

Mobay



**Mobay
Chemical Corporation**

Agricultural
Chemicals Division

November 22, 1985

P.O. Box 4913
Hawthorn Road
Kansas City, MO 64120
Cable: Kemagro Kansas City
Telephone: 816/242-2000

Mr. W. L. Axelson, Chief
Nuclear Materials Safety and
Safeguards Branch
U.S. NRC
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

03005089

License No. 24-03830-01

Dear Mr. Axelson:

In reference to your letter of October 28, 1985, we have investigated the violation which were detailed in the letter's Appendix dated October 25, 1985. The following responses correspond to numbering of items in the Appendix.

1. Access to the area around Ohmart gauge Model ELG-08 mounted on equipment No. 9.1B1 has been restricted. We intend to erect a physical barrier around the gauge source so that radiation levels will be within the limits prescribed by 10 CFR 20.105(b). We expect this to be completed by December 31, 1985. A survey of all other Cesium-137 gauge sources has been completed and has shown that Ohmart SHD Cesium-137 gauge, serial No. 69363 mounted on Equipment No. 2.1B8 shows a radiation level of about 20 mR/hr at about 6 inches from one area of the surface. We have taken steps to have this gauge source removed from service and returned to the manufacturer for repair. Meanwhile, access to the area around this gauge source has been restricted as of November 22, 1985. We expect the gauge to be returned to the manufacturer by December 31, 1985. All remaining gauges have radiation levels within the prescribed limits.
2. We have evaluated the whole body dose for those individuals who lost or otherwise did not submit their assigned film badges for the period 1983 to the present. These evaluations have been incorporated into the film badge records. Instructions have been provided to all personnel on the necessity of proper care and timely submission of their film badge. The Deputy RSO has designated a specific area, away from radioactive materials, for the storage of the control film badge. Greater care will be taken in packaging the badges for shipment to the vendor.

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Mr. W. L. Axelson
November 22, 1985
Page 2

3. The Victoreen Model 490 survey meter used by our Instrument and Electrical Maintenance Section has been calibrated on October 9, 1985 and is scheduled to be recalibrated every 6 months. The Deputy Radiation Safety Officer will maintain copies of the calibration certificates in his files.
4. An examination of all Cesium-137 gauges has been completed. All gauges and access ports and/or manways which do not have the required warning symbol, signs and information tags have been identified. Signs are being obtained for installation. We expect corrective action to remedy deficiencies will be completed by December 31, 1985.
5. A physical inventory was conducted on November 20, 1985. A record of the inventory is being prepared and will be maintained by the RSO or his deputy. Inventories will be conducted in future every six months to coincide with the required wipe tests.
6. Initial radiation surveys for our two most recently installed Kay Ray Cesium-137 gauges were actually present in the binder together with the initial surveys for our other gauges on the date of the inspection. Their format is larger than usual and perhaps for that reason, they were overlooked. We have enclosed copies of all of our initial radiation surveys.

Sincerely,

MOBAY CHEMICAL CORPORATION
AGRICULTURAL CHEMICALS DIVISION

Robert G. Koch

Robert G. Koch, Deputy
Radiation Safety Officer

RGK/ab

Enclosure

cc: D. R. Flint, Radiation Safety Officer

E118 - Plant.

SOURCE MTR 100 MC 5N69363

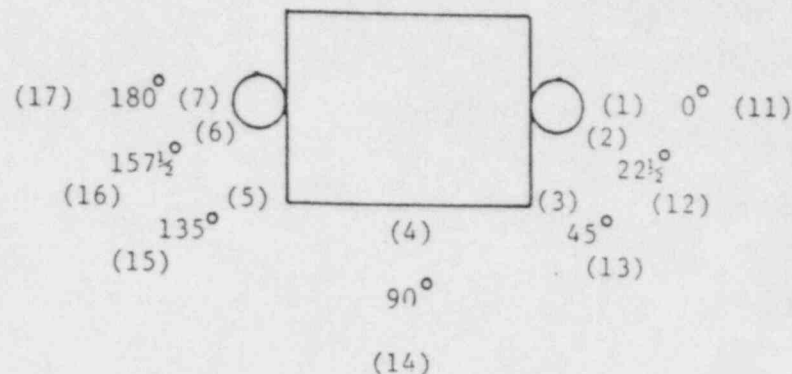
SOURCE HOLDER TYPE SLH-6 SHD For Reau. SHT

TANK L2.138-1 SCH OR WALL THICKNESS 1/4 in.

INSULATION NONE

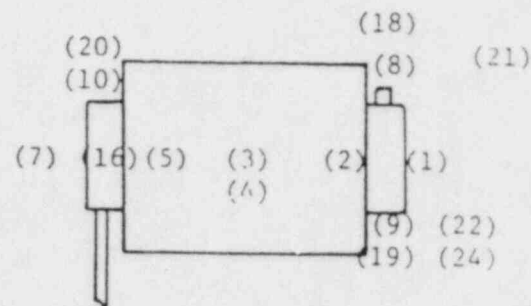
A. SOURCE HOLDER OPEN - TANK: FULL EMPTY

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>1.2</u>	(11) <u>contact</u>
(2) <u>.15</u>	(12) <u>"</u>
(3) <u>.02</u>	(13) <u>"</u>
(4) <u>.05</u>	(14) <u>"</u>
(5) <u>.03</u>	(15) <u>"</u>
(6) <u>.05</u>	(16) <u>"</u>
(7) <u>.5</u>	(17) <u>"</u>
(8) <u>.7</u>	(18) <u>"</u>
(9) <u>.4</u>	(19) <u>"</u>
(10) <u>1.1</u>	(20) <u>"</u>



B. SOURCE HOLDER CLOSED

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>.5</u>	(11) <u>CONTACT</u>
(2) <u>.2</u>	(23) <u>"</u>
(21) <u>.03</u>	(24) <u>"</u>
(22) <u>.04</u>	



NOTE: 1 - ALL READINGS ARE IN MR/HR.

2 - DISTANCE FROM SURFACE IS IN INCHES TO 5 MR/HR POINT IN THE DIRECTION INDICATED.

2-16-83

DATE	DR.	APP.	SCALE	TITLE:	CHEMAGRO AGRICULTURAL DIVISION MOBAY CHEMICAL CORP	DWG. NO.
				RADIATION SURVEY		

Formulation Blender

SOURCE MTR 50 MC SN. 68448

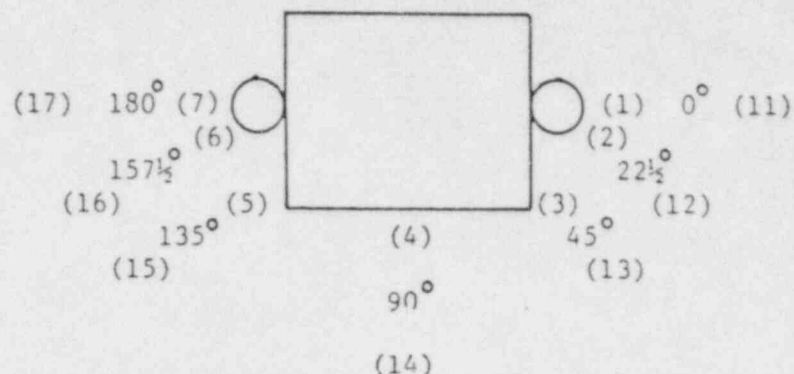
SOURCE HOLDER TYPE SHGS-2 (**Source Holder*)

TANK 6.1 R2 SCH OR WALL THICKNESS 3/16 in

INSULATION NONE

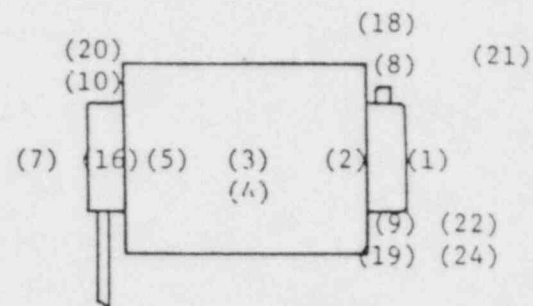
A. SOURCE HOLDER OPEN - TANK: FULL EMPTY

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>6.5</u>	(11) <u>1 1/2 in.</u>
(2) <u>.02</u>	(12) <u>CONTACT</u>
(3) <u>.03</u>	(13) <u>"</u>
(4) <u>.03</u>	(14) <u>"</u>
(5) <u>.03</u>	(15) <u>"</u>
(6) <u>.04</u>	(16) <u>"</u>
(7) <u>.2</u>	(17) <u>"</u>
(8) <u>.5</u>	(18) <u>"</u>
(9) <u>.6</u>	(19) <u>"</u>
(10) <u>.04</u>	(20) <u>"</u>



B. SOURCE HOLDER CLOSED

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>6.0</u>	(11) <u>2 in</u>
(2) <u>.01</u>	(23) <u>CONTACT</u>
(21) <u>.5</u>	(24) <u>CONTACT</u>
(22) <u>.01</u>	



NOTE: 1 - ALL READINGS ARE IN MR/HR.

2 - DISTANCE FROM SURFACE IS IN INCHES TO 5 MR/HR POINT IN THE DIRECTION INDICATED.

2-16-83

DATE	DR.	APP.	SCALE	TITLE:	CHEMAGRO AGRICULTURAL DIVISION MOBAY CHEMICAL CORP	DWG. NO.
				RADIATION SURVEY		

Formulation Blender

SOURCE MTR 50 MC SN 68447

SOURCE HOLDER TYPE SLG-1

TANK 6.1 R3 SCH OR WALL THICKNESS 3/16 in

INSULATION NONE

A. SOURCE HOLDER OPEN - TANK: FULL (EMPTY)

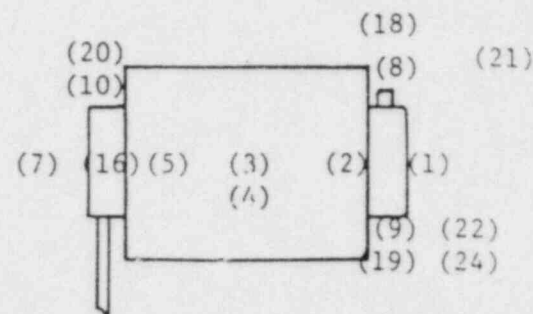
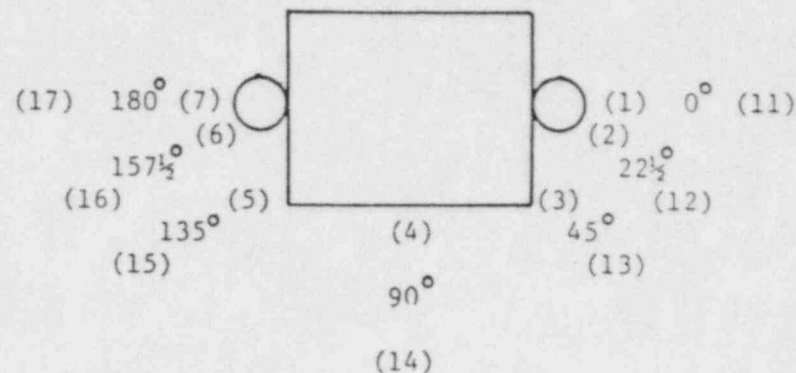
SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>.15</u> ✓	(11) <u>CONTACT</u>
(2) <u>.01</u>	(12) <u>"</u>
(3) <u>.01</u>	(13) <u>"</u>
(4) <u>.03</u>	(14) <u>"</u>
(5) <u>.05</u>	(15) <u>"</u>
(6) <u>.5</u>	(16) <u>"</u>
(7) <u>.9</u>	(17) <u>"</u>
(8) <u>.3</u>	(18) <u>"</u>
(9) <u>.6</u>	(19) <u>"</u>
(10) <u>.6</u>	(20) <u>"</u>

B. SOURCE HOLDER CLOSED

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>.15</u>	(11) <u>CONTACT</u>
(2) <u>.01</u>	(23) <u>"</u>
(21) <u>.03</u>	(24) <u>"</u>
(22) <u>.01</u>	

NOTE: 1 - ALL READINGS ARE IN MR/HR.

2 - DISTANCE FROM SURFACE IS IN INCHES TO 5 MR/HR POINT IN THE DIRECTION INDICATED.



2-16-83

DATE	DR.	APP.	SCALE	TITLE:	CHEMAGRO AGRICULTURAL DIVISION MOBAY CHEMICAL CORP	DWG. NO.
				RADIATION SURVEY		

SOURCE MTR 50 MC

SOURCE HOLDER TYPE SR-1

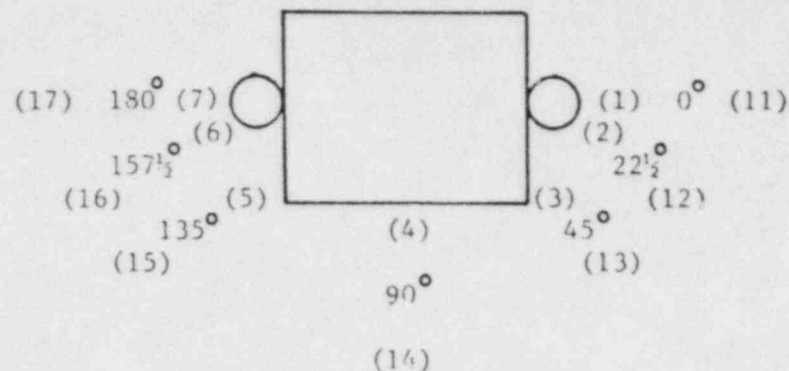
SN 6492

TANK 6.1R4 SCH OR WALL THICKNESS 1/4"

INSULATION None

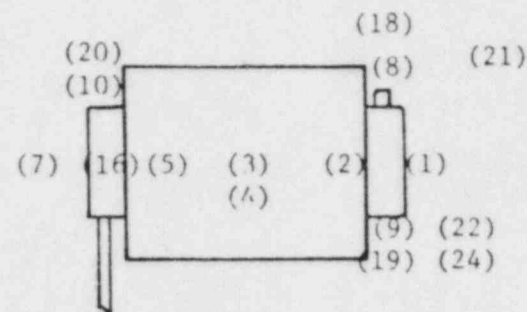
A. SOURCE HOLDER OPEN - TANK: FULL EMPTY

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>.1</u>	(11) <u>Contact</u>
(2) <u>.15</u>	(12) <u>Contact</u>
(3) <u>.07</u>	(13) <u>Contact</u>
(4) <u>.07</u>	(14) <u>Contact</u>
(5) <u>.08</u>	(15) <u>Contact</u>
(6) <u>.12</u>	(16) <u>Contact</u>
(7) <u>.1</u>	(17) <u>Contact</u>
(8) <u>.09</u>	(18) <u>Contact</u>
(9) <u>.17</u>	(19) <u>Contact</u>
(10) <u></u>	(20) <u>Contact</u>



B. SOURCE HOLDER CLOSED

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>.05</u>	(11) <u>Contact</u>
(2) <u>.04</u>	(23) <u>Contact</u>
(21) <u>.07</u>	(24) <u>Contact</u>
(22) <u>.03</u>	



NOTE: 1 - ALL READINGS ARE IN MR/HR.

2 - DISTANCE FROM SURFACE IS IN INCHES TO 5 MR/HR POINT IN THE DIRECTION INDICATED.

DATE
1/17/78

DR.

APP.

SCALE

TITLE:

RADIATION SURVEY

CHEMAGRO
AGRICULTURAL DIVISION
MOBAY CHEMICAL CORP

DWG NO.

Immunization Studies

SOURCE MTR 50 MC SN 6492

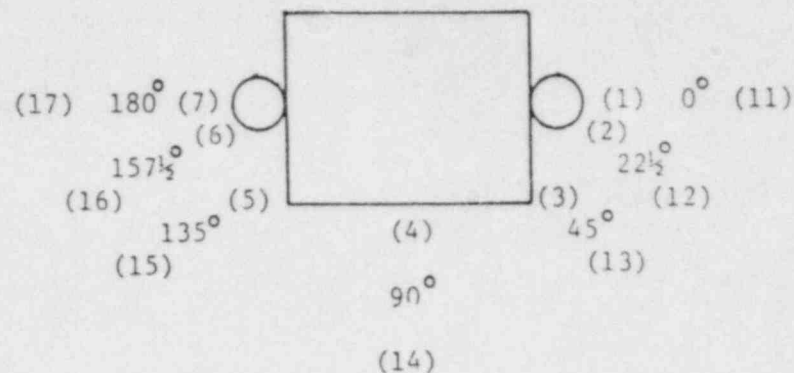
SOURCE HOLDER TYPE SLG-1

TANK 6.1 R4 SCH OR WALL THICKNESS 3/16 in

INSULATION None

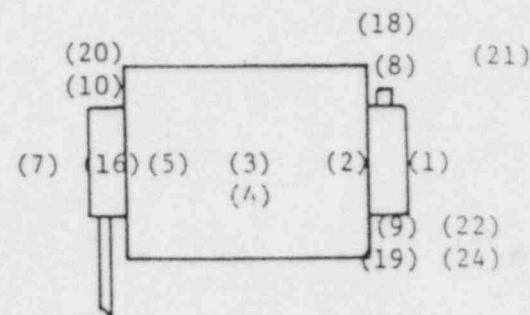
A. SOURCE HOLDER OPEN - TANK: FULL EMPTY

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>.03</u>	(11) <u>CONTACT</u>
(2) <u>.01</u>	(12) <u>"</u>
(3) <u>.01</u>	(13) <u>"</u>
(4) <u>.01</u>	(14) <u>"</u>
(5) <u>.01</u>	(15) <u>"</u>
(6) <u>.02</u>	(16) <u>"</u>
(7) <u>.3</u>	(17) <u>"</u>
(8) <u>.2</u>	(18) <u>"</u>
(9) <u>.1</u>	(19) <u>"</u>
(10) <u>.1</u>	(20) <u>"</u>



B. SOURCE HOLDER CLOSED

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>.02</u>	(11) <u>CONTACT</u>
(2) <u>.02</u>	(23) <u>"</u>
(21) <u>.01</u>	(24) <u>"</u>
(22) <u>.01</u>	



NOTE: 1 - ALL READINGS ARE IN MR/HR.

2 - DISTANCE FROM SURFACE IS IN INCHES TO 5 MR/HR POINT IN THE DIRECTION INDICATED.

2-16-83

DATE	DR.	APP.	SCALE	TITLE:	CHEMAGRO AGRICULTURAL DIVISION MOBAY CHEMICAL CORP	DWG NO.
				RADIATION SURVEY		

SOURCE MTR 50 MC

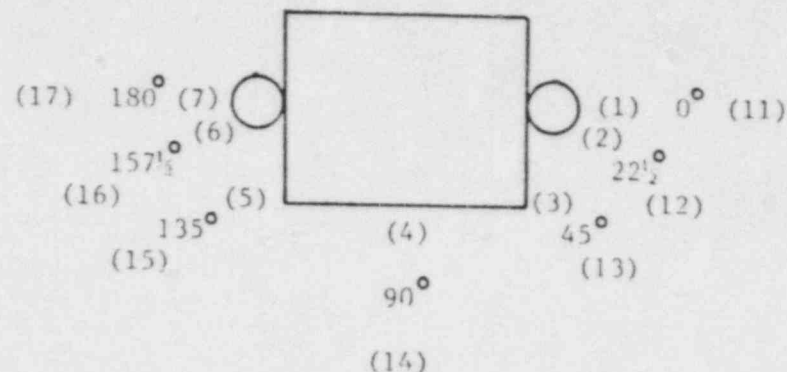
SOURCE HOLDER TYPE S R - 1 SN 6486

TANK 4.3 B17 SCH OR WALL THICKNESS 3/16

INSULATION None

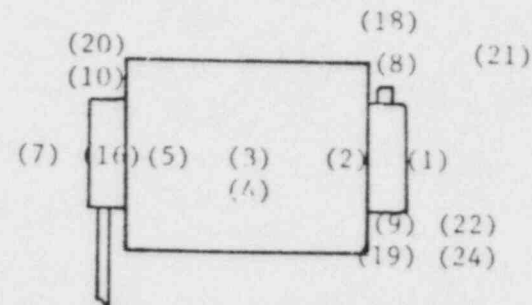
A. SOURCE HOLDER OPFN - TANK: FULL EMPTY

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>.08</u>	(11) <u>Surface</u>
(2) <u>.1</u>	(12) <u>Surface</u>
(3) <u>.09</u>	(13) <u>Surface</u>
(4) <u>.11</u>	(14) <u>Surface</u>
(5) <u>.10</u>	(15) <u>Surface</u>
(6) <u>.09</u>	(16) <u>Surface</u>
(7) <u>.09</u>	(17) <u>Surface</u>
(8) <u>.1</u>	(18) <u>Surface</u>
(9) <u>.10</u>	(19) <u>Surface</u>
(10) <u>.12</u>	(20) <u>Surface</u>



B. SOURCE HOLDER CLOSED

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>.08</u>	(11) <u>Surface</u>
(2) <u>.09</u>	(23) <u>Surface</u>
(21) <u>.1</u>	(24) <u>Surface</u>
(22) <u>.07</u>	



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2 - DISTANCE FROM SURFACE IS IN INCHES TO 5 MR/HR POINT IN THE DIRECTION INDICATED.

DATE 5-10-78

DR.

APP.

SCALE

TITLE:

RADIATION SURVEY

CHEMAGRO
AGRICULTURAL DIVISION
MOBAY CHEMICAL CORP

DWG NO.

Source out of KANAWAY

SOURCE MTR 50 MC SN 6486

SOURCE HOLDER TYPE SHLG

TANK _____ SCH OR WALL THICKNESS _____

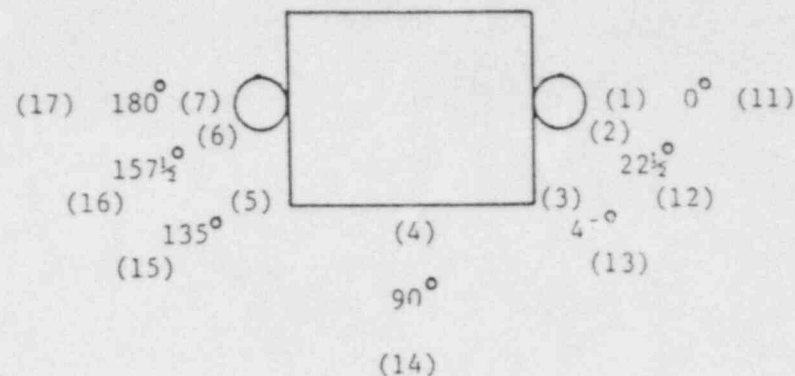
INSULATION _____

SOURCE Not Installed.

contact Radiation measured with
source closed $\angle .05$ ANY Point on closed
source holder.

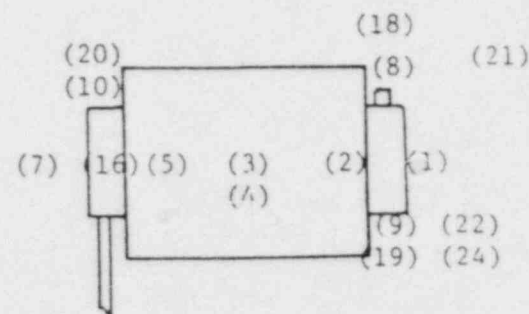
A. SOURCE HOLDER OPEN - TANK: FULL EMPTY

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) _____	(11) _____
(2) _____	(12) _____
(3) _____	(13) _____
(4) _____	(14) _____
(5) _____	(15) _____
(6) _____	(16) _____
(7) _____	(17) _____
(8) _____	(18) _____
(9) _____	(19) _____
(10) _____	(20) _____



B. SOURCE HOLDER CLOSED

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) _____	(11) _____
(2) _____	(23) _____
(21) _____	(24) _____
(22) _____	



NOTE: 1 - ALL READINGS ARE IN MR/HR.

2 - DISTANCE FROM SURFACE IS IN
INCHES TO 5 MR/HR POINT IN
THE DIRECTION INDICATED.

2-16-83

DATE DR. APP. SCALE TITLE:
RADIATION SURVEY

CHEMAGRO
AGRICULTURAL DIVISION
MOBAY CHEMICAL CORP

DWG NO.

Sugar Hopper

SOURCE MTR 20 MC SN 64 559

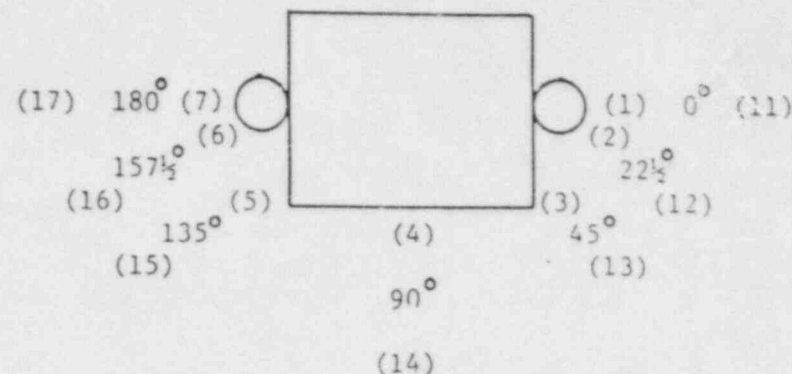
SOURCE HOLDER TYPE SLG-1

TANK L4.6H2-1 SCH OR WALL THICKNESS 1/4 in

INSULATION NONE

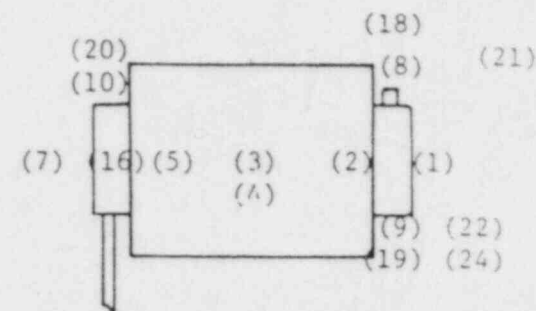
A. SOURCE HOLDER OPEN - TANK: FULL [EMPTY]

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>.01</u>	(11) <u>CONTACT</u>
(2) <u>.03</u>	(12) <u>"</u>
(3) <u>.07</u>	(13) <u>"</u>
(4) <u>.01</u>	(14) <u>"</u>
(5) <u>.01</u>	(15) <u>"</u>
(6) <u>.01</u>	(16) <u>"</u>
(7) <u>.01</u>	(17) <u>"</u>
(8) <u>.01</u>	(18) <u>"</u>
(9) <u>.01</u>	(19) <u>"</u>
(10) <u>.01</u>	(20) <u>"</u>



B. SOURCE HOLDER CLOSED

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>.01</u>	(11) <u>CONTACT</u>
(2) <u>.01</u>	(23) <u>"</u>
(21) <u>.01</u>	(24) <u>"</u>
(22) <u>.01</u>	



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2-16-83

DATE	DR.	APP.	SCALE	TITLE:	CHEMAGRO AGRICULTURAL DIVISION MOBAY CHEMICAL CORP	DWG NO.
				RADIATION SURVEY		

Junior Blender

SOURCE MTR 50 MC SN. 64846

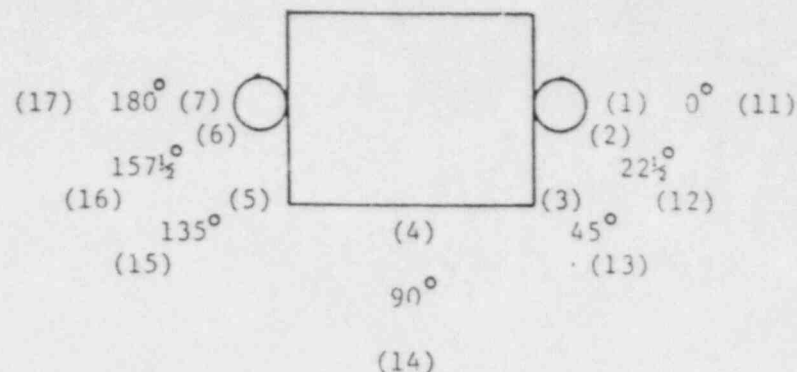
SOURCE HOLDER TYPE SLG-1

TANK L4.5R1-1 SCH OR WALL THICKNESS 1/4 in.

INSULATION None

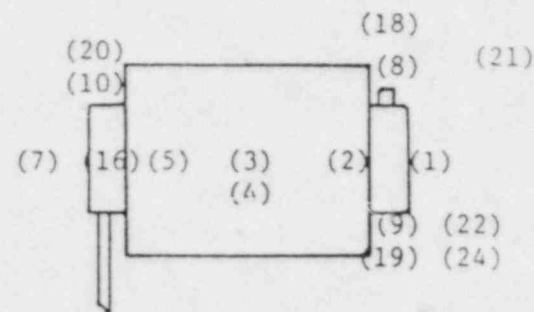
A. SOURCE HOLDER OPEN - TANK: FULL EMPTY

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>.5</u>	(11) <u>CONTACT.</u>
(2) <u>.2</u>	(12) <u>"</u>
(3) <u>.2</u>	(13) <u>"</u>
(4) <u>.01</u>	(14) <u>"</u>
(5) <u>.04</u>	(15) <u>"</u>
(6) <u>.03</u>	(16) <u>"</u>
(7) <u>.2</u>	(17) <u>"</u>
(8) <u>.2</u>	(18) <u>"</u>
(9) <u>.2</u>	(19) <u>"</u>
(10) <u>.1</u>	(20) <u>"</u>



B. SOURCE HOLDER CLOSED

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>.15</u>	(11) <u>CONTACT</u>
(2) <u>.03</u>	(23) <u>"</u>
(21) <u>.01</u>	(24) <u>"</u>
(22) <u>.01</u>	



NOTE: 1 - ALL READINGS ARE IN MR/HR.

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2-16-83

DATE	DR.	APP.	SCALE	TITLE:	CHEMAGRO AGRICULTURAL DIVISION MOBAY CHEMICAL CORP	DWG NO.
				RADIATION SURVEY		

Sub area.

Linear Chlorine Tank

SOURCE MTR 300 MC SN 64456

SOURCE HOLDER TYPE SLG-1

TANK 9.1 B1 SCH OR WALL THICKNESS .5 in

INSULATION GLASS LINED

A. SOURCE HOLDER OPEN - TANK $\left[\frac{1}{2} \right]$ FULL EMPTY

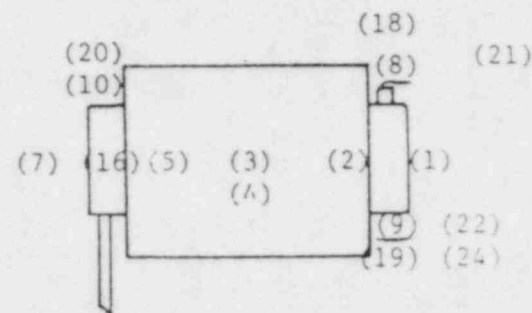
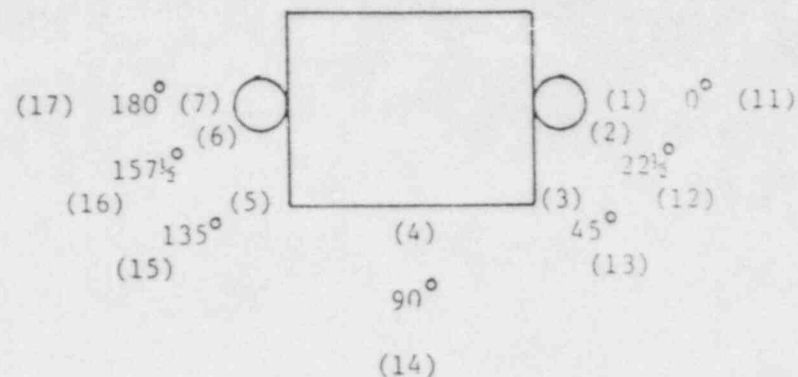
SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>.4</u>	(11) <u>CONTACT</u>
(2) <u>.3</u>	(12) <u>"</u>
(3) <u>.05</u>	(13) <u>"</u>
(4) <u>.04</u>	(14) <u>"</u>
(5) <u>.02</u>	(15) <u>"</u>
(6) <u>.12</u>	(16) <u>"</u>
(7) <u>.6</u>	(17) <u>"</u>
(8) <u>4.0</u>	(18) <u>"</u>
(9) <u>3.0</u>	(19) <u>"</u>
(10) <u>.3</u>	(20) <u>"</u>

B. SOURCE HOLDER CLOSED

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>.2</u>	(11) <u>CONTACT</u>
(2) <u>.01</u>	(23) <u>"</u>
(21) <u>.01</u>	(24) <u>"</u>
(22) <u>.01</u>	

NOTE: 1 - ALL READINGS ARE IN MR/HR.

2 - DISTANCE FROM SURFACE IS IN INCHES TO 5 MR/HR POINT IN THE DIRECTION INDICATED.



2-16-83

DATE	DR.	APP.	SCALE	TITLE:	CHEMAGRO AGRICULTURAL DIVISION MOBAY CHEMICAL CORP	DWG NO.
				RADIATION SURVEY		

SOURCE MTR 50 MC

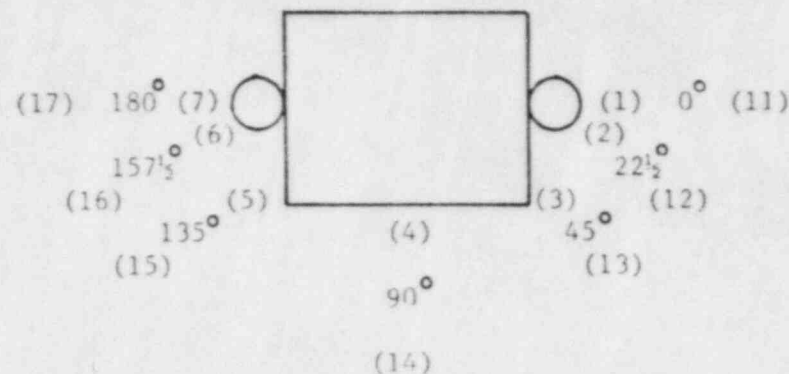
S/N 64847

WIPE TEST PERFORMED

SOURCE HOLDER TYPE ELG-08TANK 4.5 R2 SCH OR WALL THICKNESS 3/16INSULATION None

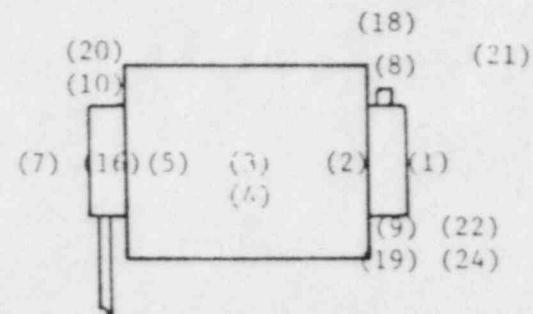
A. SOURCE HOLDER OPEN - TANK: FULL EMPTY

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>.3</u>	(11) <u>Contact</u>
(2) <u>.3</u>	(12) <u>Contact</u>
(3) <u>.2</u>	(13) <u>Contact</u>
(4) <u>.21</u>	(14) <u>Contact</u>
(5) <u>.2</u>	(15) <u>Contact</u>
(6) <u>.25</u>	(16) <u>Contact</u>
(7) <u>.3</u>	(17) <u>Contact</u>
(8) <u>.15</u>	(18) <u>Contact</u>
(9) <u>.1</u>	(19) <u>Contact</u>
(10) <u>.09</u>	(20) <u>Contact</u>



B. SOURCE HOLDER CLOSED

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>.05</u>	(11) <u>Contact</u>
(2) <u>.07</u>	(23) <u>Contact</u>
(21) <u>.01</u>	(24) <u>Contact</u>
(22) <u>.01</u>	



NOTE: 1 - ALL READINGS ARE IN MR/HR.

2 - DISTANCE FROM SURFACE IS IN INCHES TO 5 MR/HR POINT IN THE DIRECTION INDICATED.

DATE 2-23-78

DR.

APP.

SCALE

TITLE:

RADIATION SURVEY

CHEMAGRO
AGRICULTURAL DIVISION
MOBAY CHEMICAL CORP

DWG NO.

MAILED LEAK TEST 2-23-78

Source Holder

SOURCE MTR 50 MC SN 64847

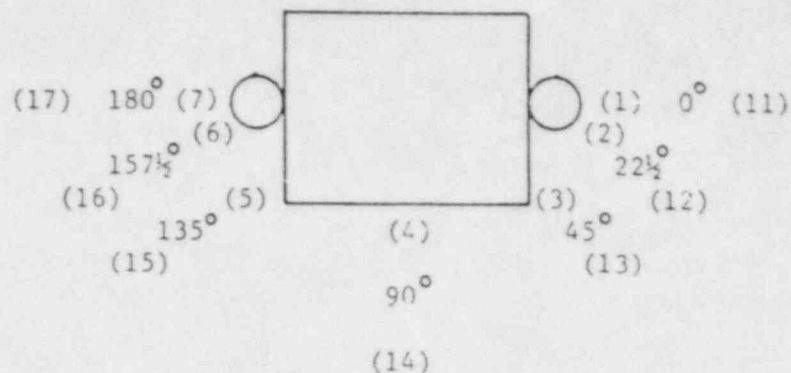
SOURCE HOLDER TYPE SLG-1

TANK L4-5R2-1 SCH OR WALL THICKNESS 1/4 in.

INSULATION None

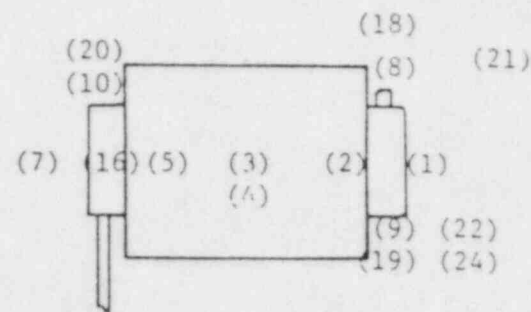
A. SOURCE HOLDER OPEN - TANK: FULL [EMPTY]

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>.6</u>	(11) <u>CONTACT</u>
(2) <u>.2</u>	(12) <u>"</u>
(3) <u>.2</u>	(13) <u>"</u>
(4) <u>.05</u>	(14) <u>"</u>
(5) <u>.05</u>	(15) <u>"</u>
(6) <u>.06</u>	(16) <u>"</u>
(7) <u>.2</u>	(17) <u>"</u>
(8) <u>.2</u>	(18) <u>"</u>
(9) <u>.2</u>	(19) <u>"</u>
(10) <u>.2</u>	(20) <u>"</u>



B. SOURCE HOLDER CLOSED

SURVEY METER CONTACT (1)	DISTANCE FROM SURFACE (2)
(1) <u>.15</u>	(11) <u>CONTACT</u>
(2) <u>.03</u>	(23) <u>"</u>
(21) <u>.01</u>	(24) <u>"</u>
(22) <u>.01</u>	



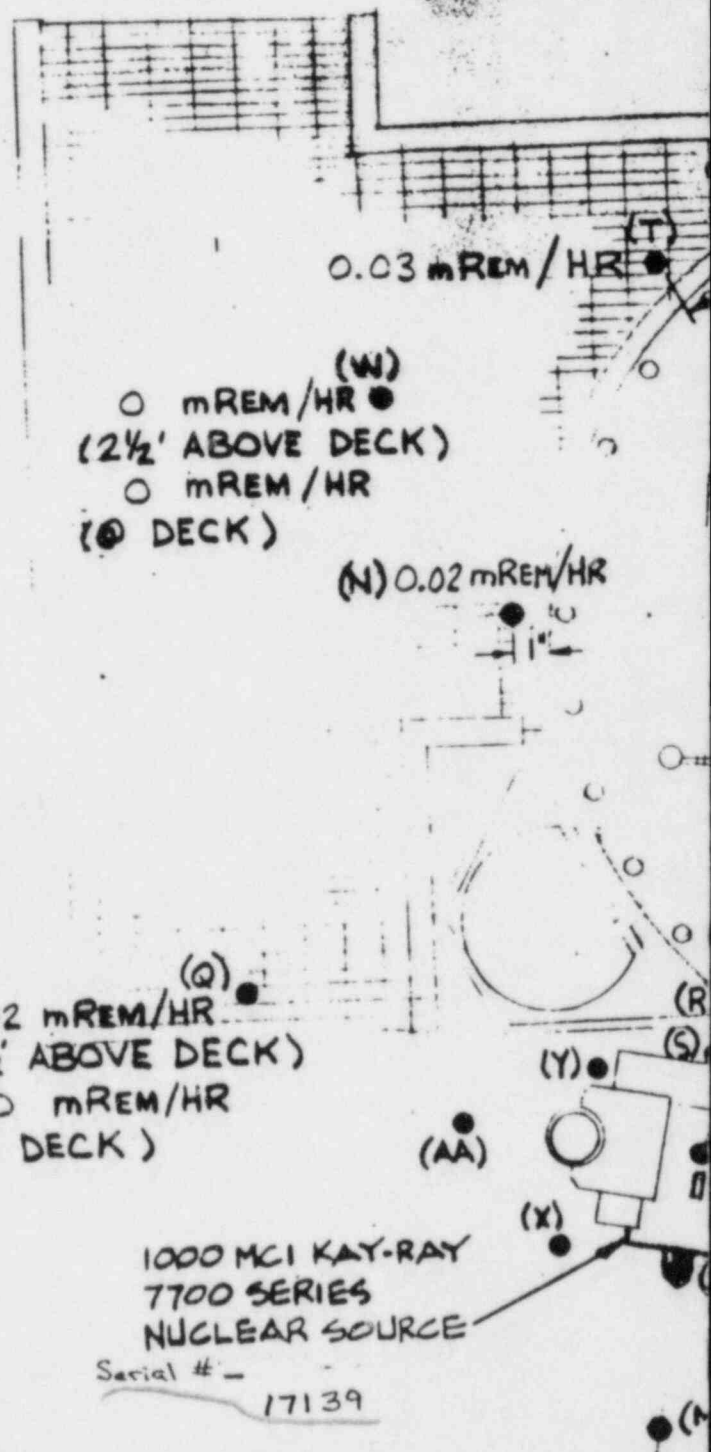
NOTE: 1 - ALL READINGS ARE IN MR/HR.

2 - DISTANCE FROM SURFACE IS IN INCHES TO 5 MR/HR POINT IN THE DIRECTION INDICATED.

2-16-83

DATE	DR.	APP.	SCALE	TITLE:	CHEMAGRO AGRICULTURAL DIVISION MOBAY CHEMICAL CORP	DWG NO.
				RADIATION SURVEY		

BERTHOLD LB34
SERIES DETECTOR



REFERENCE						DRAWN BY	KJP	ASSIGN NO.
						CHK'D. BY		PROJ. NO.
						APP'D. BY		FMR NO.
						DATE		AREA
	0	8/9/64	SWB					

BERTHOLD LB.30
SERIES DETECTOR

0.03 mREM/HR (T)

(W)
○ mREM/HR
(2½' ABOVE DECK)
○ mREM/HR
(@ DECK)

(N) 0.02 mREM/HR

(Q)
0.02 mREM/HR
(2½' ABOVE DECK)
○ mREM/HR
(@ DECK)

1000 MCI KAY-RAY
7700 SERIES
NUCLEAR SOURCE

Serial # - 17139

REFERENCE						DRAWN BY	KJP	ASSIGN NO.
						CHKD. BY		PROJ. NO.
						APPD. BY		FMR NO.
						DATE		AREA
	0	8/9/64	SWB					

NOTES:

- 1) ALL MEASUREMENTS WERE PERFORMED BY BILL KENNEDY ON 8/6/84
- 2) METER USED WAS MANUFACTURE VICTOREEN MODEL 490 SERIAL 2965 CALIB. 1/21/84
- 3) MEASUREMENTS WERE SYMMETRICAL ABOUT THE CENTER LINE OF THE SOURCE
- 4) ALL MEASUREMENTS WERE PERFORMED WITH THE SOURCE SHUTTER IN THE OPEN POSITION
- 5) THE TEST METER SENSOR WAS POINTED TOWARDS THE RADIATION SOURCE FOR ALL MEASUREMENTS
- 6) FINAL ALLIGNMENT OF SOURCE AND DETECTOR HAD NOT BEEN PERFORMED WHEN THESE MEASUREMENTS WERE MADE
- 7) VALUES FOR MEASUREMENTS NOT GIVEN ON THIS DRAWING ARE ON SHEET 2
- 8) THESE NOTES APPLY TO DWG. B21-053-I-915 SHEETS 1, 2 AND 3 UNLESS OTHERWISE NOTED
- 9) ALL MEASUREMENTS WERE TAKEN 59 INCHES FROM FLOOR UNLESS OTHERWISE NOTED.

TI APERTURE CARD

Also Available On
Aperture Card

AUG 9 1984



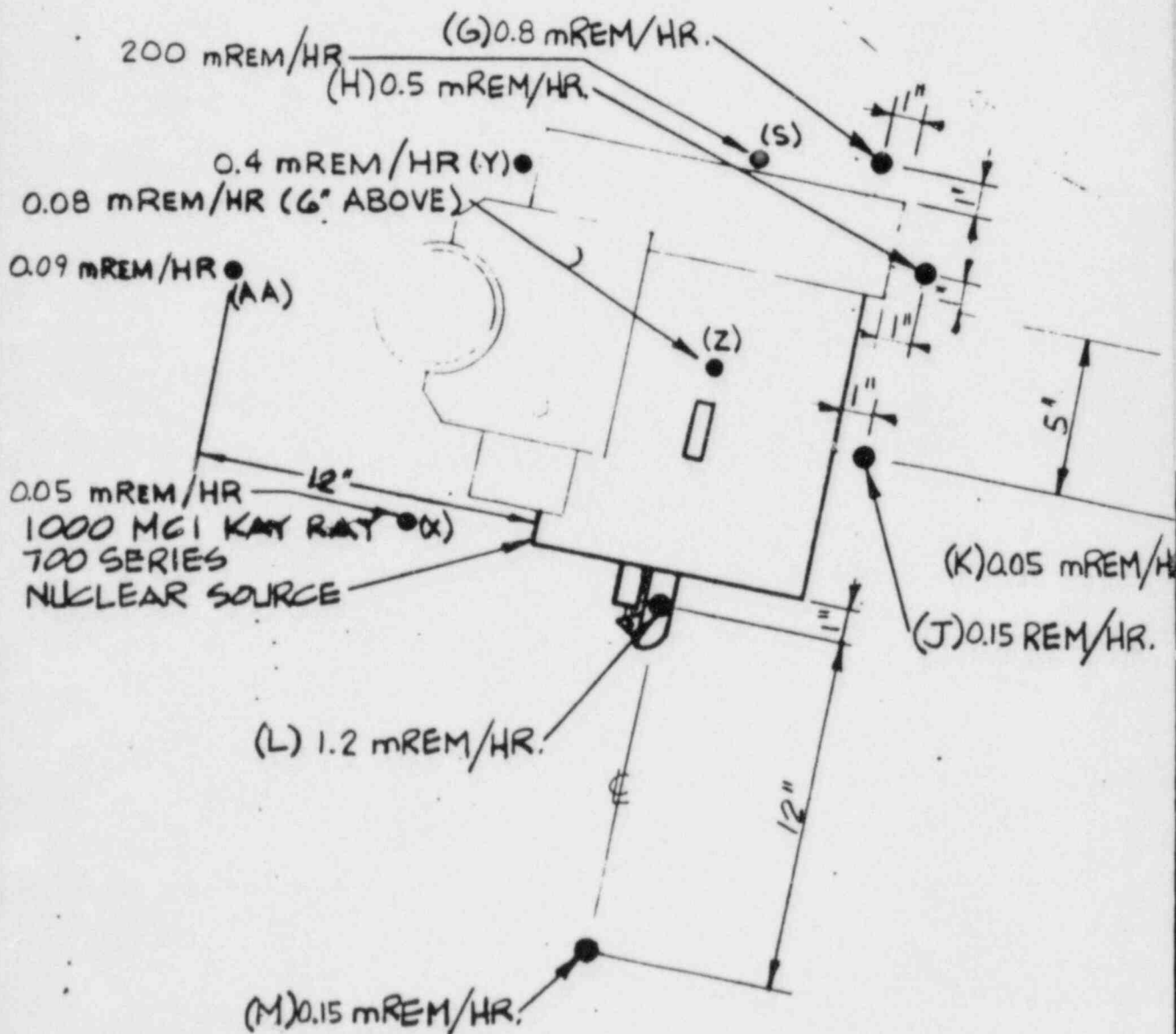
Möbly Chemical Corporation
Agricultural Chemicals Division
Box 4913, Kansas City, MO 64120

TCH CENTRIFUGE 2.1S2
RADIATION SURVEY

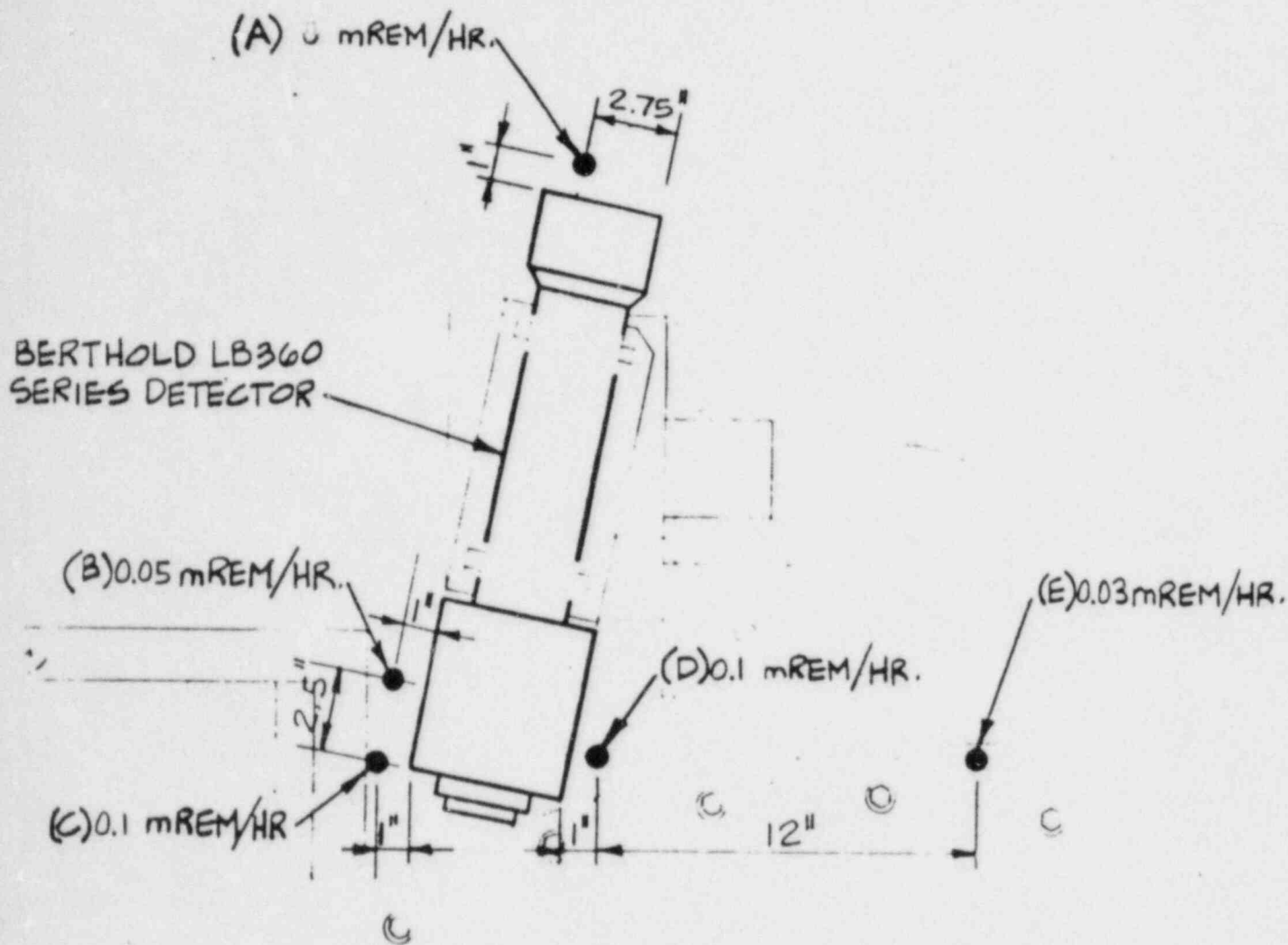
B21-053-I-915

SHEET	REV
1 OF 3	0

8512190167-01



REFERENCE						DRAWN BY	KJP	ASSIGN NO.
						CHKD. BY		PROJ. NO.
						APPD. BY		PMR NO.
						DATE		AREA
	REV	DATE	BY	CKD	APPD			



TI APERTURE CARD

Also Available On
Aperture Card

AUG 9 1984



Möbay Chemical Corporation
Agricultural Chemicals Division
Box 4918, Kansas City, MO 64120

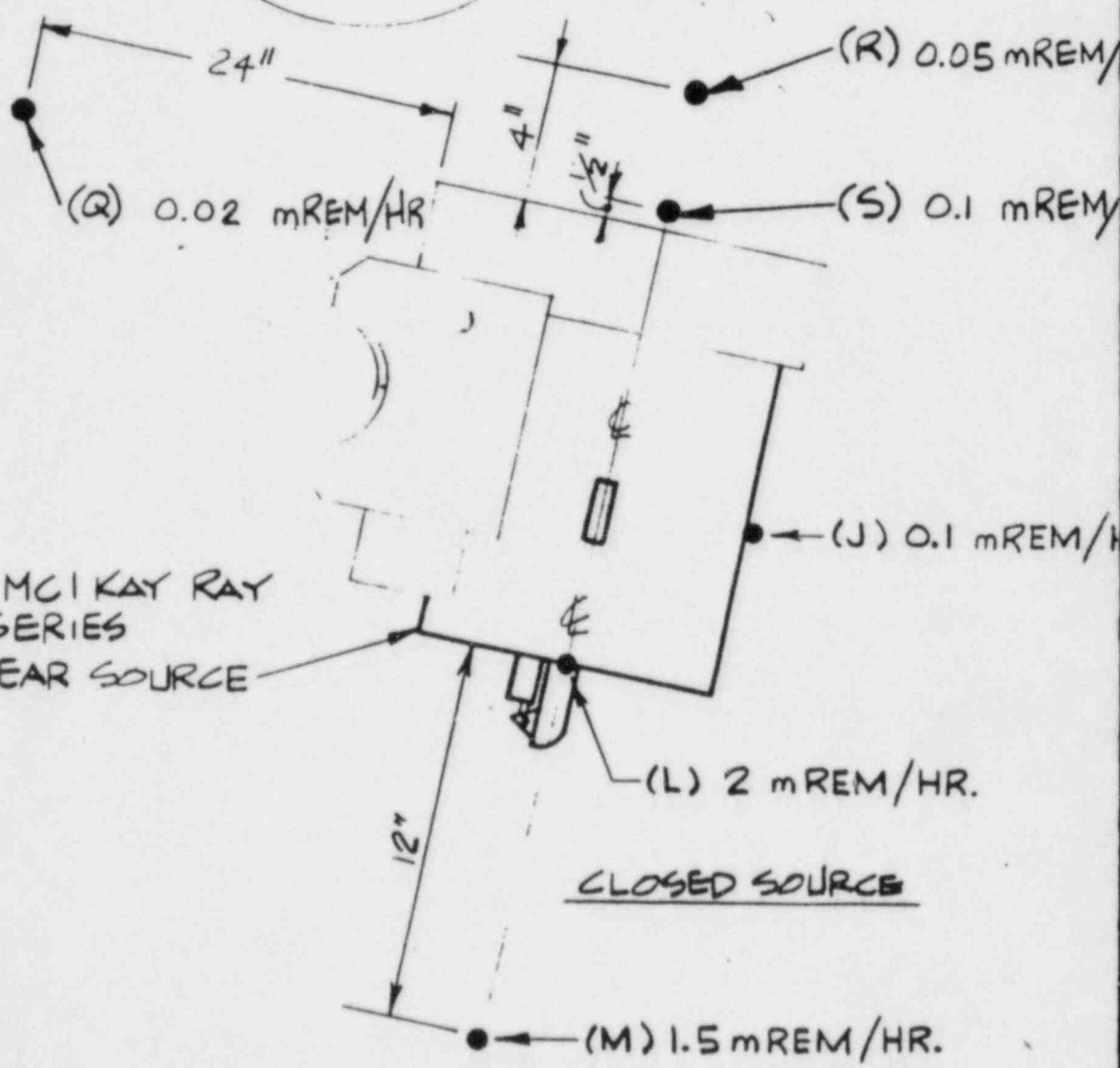
TCH CENTRIFUGE 2.152
RADIATION SURVEY

B21-058-J-915

SHEET REV

85/2190/67-02

1000 MCI KAY RAY
700 SERIES
NUCLEAR SOURCE



						DRAWN BY	KJP	ASSIGN NO.
						CHK'D. BY		PROJ. NO.
						APP'D. BY		FWR NO.

0 8/9/84 SWB

NOTES:

- 1) ALL MEASUREMENTS WERE PERFORMED BY BILL KENNEDY ON 8/6/84
- 2) ALL MEASUREMENTS WERE PERFORMED WITH THE SHUTTER CLOSED

TI
APERTURE
CARD

Also Available On
Aperture Card

8512190167 03
AUG 9 1984



Möbay Chemical Corporation
Agricultural Chemicals Division
Box 4913, Kansas City, MO 64120

TCH CENTRIFUGE 2.152
RADIATION SURVEY

BY AER-T-01F 454361 REV

BERTHOLD LB360
SERIES DETECTOR

0.03 mREM/HR (T)

0.02 mREM/HR (W)
(2 1/2' ABOVE DECK)
0.01 mREM/HR
(@ DECK)

(N) 0.05 mREM/HR

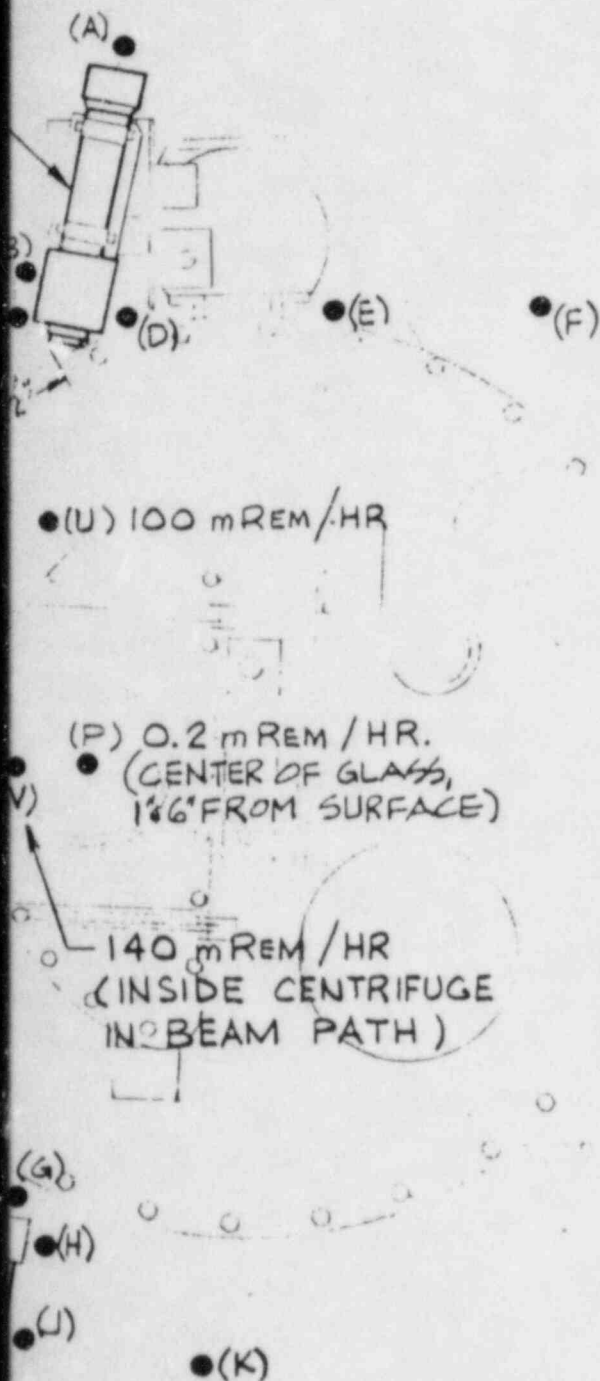
0.05 mREM/HR (Q)
(2 1/2' ABOVE DECK)
0.01 mREM/HR
(@ DECK)

1000 MCI KAY-RAY
7700 SERIES
NUCLEAR SOURCE
Serial # 14182

REFERENCE						DRAWN BY	KJP	ASSIGN NO.	99
	1	5/17/83	SWB			CHK'D. BY		PROJ. NO.	
	0	1/14/83	KJP			APP'D. BY		FMR NO.	
	REV	DATE	BY	CKD	APP'D	DATE	1-14-83	AREA	0

NOTES:

- 1) ALL MEASUREMENTS WERE PERFORMED BY BILL KENNEDY ON 1/5/83.
- 2) METER USED WAS
MANUFACTURE VICTOREEN
MODEL 490
SERIAL 2965
- 3) MEASUREMENTS WERE SYMETRICAL ABOUT THE CENTER LINE OF THE SOURCE
- 4) ALL MEASUREMENTS WERE PERFORMED WITH THE SOURCE SHUTTER IN THE OPEN POSITION
- 5) THE TEST METER SENSOR WAS POINTED TOWARDS THE RADIATION SOURCE FOR ALL MEASUREMENTS
- 6) FINAL ALLIGNMENT OF SOURCE AND DETECTOR HAD NOT BEEN PERFORMED WHEN THESE MEASUREMENTS WERE MADE
- 7) VALUES FOR MEASUREMENTS NOT GIVEN ON THIS DRAWING ARE ON SHEET 2
- 8) THESE NOTES APPLY TO DWG. B21-053-913 SHEETS 1, 2 AND 3 UNLESS OTHERWISE NOTED
- 9) ALL MEASUREMENTS WERE TAKEN 55 INCHES FROM FLOOR UNLESS OTHERWISE NOTED.



8512 150167-04

MAY 17 1983

23

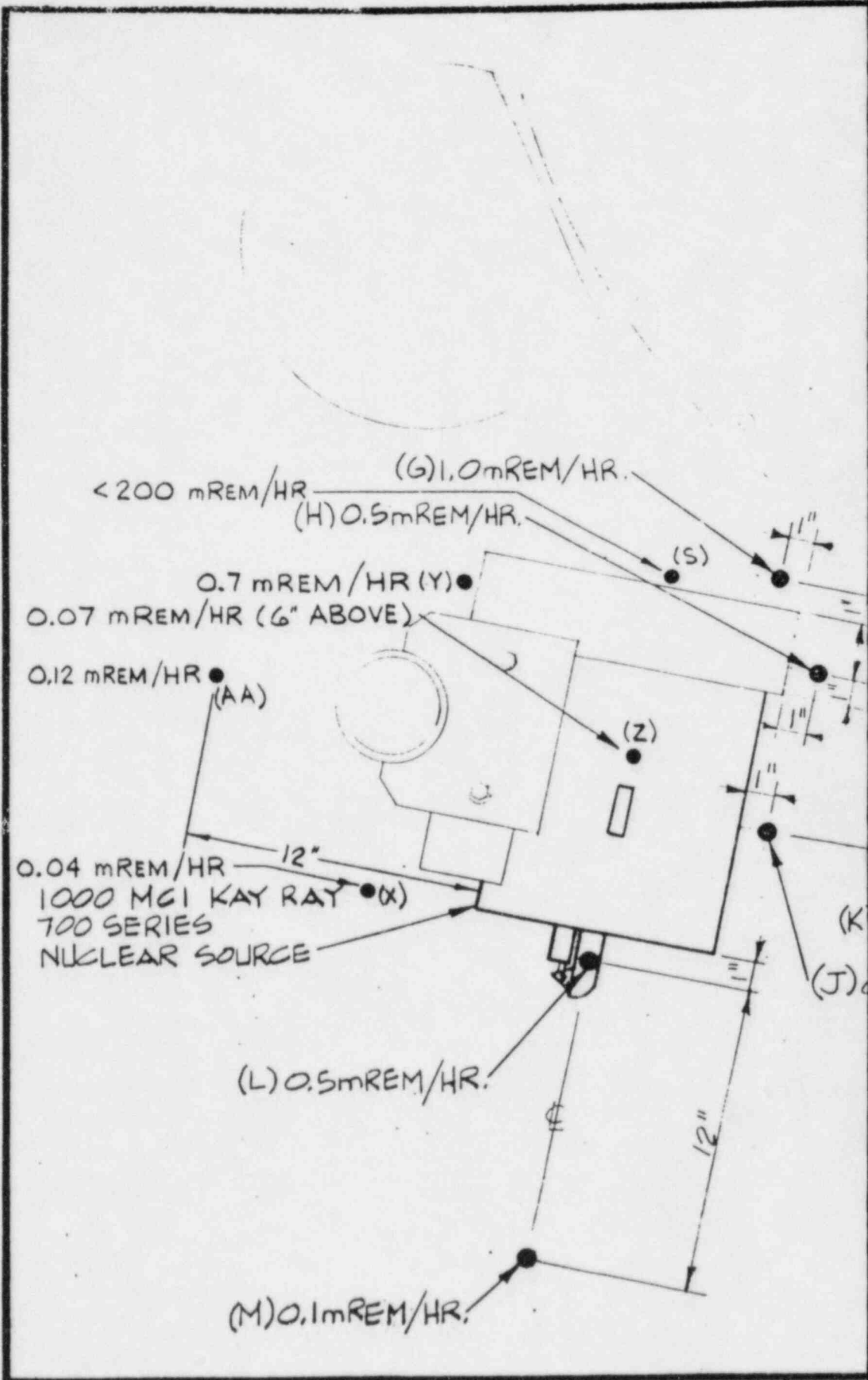


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Agricultural Chemicals Division
Box 4913, Kansas City, MO 64120

TCH CENTRIFUGE 2.151
RADIATION SURVEY

B21-053-I-913

SHEET	REV
1 OF 3	1

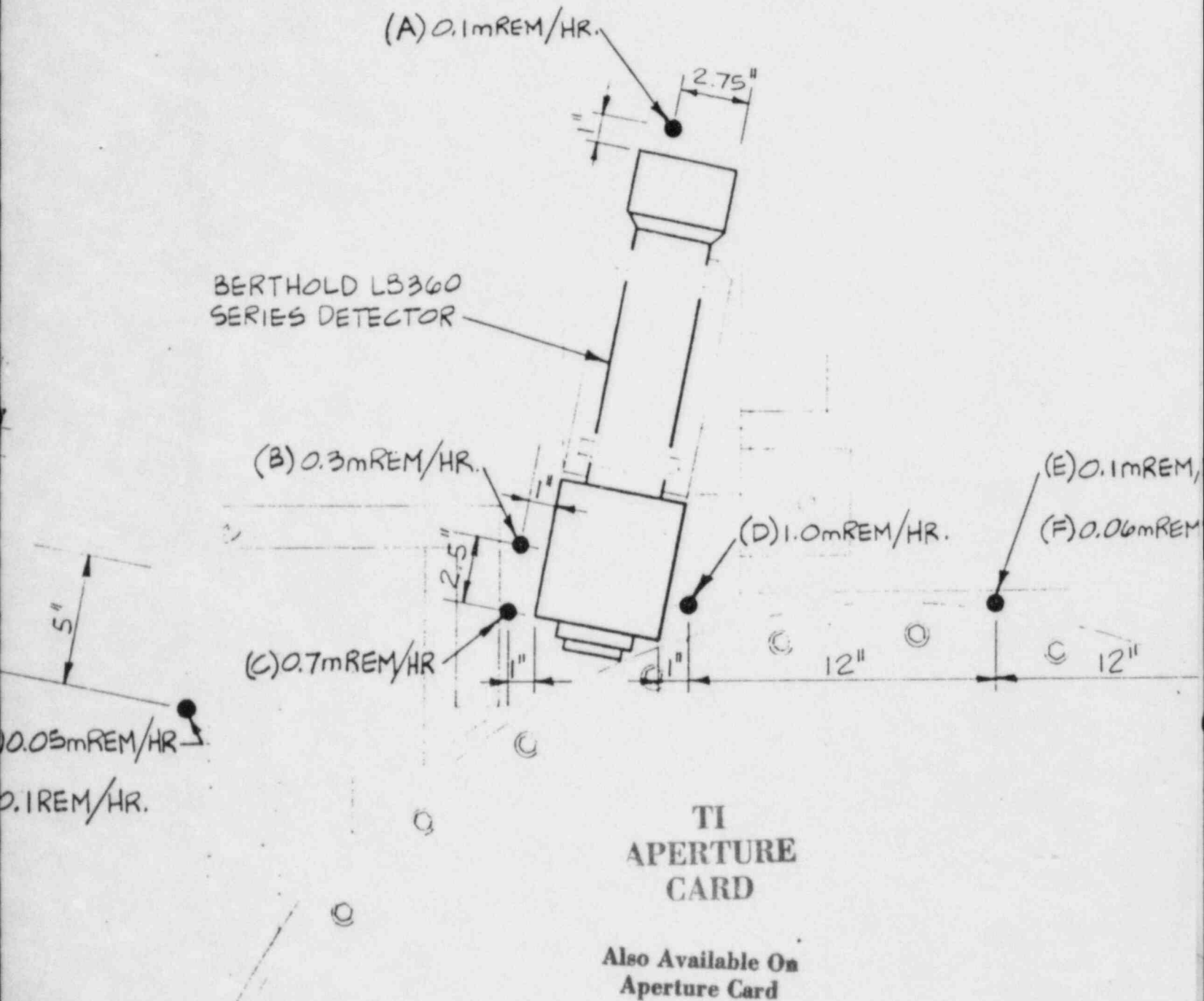


118011

						DRAWN BY	KJP
						CHK'D. BY	
						APP'D. BY	
1	5/17/83	SWB				DATE	11-14-83
0	1/14/83	KJP					

REFERENCE

REV DATE BY CKD APPD



MAY 17 1981

852190167-05

ASSIGN NO.	9523
PROJ. NO.	
FMR NO.	
AREA	052

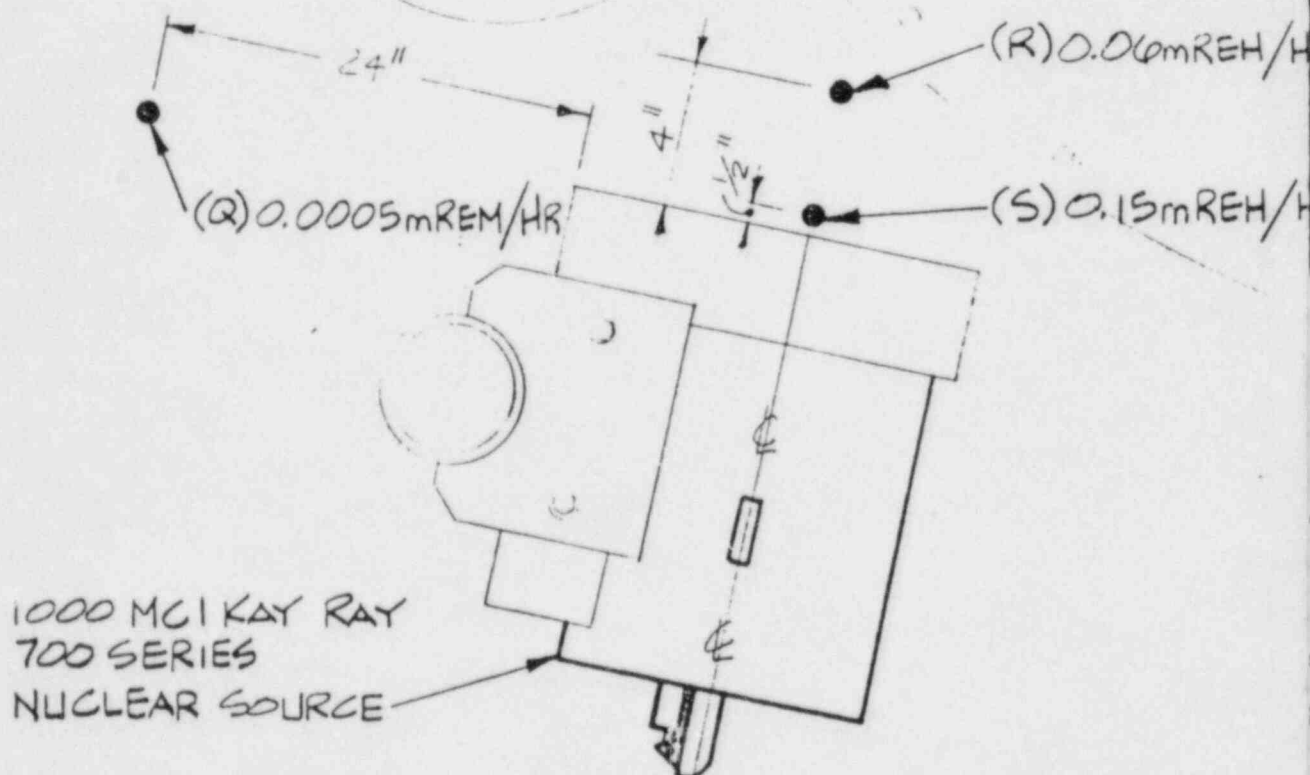


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Agricultural Chemicals Division
Box 4913, Kansas City, MO 64120

TCH CENTRIFUGE 2-FS1
RADIATION SURVEY

B21-053-I-913

SHEET
2053



CLOSED SOURCE
SURVEY 12/31/82

						DRAWN BY	KJP	ASSIGN NO.	
						CHKD. BY		PROJ. NO.	
						APP'D. BY		FMR NO.	

NOTES:

- 1) ALL MEASUREMENTS WERE
PERFORMED BY BILL
KENNEDY ON 12/31/82
- 2) ALL MEASUREMENTS WERE
PERFORMED WITH THE
SHUTTER CLOSED

TI
APERTURE
CARD

Also Available On
Aperture Card

MAY 17 1983

8512190167-06



Mobay Chemical Corporation
Agricultural Chemicals Division
Box 4913, Kansas City, MO 64120

TCH CENTRIFUGE 2.151
RADIATION SURVEY

QUEST REVI