

See/CCB

JUL 13 1993

Kaiser Aluminum & Chemical Corp.
ATTN: Edward George, Attorney
P. O. Box 1791
Charleston, WV 25326

General License
Docket No. 99990003
EA No. 92-202

Dear Mr. George:

SUBJECT: RESULTS OF FIELD AUDITS

This refers to your letter dated June 4, 1993, transmitting the results of field audits at your Gramercy, Louisiana, Trentwood, Washington, and Pleasanton, California facilities. The letter also discussed the corrective actions you've taken to date as well as future corrective actions you will implement to preclude further loss of control over licensed material. Your corrective actions appear to be adequate.

Based on our review of the audit results, it appears all licensed devices are accounted for with the exception of one device containing a nominal 100 millicurie cesium-137 sealed source which was lost from your Gramercy plant sometime in 1975. We will notify the State of Louisiana Radiation Protection Regulatory Authority of this loss. The State may wish to pursue this matter with you.

We have no further questions at this time regarding these matters.

In accordance with 10 CFR 2.790 of the Commission's regulations, a copy of this letter and the enclosure will be placed in the NRC Public Document Room.

Sincerely,

Original Signed by Roy J. Caniano

Roy J. Caniano, Chief
Nuclear Materials Safety Branch

Enclosure: Letter Dated
June 4, 1993

bcc w/enclosure:
J. Lieberman, OE
R. DeFayette
B. Berson
PUBLIC



YES
RIII
Holt
7/8/93

RIII
DeFayette
7/13/93

RIII
Caniano
7/14/93

9307200126 930713
REQ3 QA999 EMVKAISC
99990003 PDR

IE07
11

**KAISER ALUMINUM
& CHEMICAL CORPORATION**

June 4, 1993

James Lieberman, Director
Office of Enforcement
U. S. Nuclear Regulatory Commission
ATTN: Document Control Clerk
Washington, DC 20555

RE: NOTICE OF VIOLATION

Dear Mr. Lieberman:

Reference is made to my letter of February 5, 1993 regarding the Notice of Violation and Proposed Imposition of Civil Penalty dated November 20, 1992.

With the assistance of qualified health physicists, we have completed the field audits of our Gramercy, Louisiana, Trentwood, Washington and Pleasanton, California facilities. Enclosed are copies of the following inventories prepared as a result of these audits.

1. Active Inventory - Radiation Containing Equipment
2. Historical Inventory - Radiation Containing Equipment
3. Active Inventory - X-Ray Equipment

The Active Inventory - Radiation Containing Equipment is based on physical inventories taken at the plants during the audits and includes a description of the radiation source in each device. The Historical Inventory is based on a review of records at the plants. For the Gramercy, Louisiana Historical Inventory we also reviewed the records at the Louisiana Radiation Protection Division of the Department of Environmental Quality.

9306090296 13p.

5561002

James Lieberman, Director
June 4, 1993
Page 2

The Gramercy facility holds Louisiana Radiation Protection Division License No. LA-0673-LO1. The Trentwood facility operates under a general license from the Radiation Protection Division of the State of Washington Department of Health. The Pleasanton facility holds License No. 2066-60 from the Radiologic Health Branch of the State of California Department of Health Services.

In accordance with my letter of February 5, we contacted Packaging Corporation of America regarding the nuclear devices at the Wanatah, Indiana facility formerly owned by Kaiser Aluminum. Attached is a copy of Packaging Corporation of America's response of February 18, 1993 advising that plant records indicated that the devices were returned to Amstat Industries, Inc. on January 6, 1987.

We have also contacted legal counsel for Ravenswood Aluminum Corporation for information regarding the transfer of US-NRC License No. 47-14123-01. They have advised us that an inventory at the plant disclosed that all devices at the plant are licensed in the name of Ravenswood Aluminum Corporation.

A company-wide radiation compliance and safety workshop will be held August 2, 1993 in Seattle. Representatives of all plants that have nuclear devices will attend this workshop. All radiation safety officers will be required to attend. The workshop will be conducted with the assistance of Dr. Max Scott, C.H.P. The subjects to be covered at the workshop include basic radiation science concepts and associated health risks, radiation survey equipment purchase, maintenance and calibration, personnel dosimetry, record keeping, labelling, storage, disposal, audits, emergency procedures and training. Similar workshop programs will be conducted periodically thereafter.

Health and safety audits, including radiation compliance and safety, are scheduled for the Gramercy facility in September 1993, for the Pleasanton facility in December 1993 and for the Trentwood facility in January 1994.

A corporate radiation standard has been developed. Specific plant radiation compliance and safety policies/procedures are under development. In addition, training modules will

James Lieberman, Director
June 4, 1993
Page 3

be developed for individual plants for plant radiation safety officers, first line supervisors and employees who work with or around nuclear devices. We believe that these steps, in combination with the radiation compliance and safety audits and workshop program described above, will provide a solid basis to achieve full compliance with NRC regulations in the future.

Please let me know if you have any questions.

Sincerely yours,



Charles B. Brown
Assistant General Counsel

cc: ✓ A. Bert Davis (with attachments)
Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
799 Roosevelt Road
Glen Ellyn, Illinois 60137

ACTIVE INVENTORY - RADIATION CONTAINING EQUIPMENT

NAME OF
INDIVIDUAL
FOR
EQUIPMENT

BUSINESS UNIT/PLANT

EQUIPMENT TYPE

SERIAL NO.

TYPE OF SOURCE OF RADIATION

LOCATION IN FACILITY

DATE OF
PURCHASE MANUFACTURERALUMINA
GRAMERCY

DENSITY METER	K-49 - Serial No. 63328	GAMMA, CESIUM 137/50mCi	Bauxite Thickener	5/74		
DENSITY METER	K-50 - Serial No. 65643	GAMMA, CESIUM 137/100mCi	#1 Seed Charge Line - Precip.	1/77	Ohmart	George Guelfo
DENSITY METER	K-51 - Serial No. 49829	GAMMA, CESIUM 137/150mCi	#3 Seed Charge Line - Precip.	10/77	Ohmart	George Guelfo
DENSITY METER	K-53 - Serial No. 66438	GAMMA, CESIUM 137/100mCi	Storage Locker	10/77	Ohmart	Harry Withew
DENSITY METER	K-54 - Serial No. 61569	GAMMA, CESIUM 137/100mCi	#2 Seed Charge Line - Precip.	5/76	Ohmart	George Guelfo
DENSITY METER	K-55 - Serial No. N908	GAMMA, CESIUM 137/100mCi	#4 Seed Charge Line - Precip.	6/78	Ohmart	George Guelfo
RFLT SCALE	K-62 - Serial No. 3145	GAMMA, CESIUM 137/100mCi	#2 Bauxite Scale	6/78	Ohmart	John Hahsreiteringer
DENSITY METER	K-64 - Serial No. 73824	GAMMA, CESIUM 137/100mCi	Tank #91 Primary Underflow - Precip.	7/83	Ohmart	George Guelfo
DENSITY METER	K-65 - Serial No. 72434	GAMMA, CESIUM 137/500mCi	#3 Calcine Line - Precip.	3/82	Ohmart	George Guelfo
DENSITY METER	K-66 - Serial No. 69097	GAMMA, CESIUM 137/300mCi	#2 Calcine Line - Precip.	12/80	Ohmart	George Guelfo
DENSITY METER	K-67 - Serial No. 69096	GAMMA, CESIUM 137/300mCi	#1 Calcine Line - Precip.	12/80	Ohmart	George Guelfo
DENSITY METER	K-68 - Serial No. 72943	GAMMA, CESIUM 137/300mCi	Tank 26 Primary Thickener Underflow - Precip.	4/82	Ohmart	George Guelfo
DENSITY METER	K-69 - Serial No. 72651	GAMMA, CESIUM 137/100mCi	Tank 39 Primary Thickener Underflow - Precip.	4/82	Ohmart	George Guelfo
DENSITY METER	K-70 - Serial No. 72942	GAMMA, CESIUM 137/300mCi	Tank 65 Primary Thickener Underflow - Precip.	4/82	Ohmart	George Guelfo
DENSITY METER	K-71 - Serial No. 72647	GAMMA, CESIUM 137/300mCi	Tank 78 Primary Thickener Underflow - Precip.	4/82	Ohmart	George Guelfo
DENSITY METER	K-72 - Serial No. 72648	GAMMA, CESIUM 137/300mCi	Tank 104 Primary Thickener Underflow - Precip.	4/82	Ohmart	George Guelfo
DENSITY METER	K-74 - Serial No. 72280	GAMMA, CESIUM 137/100mCi	Storage Locker	4/82	Ohmart	Harry Withew
DENSITY METER	K-75 - Serial No. 73821	GAMMA, CESIUM 137/100mCi	Storage Locker	7/83	Ohmart	Harry Withew
DENSITY METER	K-76 - Serial No. M0296	GAMMA, CESIUM 137/50mCi	#2 Kiln Slurry Line - Calcination	2/86	Ohmart	George Guelfo
DENSITY METER	K-77 - Serial No. M0297	GAMMA, CESIUM 137/50mCi	Storage Locker	2/86	Ohmart	Harry Withew
DENSITY METER	K-78 - Serial No. 71329	GAMMA, CESIUM 137/50mCi	Hydrate Dryer Feed Line	7/81	Ohmart	George Guelfo
DENSITY METER	K-79 - Serial No. 89679	GAMMA, CESIUM 137/100mCi	Dual Seed Charge (A) - Precip.	10/80	Ohmart	George Guelfo
DENSITY METER	K-81 - Serial No. 69353	GAMMA, CESIUM 137/80mCi	Storage Locker	12/86	Ohmart	Harry Withew
DENSITY METER	K-82 - Serial No. M1646	GAMMA, CESIUM 137/10mCi	West Oxalate Settler Tank	10/87	Ohmart	Seymour Brown
DENSITY METER	K-83 - Serial No. M2786	GAMMA, CESIUM 137/80mCi	#8 Washer Underflow	1/89	Ohmart	Seymour Brown
DENSITY METER	K-84 - Serial No. M1651	GAMMA, CESIUM 137/10mCi	East Oxalate Settler Tank	3/88	Ohmart	Seymour Brown
DENSITY METER	K-85 - Serial No. 61582	GAMMA, CESIUM 137/10mCi	Storage	11/89	Ohmart	Harry Withew
DENSITY METER	K-86 - Serial No. 61583	GAMMA, CESIUM 137/10mCi	Dual Seed Charge (B) - Precip.	11/88	Ohmart	George Guelfo
DENSITY METER	K-87 - Serial No. 61589	GAMMA, CESIUM 137/10mCi	#1 Kiln Slurry Line - Calcination	2/90	Ohmart	George Guelfo
DENSITY METER	K-88 - Serial No. 51012	GAMMA, CESIUM 137/20mCi	Retreat Head Tank Discharge	2/90	Ohmart	George Guelfo
DENSITY METER	K-89 - Serial No. 61584	GAMMA, CESIUM 137/10mCi	Storage Locker	11/89	Ohmart	Harry Withew
DENSITY METER	K-90 - Serial No. 69669	GAMMA, CESIUM 137/80mCi	Tank 117 PPT Underflow	8/89	Ohmart	George Guelfo
DENSITY METER	K-91 - Serial No. M0370	GAMMA, CESIUM 137/10mCi	North Sweet's Density	2/90	Ohmart	Seymour Brown
DENSITY METER	K-92 - Serial No. M4002	GAMMA, CESIUM 137/10mCi	South Sweet's Density	2/90	Ohmart	Seymour Brown
DENSITY METER	K-93 - Serial No. 66867	GAMMA, CESIUM 137/20mCi	D.E. 313 (ST Seed)	8/90	Ohmart	George Guelfo
DENSITY METER	K-94 - Serial No. 66869	GAMMA, CESIUM 137/20mCi	D.E. 276 (TT Seed)	8/90	Ohmart	George Guelfo
DENSITY METER	K-95 - Serial No. 65703	GAMMA, CESIUM 137/10mCi	D.E. 234 (Product Transfer "A" Train)	8/90	Ohmart	George Guelfo
DENSITY METER	K-96 - Serial No. 65705	GAMMA, CESIUM 137/10mCi	D.E. 267 (Product Transfer "B" Train)	8/90	Ohmart	George Guelfo
DENSITY METER	K-98 - Serial No. M5348	GAMMA, CESIUM 137/20mCi	Storage Magnetometer Building	8/90	Ohmart	Harry Withew
DENSITY METER	K-99 - Serial No. M5782	GAMMA, CESIUM 137/50mCi	Monohydrate Density	4/91	Ohmart	Seymour Brown
DENSITY METER	K-100 - Serial No. M4971	GAMMA, CESIUM 137/10mCi	#3 Kiln Feed	7/90	Ohmart	George Guelfo
DENSITY METER	K-101 - Serial No. M7089	GAMMA, CESIUM 137/250mCi	7 Washer Underflow	3/92	Ohmart	Seymour Brown

72

ACTIVE INVENTORY - RADIATION CONTAINING EQUIPMENT

BUSINESS UNIT/PLANT	EQUIPMENT TYPE	SERIAL NO.	TYPE OF SOURCE OF RADIATION	LOCATION IN FACILITY	DATE OF PURCHASE	MANUFACTURER	NAME OF INDIVIDUAL FOR EQUIPMENT
FLAT BOLDED PRODS. Pleasanton (CFT)	THICKNESS GAUGE # 4 MODEL	5420A	300 mCi - SR 90 ISOTOPE	Room B135	1983	Accuray	Ghazary
Trentwood	THICKNESS GAUGE MODEL U.BD	83292431 Source Serial # AM 29	1000mCi - AM 241 ISOTOPE	#1 Cold Mill	1981	Accuray	B. Fletcher
	THICKNESS GAUGE MODEL U.BD	83292431 Source Serial # S 521	300mCi - SR90 ISOTOPE	#1 Cold Mill	1981	Accuray	B. Fletcher
	THICKNESS GAUGE MODEL U.B	82293731 Source Serial # S 885	70mCi - SR90 ISOTOPE	#2 Cold Mill	1984	Accuray	B. Fletcher
	THICKNESS GAUGE MODEL U.6	482232331 Source Serial # S 424	300mCi - SR90 ISOTOPE	#5 Cold Mill - exit	1984	Accuray	B. Fletcher
	THICKNESS GAUGE MODEL U.6	674184131 Source Serial # S 110	70mCi - SR90 ISOTOPE	#4 Cold Mill	1984	Accuray	B. Fletcher
	THICKNESS GAUGE MODEL U.2	3734822 Source Serial # S 843.1	70mCi - SR90 ISOTOPE	#3 Cold Mill	1984	Accuray	B. Fletcher
	THICKNESS GAUGE MODEL U.3	3734792 Source Serial # S 978.1	70mCi - SR90 ISOTOPE	#4 Cold Mill	1984	Accuray	J. Lewis
	THICKNESS GAUGE MODEL U.3	3734782 Source Serial # S 1028	70mCi - SR90 ISOTOPE	#5 Cold Mill	1984	Accuray	J. Lewis
	THICKNESS GAUGE MODEL U.8	581305231 Source Serial # S 440	300mCi - SR90 ISOTOPE	#6 Cold Mill	1986	Accuray	J. Lewis
	THICKNESS GAUGE MODEL U.6	481232431 Source Serial # S 418	300mCi - SR90 ISOTOPE	#7 Cold Mill	1986	Accuray	J. Lewis
	THICKNESS GAUGE MODEL U.6	484272031 Source Serial # S 114	70mCi - SR90 ISOTOPE	Coil Coater	1991	Accuray	J. Lewis
	THICKNESS GAUGE MODEL U.6	82293731 Source Serial # S 528	300mCi - SR90 ISOTOPE	#2 Cold Mill - stored	1985	Accuray	B. Fletcher

-12

HISTORICAL INVENTORY - RADIATION CONTAINING EQUIPMENT

NAME OF
INDIVIDUAL
RESPONSIBLE
FOR
EQUIPMENT

BUSINESS UNIT/PLANT

EQUIPMENT TYPE

SERIAL NO.

TYPE OF SOURCE OF RADIATION

DISPOSITION

ACQUISITION
DATE

MANUFACTURER

FLAT ROLLED PRODS.
Passation (CFT)

PHOSGENE ANAL ZEL	#51-363	800 Micromeres Am241	Disposed - Richard, WA	5/88	MCA	Suchyta
Gas Chromatograph	#097219007042	15mCi, Ni-63	Sold - Cal Coast, Berkeley, CA	5/88	Perkin Elmer	Suchyta
Gas Chromatograph	#08724590011120	15mCi, Ni-63	Sold - Cal Coast, Berkeley, CA	5/88	Perkin Elmer	Suchyta
Gas Chromatograph	808	15mCi, Ni-63	Disposed - Beatty, NV	7/91	Perkin Elmer	Suchyta
Portable Gas Chromatograph	510 6907	750mCi, Tritium	Sold to Cal Coast, Berkeley	5/88	Unknown	Suchyta

Trentwood

Isotope	#5 769-1	70mCi	Transferred - ABB, Columbus, OH	7/5/81	Accuray	Jabara
Isotope	#5 111-1	70mCi	Transferred - ABB, Columbus, OH	7/5/81	Accuray	Jabara
Isotope	#5 BRD-1	70mCi	Transferred - ABB, Columbus, OH	12/20/91	Accuray	Jabara

ALUMINA
Gramercy

95

Sigsbee
1 Lat

DENSITY METER	K-1	Cs-137, 200mCi	Disposed - pre 1976	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-2	Cs-137, 50mCi	Disposed - pre 1976	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-3	Cs-137, 100mCi	Disposed - 1978-79	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-4	Cs-137, 100mCi	Disposed - March 1979	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-5	Cs-137, 50mCi	Disposed July 1986	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-6	Cs-137, 50mCi	Disposed Pre 1976	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-7	Cs-137, 50mCi	Disposed Pre 1976	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-8	Cs-137, 100mCi	Disposed March 1979	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-9	Cs-137, 20mCi	Disposed 1976-77	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-10	Cs-137, 20mCi	Disposed November 1976	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-11	Cs-137, 100mCi	Disposed Pre 1976	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-12	Cs-137, 100mCi	Lost 1975	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-13	Cs-137, 100mCi	Disposed Pre 1976	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-14	Cs-137, 20mCi	Disposed Pre 1976	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-15	Cs-137, 20mCi	Disposed March 1979	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-16	Cs-137, 100mCi	Disposed pre 1976	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-17	Cs-137, 100mCi	Disposed July 1986	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-18	Cs-137, 150mCi	Disposed July 1986	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-19	Cs-137, 100mCi	Disposed Pre 1976	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-20	Cs-137, 100mCi	Disposed November 1976	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-21	Cs-137, 100mCi	Disposed March 1979	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-22	Cs-137, 100mCi	Disposed July 1976	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-23	Cs-137, 100mCi	Disposed August 1986	Early 1970's	Omnat	NO RECORD
DENSITY METER	K-24	Cs-137, 100mCi	Disposed Pre 1976	Early 1970's	Omnat	NO RECORD

*

HISTORICAL INVENTORY - RADIATION CONTAINING EQUIPMENT

BUSINESS UNIT/PLANT	EQUIPMENT TYPE	SERIAL NO.	TYPE OF SOURCE OF RADIATION	DISPOSITION	ACQUISITION DATE	MANUFACTURER	NAME OF INDIVIDUAL RESPONSIBLE FOR EQUIPMENT
Granberry (cont.)	DENSITY METER	K-25	Cs-137,100mCi	Disposed March 1978	Early 1970's	Ohmart	NO RECORD
	DENSITY METER	K-26	Am-241, 85mCi	Disposed August 1986	Early 1970's	Ohmart	NO RECORD
	DENSITY METER	K-27	Cs-137,20mCi	Disposed November 1976	Early 1970's	Ohmart	NO RECORD
	DENSITY METER	K-28	Cs-137,100mCi	Disposed Pre-1976	Early 1970's	Ohmart	NO RECORD
	DENSITY METER	K-29	Ra-226,0.05mCi	Disposed July 1974	Early 1970's	Ohmart	NO RECORD
	DENSITY METER	K-30	Ra-226,0.05mCi	Disposed March 1979	Early 1970's	Ohmart	NO RECORD
	DENSITY METER	K-31	Ra-226,0.05mCi	Disposed March 1979	Early 1970's	Ohmart	NO RECORD
	DENSITY METER	K-32	Ra-226,0.01mCi	Disposed July 1986	Early 1970's	Ohmart	NO RECORD
	DENSITY METER	K-33	Ra-226,0.025mCi	Disposed July 1986	Early 1970's	Ohmart	NO RECORD
	DENSITY METER	K-34	Ra-226,0.05mCi	Disposed March 1979	Early 1970's	Ohmart	NO RECORD
	DENSITY METER	K-35	Ra-226,0.01mCi	Disposed March 1979	Early 1970's	Ohmart	NO RECORD
	DENSITY METER	K-36	Ra-226,0.075mCi	Disposed March 1979	Early 1970's	Ohmart	NO RECORD
	DENSITY METER	K-37	Ra-226,0.075mCi	Disposed March 1979	Early 1970's	Texas Nuclear	NO RECORD
	DENSITY METER	K-38	Ra-226,0.05mCi	Disposed March 1979	Early 1970's	Ohmart	NO RECORD
	DENSITY METER	K-39	Ra-226,0.05mCi	Disposed March 1979	Early 1970's	Ohmart	NO RECORD
	DENSITY METER	K-40	Ra-226,0.01mCi	Disposed November 1976	Early 1970's	Ohmart	NO RECORD
	DENSITY METER	K-41	Ra-226,0.01mCi	Disposed November 1976	Early 1970's	Ohmart	NO RECORD
	DENSITY METER	K-42	Ra-226,0.01mCi	Disposed November 1976	Early 1970's	Ohmart	NO RECORD
	DENSITY METER	K-43	Ra-226,0.05mCi	Disposed November 1976	Early 1970's	Ohmart	NO RECORD
	DENSITY METER	K-44	Ra-226,0.01mCi	Disposed March 1979	Early 1970's	Ohmart	NO RECORD
	DENSITY METER	K-45	Cs-137,20mCi	Disposed July 1986	Mid 1970's	Ohmart	NO RECORD
	DENSITY METER	K-46	Cs-137,150mCi	Disposed 1977-78	Mid 1970's	Ohmart	NO RECORD
	DENSITY METER	K-47	Cs-137,150mCi	Disposed March 1979	Mid 1970's	Ohmart	NO RECORD
	DENSITY METER	K-48	Cs-137,150mCi	Disposed July 1986	Mid 1970's	Ohmart	NO RECORD
	DENSITY METER	K-52	Cs-137,100mCi	Disposed July 1991	Mid 1970's	Ohmart	NO RECORD
	DENSITY METER	K-56	Cs-137,1500mCi	Disposed July 1983	Late 1970's	Coastal Rad	NO RECORD
	DENSITY METER	K-57	Cs-137,1500mCi	Disposed July 1983	Late 1970's	Coastal Rad	NO RECORD
	DENSITY METER	K-58	Cs-137,100mCi	Disposed July 1991	Late 1970's	UNKNOWN	NO RECORD
	DENSITY METER	K-59	Cs-137,50mCi	Disposed July 1991	Late 1970's	UNKNOWN	NO RECORD
	DENSITY METER	K-60	Cs-137,50mCi	Disposed July 1986	Early 1980's	UNKNOWN	NO RECORD
	DENSITY METER	K-61	Cs-137,50mCi	Disposed July 1991	Early 1980's	UNKNOWN	NO RECORD
	DENSITY METER	K-63	Cs-137,100mCi	Disposed February 1987	Early 1980's	UNKNOWN	NO RECORD
	DENSITY METER	K-73	Cs-137,100mCi	Disposed July 1991	Mid 1980's	UNKNOWN	NO RECORD
	DENSITY METER	K-81	Cs-137,80mCi	Disposed July 1991	Mid 1980's	UNKNOWN	NO RECORD
	DENSITY METER	K-1000	Cs-137,150mCi	Disposed May 1970	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1001	Cs-137,500mCi	Disposed August 1977	Late 1960's	UNKNOWN	NO RECORD

HISTORICAL INVENTORY - RADIATION CONTAINING EQUIPMENT

BUSINESS UNIT/PLANT	EQUIPMENT TYPE	SERIAL NO.	TYPE OF SOURCE OF RADIATION	DISPOSITION	ACQUISITION		NAME OF INDIVIDUAL RESPONSIBLE FOR EQUIPMENT
					DATE	MANUFACTURER	
	DENSITY METER	K-1001A	Cs-137,0.25mCi	Disposed August 1977	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1002	Cs-137,500mCi	Disposed August 1977	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1002A	Cs-137,0.25mCi	Disposed August 1977	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1003	Cs-137,500mCi	Disposed August 1977	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1004	Cs-137,500mCi	Disposed August 1977	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1005	Cs-137,50mCi	Disposed August 1977	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1006	Cs-137,400mCi	Disposed August 1977	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1007	Cs-137,50mCi	Disposed August 1977	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1008	Cs-137,50mCi	Disposed August 1977	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1009	Cs-137,50mCi	Disposed August 1977	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1010	Cs-137,100mCi	Disposed August 1977	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1011	Cs-137,100mCi	Disposed August 1977	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1012	Cs-137,150mCi	Disposed August 1977	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1013	Cs-137,150mCi	Disposed August 1977	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1014	Cs-137,150mCi	Disposed August 1977	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1015	Cs-137,150mCi	Disposed August 1977	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1016	Cs-137,150mCi	Disposed August 1977	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1017	Cs-137,50mCi	Transferred to LaRoche August 1988	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1018	Cs-137,1000mCi	Transferred to LaRoche August 1988	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1019	Cs-137,1000mCi	Transferred to LaRoche August 1988	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1020	Cs-137,100mCi	Transferred to LaRoche August 1988	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1021	Cs-137,150mCi	Disposed August 1977	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1022	Cs-137,50mCi	Disposed August 1977	Early 1970's	UNKNOWN	NO RECORD
	DENSITY METER	K-1023	Cs-137,150mCi	Disposed August 1977	Early 1970's	UNKNOWN	NO RECORD
	DENSITY METER	K-1024	H-3,250mCi	Disposed - Prior to 1988	Late 1960's	UNKNOWN	NO RECORD
	DENSITY METER	K-1025	Cs-137,100mCi	Disposed August 1977	Early 1970's	UNKNOWN	NO RECORD
	DENSITY METER	K-1026	Cs-137,1500mCi	Disposed August 1977	Early 1970's	UNKNOWN	NO RECORD
	DENSITY METER	K-1027	Cs-137,50mCi	Transferred to LaRoche August 1988	Early 1970's	UNKNOWN	NO RECORD
	DENSITY METER	K-1028	Cs-137,1000mCi	Transferred to LaRoche August 1988	Early 1970's	UNKNOWN	NO RECORD
	DENSITY METER	K-1028	Cs-137,2mCi	Transferred to LaRoche August 1988	Mid 1970's	UNKNOWN	NO RECORD
	DENSITY METER	K-1030	Cs-137,150mCi	Transferred to LaRoche August 1988	Mid 1970's	UNKNOWN	NO RECORD
	DENSITY METER	K-1031	Cs-137,150mCi	Transferred to LaRoche August 1988	Mid 1970's	UNKNOWN	NO RECORD
	DENSITY METER	K-1032	Cs-137,50mCi	Transferred to LaRoche August 1988	Early 1980's	UNKNOWN	NO RECORD
	DENSITY METER	K-1033	Cs-137,800mCi	Transferred to LaRoche August 1988	Early 1980's	UNKNOWN	NO RECORD
	DENSITY METER	K-1034	Cs-137,1600mCi	Transferred to LaRoche August 1988	Early 1980's	UNKNOWN	NO RECORD

ACTIVE INVENTORY - X-RAY EQUIPMENT

BUSINESS UNIT/PLANT	EQUIPMENT TYPE	SERIAL NO.	TYPE OF SOURCE OF RADIATION	LOCATION IN FACILITY	DATE OF PURCHASE	MANUFACTURER	NAME OF INDIVIDUAL FOR EQUIPMENT
ALUMINA Gramercy	DIFFRACCTOMETER	719428	X-RAY	Laboratory	1988	General Electric	Dyer LaFleur
	SPECTROMETER	14742-10	X-RAY	Laboratory	1991	General Electric	Dyer LaFleur
	SPECTROMETER	71426	X-RAY	Laboratory	1988	General Electric	Dyer LaFleur
FLAT ROLLED PRODS.							
Pleasanton (CFT)	Electron Probe X-Ray Micro-Analyzer	JXA-733	X-RAY - 50 AMPS 25 kv	Room B217	1977	JEOL	Shaarbaif
	X-Ray Diffraction Unit Model M34007-Q1100		X-RAY 35kv, 19mg	Room B238	1976	Siemens	Anderson
	X-Ray Diffraction Unit Model P.W. 1600		Spectrometer	Room B236		Philips	Anderson
	Scanning Electron Microscope Model III		X-RAY - 30kv	Room B217	1979	ISI	Shaarbaif
	Scanning Electron Microscope 1330 Model CB		X-RAY - 30kv	Room B217	1988	JSM	Shaarbaif
Trentwood	X-RAY FLUORESCENCE - 200/400	#174/24124-4124/B620b	X-RAY FLUORESCENCE - 50mCu2uCl	Coater Lab	1992	Asoma	J. Lewis
	X-RAY FLUORESCENCE	24124 (Remote Head)	X-RAY FLUORESCENCE - 100mCu/Bu	Coater Lab	1992	Asoma	J. Lewis
	THICKNESS GAUGE	X-RAY GAUGE - 5	X-RAY - 40 kv	#5 Cold Mill - entry	1985	Sensoray	B. Fletcher
	THICKNESS GAUGE	X-RAY GAUGE - 28	X-RAY - 40 kv	#5 Cold Mill - std 2	1985	Sensoray	B. Fletcher
	THICKNESS GAUGE	X-RAY GAUGE - 30	X-RAY - 40 kv	#5 Cold Mill - std 4	1985	Sensoray	B. Fletcher
	THICKNESS GAUGE	X-RAY GAUGE - 25	X-RAY - 40 kv	#5 Cold Mill - exit	1985	Sensoray	B. Fletcher
	THICKNESS GAUGE	X-RAY GAUGE - 28	X-RAY - 30/40 kv	#1 Cold Mill - exit	1985	Sensoray	B. Fletcher
	THICKNESS GAUGE	X-RAY GAUGE - 34190-1	X-RAY - 60 kv	5 Std Hot Mill - exit	1985	Weston	G. Takasaki
	THICKNESS GAUGE	X-RAY GAUGE - 34190-2	X-RAY - 60 kv	5 Std hot Mill - exit	1985	Weston	G. Takasaki
	LASER - SPEED/LENGTH	Model 1902 - 40 MW Gas Diode	Laser	#5 Cold Mill - Exit	1989	TSI	B. Fletcher
	LASER - SURFACE INSPECTION	Model 1125 - 5MW Helium Neon	Laser	#6 Cold Slitter	1988	Uniphase	J. Lewis
	LASER - SURFACE INSPECTION	Model 1125 - 5MW Helium Neon	Laser	#8 Cold Slitter	1988	Uniphase	J. Lewis
	LASER - SURFACE INSPECTION	Model 1125 - 5MW Helium Neon	Laser	#7 Cold Slitter	1988	Uniphase	J. Lewis
	LASER - SURFACE INSPECTION	Model 1125 - 5MW Helium Neon	Laser	#7 Cold Slitter	1988	Uniphase	J. Lewis
	LASER - SURFACE INSPECTION	Model 1125 - 5MW Helium Neon	Laser	#7 Cold Slitter	1988	Uniphase	J. Lewis
	LASER - SURFACE INSPECTION	Model 1125 - 5MW Helium Neon	Laser	#7 Cold Slitter	1988	Uniphase	J. Lewis

Packaging Corporation of America
A Tenneco Company



General Offices
1603 Orrington Avenue
Evanston, Illinois 60204
(708) 492-5713

3-9-93
Chris L. D.
E. J. George
Forad

February 18, 1993

RECEIVED

FEB 22 1993

KAISER ALUMINUM & CHEMICAL CORPORATION
LAW DEPARTMENT

Charles B. Brown, Esq.
Assistant General Counsel
Kaiser Aluminum & Chemical Corporation
300 Lakeside Drive
Oakland, CA 94643-0001

Re: Licensed Nuclear Devices at the Wanatah Facility

Dear Mr. Brown:

I am writing in response to your January 29, 1993 letter regarding nuclear devices located at the Wanatah, Indiana facility purchased by PCA from Kaiser on August 20, 1987. I have learned from personnel at the plant that these pieces of equipment were anti-static devices which contained a small isotope. According to the plant records, they were returned to Amstat Industries, Inc. in Glenview, Illinois via United Parcel Service on January 6, 1987. I enclose for your information copies of the documents we have in our file regarding this.

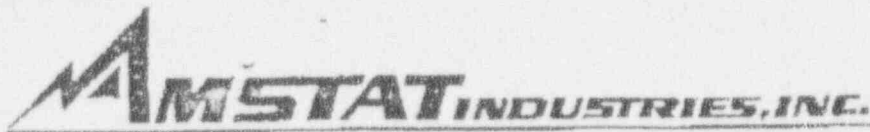
Very truly yours,

Lynn J. Carter
Lynn J. Carter
Senior Attorney

LJC/rc
Encls.

JUN 7 1993 ✓





3012 N. Lake Terrace □ Glenview, IL 60025 □ (312) 998-6210

December 18, 1986

Mr. Adam Patrick
KAISER ALUMINUM & CHEMICAL CORP.
U.S. Hwy. 30
Wanatah, IN 46390

Dear Mr. Patrick,

It is time to advise you that the NUCLECEL static eliminators (S/N 4842 - 4845) that you leased last year under your purchase order 555M918112 will be coming due for replacement Feb 27, 1987.

In order to assure you continuity of service, we are enclosing replacement lease forms. Please fill in the three lines marked with an "X" on all three copies, and return all of the signed copies to us along with your confirming purchase order. As before, a signed acceptance copy of the lease will be returned to you at the time of invoicing.

When the new order is received, kindly return the old one, prepaid and insured, to

NUCLEAR Radiation Developments
2937 Alt Blvd., North
Grand Island, NY 14072

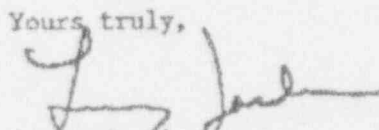
Marks: NRD (AU) 5293 For Disposal

We would appreciate being advised when the return shipment has gone forward.

If any questions arise, please do not hesitate to call.

Thank you again.

Yours truly,


Larry Jacobson

LJ:ms
encl.

T/c -
12/30
send return Papers to me

2/4



3012 N. Lake Terrace □ Glenview, IL 60025 □ (312) 998-6210

January 5, 1987

Mr. Adam Patrick
KAISER ALUMINUM & CHEMICAL CORP.
U.S. Hwy. 30
Wanatah, IN 46390

Dear Mr. Patrick:

Following our telephone conversation, we are enclosing a UPS Hazardous Materials Shipping Paper (multi-copy, red and yellow) and Shipper's Certification #7479942.

When the balance of the forms are filled out, you will be able to return the expiring devices to Nuclear Radiation Developments as we outlined in our letter of December 18, 1986.

We trust that this will provide everything you require. If any further questions arise, please do not hesitate to call.

Yours truly,

Larry Jacobson

LJ:eo
encl.

*Returned
1/6/87
via UPS*

3/4
- 1 -

SHIPPING PAPER

HAZARD MATERIALS

Not Permitted

Radioactive Material N.O.S.

mCi Po-210 Solid Metallic

HAZARD CLASS

IDENTIFICATION NUMBER

RADIOACTIVE MATERIAL

UN-2982

WEIGHT or VOLUME

TYPE DOT Label Required, Lbl Qty. or Exemption Number

RADIOACTIVE WHITE 1

SHIPPER: Use ball point pen and press firmly when preparing this form

INSTRUCTIONS

IN LOADING

Remove one copy of form and insert in Hazardous Materials envelope provided.

IN TRANSIT

Driver must have Hazardous Materials envelope in vehicle cab during transit.

91334 17-80 (20M) 8-87

 $\frac{1}{4} \frac{1}{4}$

*** TOTAL PAGE: 004 ***



United Parcel Service

3626546

SHIPPER'S CERTIFICATION
FOR HAZARDOUS MATERIALS[illegible]

CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation, according to the applicable regulations of the Department of Transportation, and Requirements of United Parcel Service.

Shipper's Signature _____

Date _____