC	_ 7	whard.	D. Hardes	Tage
EXPIRATION DATE 8-31-95		-	-92	1

#### GENERAL LICENSES CERTIFICATION

(For exchange of general license detectors only. New purchase of general license EC detectors requires completion of customer certification card, publication number (43) 5953-1798) or part number 5953-1798...

This is to certify that we understand and are in compliance with regulations governing the general license EC detector described in information for General Licensees, publication number (43) 5953-1798 or part number 5953-1798.

QTY		EXCHANGE	SERIAL NO.	
acresses	HP 19233 EC Detector, 15 mCl Ni 63-plated part, general license ECD for use on HP 5890 Series Gas Chromatographs.		Special State of the State of t	
Commission	HP 19312 EC Detector, 15 mCl NI 63-plated part, general Boense ECD for use on HP 5880 Series Gas Chromatographs.	0		
	HP 19282 EC Detector, 15 mCl Ni 63-plated part, general ficense ECD for use on HP 5700 and HP 5790 Series Gas Chromatographs.			
	HP EC Detector no. G1223 A. 15 mChplated part, general Boense ECD for use on HP 5890 Series Gas Chromatographs.	0	Scripping Control Cont	
Patrick State Control			The state of the s	
	SIGNATURE OF GENERAL LICENSEE	DATE		

C. EC DETECTOR EXCHANGE PROGRAM—EC Detectors HP 19233, HP 19235, HP 19282, HP 19303, HP 19312, HP 18713A, HP part number 18803-60520, HP G1223A, and HP G1224A.

Hewlett-Packard will ship a rebuilt detector subject to the following:

- This form must be completed properly and accompanied by a fully assembled detector (HP 19235, HP 19233, HP 19303, or HP 19312, HP 18713A, HP 19282, HP part number 18803-60520, HP G1223A, or HP G1224A.
- This program does not apply to any electronic parts or nonstandard hardware. Any such items received will be returned with the rebuilt detector.
- All rebuilt detectors are guaranteed to meet HP specifications for new detectors.
- Hewlett-Packard must receive the used detector before a replacement detector can be shipped. A rebuilt detector will be shipped within five working days after receipt of the used detector.
- Unless otherwise specified, return shipments will be by the fastest available method. All shipments will be FOB origin, freight prepaid, and added to the invoice.
- For prices, call your local Hewlett-Packard sales office and request the price for the appropriate exchange part number shown below.

When returning a detector for exchange.

- 1. Do not place an order with your local office. Leave blank the space for sales order number on the reverse side.
- Consult your radiation safety officer and the latest revision of the Code of Federal Regulations. Titles 10 and 49 (sec. 173.421-1, 173.421-1, 173.421), and applicable local and state regulations for packaging, labeling, and shipping instruction.
- 3. Send this form, a copy of your purchase order, and the detector directly to:

EC Detector Exchange Program Hewlett-Packard Company—Avondale Division Route 41 & Starr Road Avondale, Pennsylvania 19311

NOTE: If your detector is covered by warranty, contact your local service engineer before shipping your detector. This engineer will provide an order number to be entered on the reverse side instead of your purchase order number. In this case, you need not supply a purchase order.

Model No.	Detector No.	Exchange Part No.
HP 5890 Series	HP 19233	19233-69570 (general)
HP 5890 Series	HP 19235	19235-69530 (specific)
HP 5700/5790 Series	HP 18713A	18713-69501 (specific)
HP 5880 Series	HP part no. 18803-60520	18803-69520 (specific)
HP 5880 Series	HP 19303	19303-69550 (specific)
HP 5700/HP 5790	HP 19282	19282-69501 (general)
HP 5880	HP 19312	19312-69550 (general)
HP 5890 Series	HP G1223A	19233-69576 (general)
HP 5890 Series	HP G1224A	19235-69536 (specific)



- E. Nickel-63 Hewlett-Packard Detector Cell Model No. 18803A
  - a. Detector Serial No. C0286

Method to Remove From License: Returned to Hewlett-Packard for disposal.

#### Documentation:

- 1. Shipping Order dated 9-8-93 from BFG to Hewlett-Packard
- Letter dated 9-21-93 from Hewlett-Packard to BFG acknowledging receipt of SN-C2086
- b. Detector Serial No. H2930

Method to Remove From License: BFGoodrich to request Hewlett-Packard to put on their general license.

#### Documentation:

 Letter from HP to BFG, dated 9-14-93 transferring detector to General License 07-28762-02G

# **BFGoodrich**

REMIT TO

PURCHASING SHIPPING ORDER

NOTICE TO	SUPPLIER: THIS IS AN	INVOICE. THE AMOU	NT OF THIS INVOICE WILL B	SE DEDUCTED FROM	OUR NEXT REMITTANCE
BPDC	OUR P. O. NUMBER	REQUISITION NO.	S. O. & DEBIT NO. #	REFER TO	THIS NUMBER
85/0	CREDIT TO ACCT.	DATE ENTERED	9-8-93		ON FOR SHIPMENT
OLD TO	PREPAID CHARGE	ATTN: ECD 2850 CEN	TERVILLE RD. DE 19808-1610	3. DAMAGED I  4. * B.F.G. PI ON 5 O.  5. SHIPPED TO	RETURNED FOR REPLACEMEN  M TRANSIT - CLAIM CASE  ROPERTY GUT FOR PROCESSIN  NUMBER INDICATED ABOYE.  D B.F.G. BY MISTAKE  PROPERTY (ORUMS ETC.)
	COLLECT		QTY. SHIPPED	143	UNIT EXTENSION
		-60528 - Dispos	al	cke/ 63	
CASE NO'S		R COUNTED BY	PAM LANE DEPT. NO. 85/0	DOGEN SHIPPING STAM	19/8/93
	INBOUND TRA	NEPORTATION CHARGES	PURCHASING DEPT. APPROV	AL	

DO NOT ADD

WORK COPY

# How to Package and Ship ECDs

1. Wipe off any external chemicals or debris that may be on the ECD, with a clean dry cloth.

2. Plug the entrance fitting, and cap the vent tube.

3. Place the ECD in a strong plastic bag, and seal the bag.

4. Pack it in a strong container (corrugated cardboard is satisfactory) with a shock absorbing packing material (bubble-pack if civaliable), and carefully seal the box.

Mark the box with the following marking "Radioactive material excepted packages-articles, UN 2910".

6. All ECDs should be sent to: Hewlett-Packard Company

Attention: ECD Lab 2850 Centerville Road Wilmington, DE 19808-1610

7. We recommend that all ECDs should be shipped via Federal Express, never send an ECD via regular mail.

8. For additional regulatory information, regarding shipping ECDs, refer to the publication "Information for General Licensees" (HP Part No. 5953-1798).

- Please enclose a letter on company letter-head, specifying the required service (i.e. disposal, re-built, cleaning, etc.) Please specify the serial number(s) of the detector(s), and your return address.
- 10. If you are returning a high-wipe detector (the wipe test indicated leakage greater than 0.005 microcuries), please call the ECD lab at (302)633-8521 immediately before shipment.



Hewiett-Packard Company Little Falls Site 2850 Centerville Rd. Wilmington, DE 19808

Sept 21,1993
Pamila Lame.
BFG ordrich Co.
Research & Development Ch.
9921 Brecksville Road
Brocksville, Ohio 44141

Re: Acknowledgement of Receipt of Electron Capture Detector

Dear Customer,

This is to acknowledge that Electron Capture Detector(s), Serial Number(s):

( 2086)

were received on Soft 9,1998 \_\_\_\_\_, and are in possession of the Hewlett-Packard Company, Wilmington, DE, U.S.A.

Sincerely, yours,

HEWLETT-PACKARD COMPANY NRC License No. 07-28762-02G



Hewlett-Packard Company Little Falls Site 2850 Centerville Rd. Wilmington, DE 19808

Sept. 14, 1993

BF Goodrich Company Research & Development Company Attention: Pamela S. Lane 9921 Bracksville Rd. Bracksville, Ohio 44141

Dear Ms. Lane,

Our records indicate that your company possess a generally licensed Electron Capture Detector, Serial Number H2930, Model No. 19282. Since this is a general license detector, it is covered under Hewlett-Packard's Distribution License, License Number 07-28762-02G, issued by the U.S. Nuclear Regulatory Commission.

Hewlett-Packard distribution license allows us to distribute generally licensed Electron Capture Detectors. If you are in possession of a generally licensed Electron Capture Detector, and you comply with the requirements in our publication "Information for General Licensees", (H.P. Part No. 5953-1798), then that detector is covered under H.P.'s Distribution License.

If you should have any additional questions, or require any additional information, please do not hesitate to contact us.

Sincerely yours,

Brian Donnelly

Radiation Safety Officer

HEWLETT-PACKARD COMPANY

# HP 19233, HP 19282, HP 19312, and HP G1223A ECD

#### Introduction

This publication describes proper installation, operation, and maintenance of HP 19233, HP 19282, HP 19312, and HP G1223A Electron Capture Detectors (ECD). It also discusses the regulations that govern their use and the safety precautions that must be observed to help avoid radiological hazards.

The terms "Regulations," "Agency," and "ECD" are used throughout this book. "Regulations" refers to the regulations of the Nuclear Regulatory Commission (NRC) as published in Title 10 of the Code of Federal Regulations (abbreviated as 10CFR) or, in the Agreement Stat o. to the regulations of the responsible state agency. "Agency" refers to the Nuclear Regulatory Commission (NRC) or, in Agreement States, to the responsible state agency. Your local Hewlett-Packard Sales Office can advise you of the situation in your state. "ECD" refers to the HP 19282 Electron Capture Detector used in the HP 5790 Gas Chromatograph, or to the HP 19312 Electron Capture Detector used in the HP 5880 Gas Chromatograph, or to HP 19233 and HP G1223A Electron Capture Detector used in the HP 5890 Gas Chromatograph.

#### NOTE

The material in this book concerning regulations is accurate as of the date of writing; however, regulations may change. It is your responsibility to be in compliance with the latest revision.

A Certification Form is included at the back of this book. The

detector, or the instrument in which it is installed, cannot be shipped until the completed Certification Form is received by the Little Falls Site, formerly the Avondale Division, of Hewlett-Packard Company.

#### Description of the Detector

The ECD can be purchased as an option with the instrument, in which case it is installed at the factory, or as an add-on accessory to be installed by you or by Hewlett-Packard.

The ECD consists of the detector cell, the thermal insulation that surrounds it, mounting hardware and the detector cover, and associated overheat protection circuitry. The two halves of the cell are joined by screws that require a special tool for removal. This tool is not supplied with the detector.

#### Licensing Requirements

You automatically become a General Licensee when you purchase the ECD, whether it is mounted in a gas chromatograph or purchased as an add-on accessory. You do not have to apply for a general license from the NRC or State Agency. You may be required to register with the Regulatory Agency of your state in case you live in an "Agreement State."

Certain regulations apply to general licenses. In particular, you may not do the following:

- 1. Open the detector cell.
- Modify the cell in any manner.

- Use any solvent, including water, to clean the cell.
- Interfere with or attempt to defeat the overheat circuitry supplied with the detector.
- 5. Transfer the detector to another person or another location except as described in the Regulations.

#### You are required to:

- Perform a radioactivity leak test at least every 6 months.
- Maintain records as required by the Agency.
- Notify the Agency in case of any incidents or failures that might lead to a hazardous condition.

These requirements are discussed in greater detail later in this book, together with the full text of the pertinent sections of the NRC regulations. Use of the detector in Agreement States is governed by regulations substantially the same as these.

#### Principle of Operation

The radioactive source in the cell produces high-energy electrons. These interact with carrier gas molecules, causing a multiplication of the number of electrons and a decrease in their energy. The resulting low-energy electrons can be captured by certain sample molecules. The surviving electrons are periodically collected by a voltage pulse applied to the cell electrodes.

# F. Nickel-63

Method to Remove From License: Returned to Perkin Elmer via Nuclear Radiation Development for disposal.

## Documentation:

- 1. Copy of BFG Shipping Order 00559 with UPS shipment imprint.
- 2. Copy of BFG Purchase Order and check for disposal.

# PRINTED IN U.S.A. PLEASE USE THE ABOVE NUMBER WHEN CORRESPONDING SHIPPING ORDER NUMBER 62.24 TOTAL 00559 Grand Island NY 14072 OSD &R REPORTNUMBER Att. Larry Keating CHECKED BY BILL OF LADING NUMBER 第一部 四四四 61 14 3 B PRICE Nuclear Radiation Development NOS8 UNIT SHIPPED (FS) QUANTITY REQUIRED DELIVERY DATE. 2937 AIT Blvd VALUE, IF OVER \$250. いっていている。 GROSS WT. Perkin-Elmer 10 mCi Nicke 163 Foil Source Model 3300119 Serial DOT - Radioactive Instrument YOUR INVOICE DATE YOUR INVOICE NO. RMA-LK-9-21-92 SHIP VIA UPS # 10389 Dated 1-80 COLLECT PREPAID DESCRIPTION HAZARDOUS TYES XNO (II YES, GIVE ADDITIONAL INFORMATION BELOW) DATE SHIPPED 10/1/92 NSTRUCTIONS TO VENDOR MATERIAL RECEIVED BY SHIPPED FROM SOLD TO OUR PURCHASE CROER NO X Return for Disposal ☐ REJECTED - RETURNED FOR REPLACEMENT SHIPPING ORDER CHECK REASON FOR SHIPMENT Avon hake Ohio CONTAINER - RETURNED FOR CREDIT TO BE REPARRED AND RETURNED TO REJECT ED - RETURNED FOR CHEDIT Richard B. Howolesty POPT NO D 2404 9-23-93 SALE OF PROPERTY UDAN OF PROPERTY BFG-15046-F2 6:90

SUGGES 'D VENDOR EST. PRICE R DUE DATE REG ORDER PURCHASE ORDER - REQUISITION RELEASE NO BFGoodrich Chemical Group SHIP TO: The BFGoodrich Chemical Group AT TECHNICAL CENTER MOORE & WALKER ROADS DATE 9-21-92 AVON LAKE, OHIO 44012 BILL AND SEND INVOICES IN duplicate To The BFGoodrich Chemical Group TO ATTH: ACCOUNTS PAYABLE DEPT. Nuclear Radiation Development Corp. 2937 ALT Blvd. ATTECHNICAL CENTER Grand Island, NY 14072 P. O. BOX 122 AVON LAKE, OHIO 44012 Attn: Larry Keating (716) 773-7634 Fax 773-7744 TERMS CHECK ENCLOSED SHIPMENT PROMISED (CHEAPEST WAY UNLESS OTHERWISE SPECIFIED) SHIPPING DATE NIA F.O.B. CHARGEE PLEASE ENTER OUR ORDER PER THE TERMS, CONDITIONS AND SPECIFICATIONS SET FORTH OR REFERRED TO ON THE FACE AND REVERSE SIDE, ACKNOWLEDGE YOUR DO NOT INSURE PARCEL POST SHIPMENTS OF DECLARE EXCESS VALUATION ON EXPRESS FOR OUR ACCOUNT PRICE DESCRIPTION QUANTITY 100 Cover costs of dismantling and proper disposal, per all applicable state and federal EPA and NRC regulations of one Perkin-Elmer 15MCI Nick: 1 63 foil source Moded 3300119, Serial number 10389 NRD is to provide BFCoodrich with written certification of disposal date and location. BFGoodrich has this source listed on our NRC License #34-08558-01 OUR CODE NUMBER, PURCHASE ORDER NUMBER AND NET WEIGHT MUST BE STENCILED ON TOP AND SIDES OF DRUMS AND ON END OR SIDES OF BAGS. FREIGHT BILLS, BILLS OF LADING, QUALITY REPORTS, INVOICES AND PACKING SLIPS MUST SHOW OUR CODE NUMBER, PURCHASE ORDER NUMBER, REQUISITION NUMBER AND NET WEIGHT EACH OF YOUR INVOICES SHALL BEAR THE FOLLOWING STATEMENT: "WE HEREBY CERTIFY THAT THESE GOODS AND/OR SERVICES WERE PRODUCED AND/OR PERFORMED IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF SECTION 6, 7 AND 12 OF THE FA'R LABO STANDARDS ACT OF 1938, AS AMENDED, AND OF REGULATIONS AND ORDERS OF THE ADMINISTRATOR OF THE WAGE AND HOUR DIVISION ISSUED UNDER SECTION 14 THEREOF SALES OR USE TAX NOT TO BE ADDED UNLESS OTHERWISE INDICATED, DIRECT PAY AUTHORITY BY OHIO PERMIT 9800, 676 KENTUCKY PERMITS 26421 (LOUISVILLE) AND 26422 (CALVERT CITY), TEXAS PERMIT 3-00006 7515-4 CHARGE DEPT BLDG DEL TO DEPT 641 B/431 2404 496 R. D. Hardesty EA NO JOB NO BFGoodrich Chemical Group Eashepil 9/23/92 BUYER Title of duly authorized official

# **BFGoodrich**

Technical Center, Avon Lake, O. 44012

PAY

AL 02873

BE SOODSICH TO CHEMICAL CHOULT I

DATE

PAY TO THE ORDER OF

AMOUNT

September 22, 1992

NUCLEAR RADIATION DEVELOPMENT CORP.

\$100.00

ELYRIA SAVINGS & TRUST NATIONAL BANK AVON LAKE OFFICE AVON LAKE OHIO

WORKING FUND

"O 28 73 3 " 1:04 1 20 200 31:

7 ... 3 28 ... 0 7 11"

REMITTANCE ADVICE - DETACH BEFORE DEPOSITING CHECK

9 22 92 Disposal of P&E Nickel 63 P404 496 \$100.00  Foil Source from Electron Capture Detector		REMITTARILE ADVI	CE . DE INCLIE	FLOWE DEL COULIN	Control of the second	A CONTRACTOR OF THE PROPERTY OF THE PARTY OF	and the second second second second second	
9 22 92 Disposal of P&E Nickel 63 P404 496 \$100.00 Foil Source from	INVOICE DATE	INVOICE NUMBER	DEPT. ACCT. NO. INV		INVOICE AMOUNT	DISCOUNT	NET AMOUNT	
		Disposal of P&E Nickel 63 Foil Source from	DEPT. P404	ACCT, NO.	A CONTRACTOR REPORT AND THE RESIDENCE OF STATE AND ADDRESS OF STATE ADD	DISCOUNT		

BFGoodrich Technical Center Avon Lake, O. 44012

AMOUNT OF PAYMENT

G. Cesium-137 Four Texas Nuclear Model 696894 Level Ganges

Method to Remove From License: Return to supplier.

Documentation:

Letter from TN Technologies, Inc. dated 9-8-93 certifying receipt and ownership of the four level gauges.



#### ACKNOWLEDGMENT OF RECEIPT OF RADIOACTIVE MATERIAL

Date:

September 8, 1993

Company Name:

The Geon Company

Address:

P.O. Box 122

Avon Lake, OH 44012

Attention:

Mr. Bill Baran

This is to certify that TN Technologies Inc. has received and accepted ownership of the radioactive material described below pursuant to applicable regulations and as authorized by our Texas Radioactive Material License LO3524:

Isotope	Activity	Source Serial No.	Manufacturer	Model No.	Model Serial No.
Cs-137	100 mCi	AA-0385	Texas Nuclear	5205	B189
Cs-137	100 mCi	AA-0384	Texas Nuclear	5205	B190
Cs-137	100 mCi	AA-0393	Texas Nuclear	5205	B191
Cs-137	100 mCi	AA-0392	Texas Nuclear	5205	B192

This receipt should be retained in your files as a permanent record showing the disposition of this radioactive material.

If you have any questions or if we may be of further assistance, please contact me directly at 512-388-9291.

Sincerely,

TN TECHNOLOGIES, INC.

Lori Pelliccia

**Technical Services Coordinator** 

/llp

TN Technologies, Inc.