

CORRECTED COPY

MATERIALS LICENSE

Amendment No. 20

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code 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(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee

1. Berthold Systems, Inc.
Hopewell Business and Industrial Park
2. 101 Corporation Drive
Aliquippa, Pennsylvania 15001-4863

In accordance with letter received
August 18, 1992,

3. License number 37-21226-01 is amended in
its entirety to read as follows:

4. Expiration date October 31, 1993

5. Docket or
Reference No 030-20043

6. Byproduct, source, and/or
special nuclear material

7. Chemical and/or physical
form

8. Maximum amount that licensee
may possess at any one time
under this license

- A. Cobalt 60
- B. Krypton 85
- C. Strontium 90
- D. Cesium 137
- E. Americium 241
- F. Curium 244

- A. Sealed sources
- B. Sealed sources
- C. Sealed sources
- D. Sealed sources
- E. Sealed sources
- F. Sealed sources

- A. 10 curies
- B. 10 curies
- C. 10 curies
- D. 40 curies
- E. 10 curies
- F. 10 curies

9. Authorized use

- A. through F. For use and/or possession incident to:

- (1) Installation into or removal from Berthold devices.
- (2) Installation, relocation, repair, and servicing of Berthold devices including the leak testing of sealed sources and radiation surveys of devices.
- (3) Retrieving, storing, and transferring for disposal Berthold devices received from customers.
- (4) Distribution of Berthold devices approved in Condition 12.A. to persons authorized to receive the licensed material pursuant to the terms and conditions of a specific license issued by the Nuclear Regulatory Commission or an Agreement State.
- (5) Instruction and training of individuals in the use of the Berthold devices.
- (6) Demonstration of Berthold Series LB-300L, LB-7400D, or LB-379 generally licensed gauges.
- (7) Importing of new sealed sources and devices for testing and evaluation of safety properties prior to registration.

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SUPPLEMENTARY SHEET

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CONDITIONS

10. A. Licensed material may be used at 101 Corporation Drive, Hopewell Business and Industrial Park, Aliquippa, Pennsylvania and at customer facilities and temporary job sites of the licensee anywhere in the United States where the U.S. Nuclear Regulatory Commission maintains jurisdiction for regulating the use of licensed material.
- B. Notwithstanding Condition 10.A., licensed material for testing and evaluation may be used and stored only at 101 Corporation Drive, Hopewell Business and Industrial Park, Aliquippa, Pennsylvania.
11. A. Licensed material shall be used by, or under the supervision and in the physical presence of, Jeffrey Dinkel, Thomas Kuny, or individuals who have satisfactorily completed the training program described in the licensee's letter dated March 20, 1987. The licensee shall maintain a written record of all individuals designated as users.
- B. The Radiation Safety Officer for this license is Thomas Kuny.
12. A. The activities authorized by this license are approved for the following herthold devices:

Device Model No.	Isotope	Source Dwg. No.	Maximum Activity Per Source (millicuries)	Type of Licensee
LB 300 IRL (Series)	Cobalt 60	P-2608-100	8	Specific
LB 300 IRL (Series)	Cobalt 60	P-2608-101	8	Specific
LB 300 IRL (Series)	Cesium 137	SK1208	50	Specific
LB 300 IRL (Series)	Cesium 137	VZ287	50	Specific
LB 300 IP D/L (Series)	Cesium 137	P-2623-100	300	Specific
LB 300 IP D/L (Series)	Cesium 137	P-2623-100	30	General
LB 6600 (Series)	Americium 241	P-2611-100	100	Specific
LB 300 ML	Cobalt 60	P-2608-100/101	300	Specific
	Cesium 137	SK-1208/VZ-287	500	Specific
LB 300 MLT	Cobalt 60	P-2608-100/101	300	Specific
	Cesium 137	SK-1208/VZ-287	500	Specific
LB 300 L (Series)	Cobalt 60	P-2608-100	500	Both
LB 300 L (Series)	Cobalt 60	P-2608-101	500	Both
LB 300 L (Series)	Cesium 137	SK-1208	500	Both
LB 300 L (Series)	Cesium 137	VZ-287	500	Both
LB 300 LP (Series)	Cobalt 60	P-2602-100	100	Both
LB 300 LP (Series)	Cesium 137	P-2623-100 or 2645.100-000	1,000	Both
LB 375	Curium 244	2657.000-000	10	Both
LB 375	Cesium 137	P-2623-100	100	Both
LB 375	Americium 241	P-2611-100	300	Both
LB 379	Americium 241	P-2642-100	100	Both
LB 7400 D/L (Series)	Cobalt 60	P-2602-100	500	Both
LB 7400 D/L (Series)	Cesium 137	P-2623-100	500	Both

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(12. Continued)

CONDITIONS

Device Model No.	Isotope	Source Dwg. No.	Maximum Activity Per Source (millicuries)	Type of Licensee
LB 740C D/L (Series)	Cesium 137	P-2645-100.000	3000	Both
LB 330	Cobalt 60	P-2651-201	10	Both
LB 330	Cobalt 60	P-2651-202	10	Both
LB 330	Cesium 137	2653.100-001	32	Both
LB 330	Americium 241	2663.000-000	120	Both
LB 360 - AS	Americium 241	P-2627-100	300	Both
LB-AS (Series)	Americium 241	P-2627-100 or P-2642-100	300	Both
LB-BW (Series)	Krypton 85	KAC.D3	200	Both
LB-BW (Series)	Strontium 90	SIF.P1	10	Both
LB-BW (Series)	Curium 244	CL CL	200	Both
LB-BW (Series)	Americium 241	AMC.D2	10	Both
LB-BW (Series)	Americium 241	AMC.D3	30	Both
LB-BW (Series)	Americium 241	AMC.16	100	Both
LB-RW (Series)	Americium 241	AMC.17	300	Both

- B. The following isotopes may be possessed in the form of sealed sources for testing and evaluation of safety properties prior to registration. The total number of such sources possessed at any one time is limited to four. No individual source shall be possessed for testing and evaluation for longer than one year.

Isotope	Maximum Activity Per Source (millicuries)
Cobalt 60	300
Krypton 85	300
Strontium 90	300
Cesium 137	300
Americium 241	300
Curium 244	300

13. Only sealed sources and devices which have been evaluated by the Nuclear Regulatory Commission or an Agreement State and for which the certificate of registration described in 10 CFR 32.210 has been issued may be distributed to persons authorized to receive the radioactive material pursuant to a specific license issued by the Commission or an Agreement State.
14. This license does not authorize distribution of licensed material to persons generally licensed pursuant to 10 CFR 32 or the equivalent provisions of the regulations of an Agreement State.

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(Continued)

CONDITIONS

15. A. Sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed 6 months or at such other intervals as are specified by the certificate of registration referred to in 10 CFR 32.210, not to exceed 3 years.
- B. Notwithstanding Paragraph A of this Condition, sealed sources designed to emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed 3 months.
- C. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.
- D. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to any use or transfer as a sealed source.
- E. Sealed sources and detector cells need not be leak tested if:
- (i) they contain only hydrogen 3; or
 - (ii) they contain only a gas; or
 - (iii) the half-life of the isotope is 30 days or less; or
 - (iv) they contain not more than 100 microcuries of beta and/or gamma emitting material or not more than 10 microcuries of alpha emitting material; or
 - (v) they are not designed to emit alpha particles, are in storage, and are not being used. However, when they are removed from storage for use or transfer to another person, and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source or detector cell shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.
- F. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. Records of leak test results shall be kept in units of microcuries and shall be maintained for inspection by the Commission. If the test reveals the presence of 0.005 microcurie or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission and the source shall be removed from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within 5 days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region I, ATTN: Chief, Nuclear Materials Safety Branch, 475 Allendale Road, King of Prussia, Pennsylvania 19406. The report shall specify the source involved, the test results, and corrective action taken.

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(16. Continued)

CONDITIONS

- G. The licensee is authorized to collect leak test samples for analysis by the licensee or Applied Health Physics, Inc. Alternatively, tests for leakage and/or contamination may be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.
16. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders or detector cells by the licensee.
17. The licensee shall conduct a physical inventory every 6 months to account for all sources and/or devices received and possessed under the license. Records of inventories shall be maintained for 5 years from the date of each inventory.
18. The licensee may transport licensed material in accordance with the provisions of 10 CFR 71, "Packaging and Transportation of Radioactive Material."



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CONDITIONS

19. Except as specifically provided otherwise in this license, the licensee shall conduct 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 unless the statements, representations and procedures in the licensee's application and correspondence are more restrictive than the regulations.

- A. Application dated November 12, 1982
- B. Letter dated February 25, 1985
- C. Letter dated August 15, 1985
- D. Letter dated December 2, 1985
- E. Letter dated May 19, 1986
- F. Letter dated March 16, 1987
- G. Letter dated March 20, 1987
- H. Letter dated April 27, 1987
- I. Letter dated June 5, 1987
- J. Letter dated February 10, 1988
- K. Letter dated August 31, 1988
- L. Letter dated March 15, 1989
- M. Letter dated March 21, 1989
- N. Letter dated June 8, 1989
- O. Letter dated November 7, 1989
- P. Letter dated March 26, 1990
- Q. Letter dated June 4, 1990
- R. Letter dated October 10, 1990
- S. Letter dated January 21, 1991
- T. Letter dated March 1, 1991
- U. Letter dated February 7, 1991
- V. Letter dated June 20, 1991
- W. Letter dated October 2, 1991
- X. Letter received April 17, 1992
- Y. Letter dated August 18, 1992

For the U.S. Nuclear Regulatory Commission

Original Signed By:

Elizabeth Uilrich

Date NOV 06 1992

By

Nuclear Materials Safety Branch
Region I

King of Prussia, Pennsylvania 19406

NOV 06 1992

License No. 37-21226-01
Docket No. 030-20043
Control No. 117014

Berthold Systems, Inc.
ATTN: G. M. Smith, Jr.
President
Hopewell Business and Industrial Park
101 Corporation Drive
Aliquippa, Pennsylvania 15001-4863


Dear Mr. Smith:

Enclosed is the Corrected Copy of Amendment No. 20 for License No. 37-21226-01. In accordance with the telephone call from Mary Dedola on October 22, 1992, the Cobalt 60 source number listed as P-2623-100 for the LB 300 LP series device was corrected to read P-2602-100.

We apologize for any inconvenience this error may have caused.

Sincerely,

Original Signed By:
Elizabeth Uilrich

 John D. Kinneman, Chief
Research, Development and
Decommissioning Section
Division of Radiation Safety
and Safeguards

Enclosure:
Corrected Copy of Amendment 20 for License No. 37-21226-01

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