



Occidental Chemical Corporation OxyChem
A Subsidiary of Occidental Petroleum Corporation



1600 South Madison Street, Ludington, Michigan 49431
Phone 231.845.4411

August 28, 2014

Mr. Frank Tran
United States Nuclear Regulatory Commission

Sent Via Email to fank.tran@nrc.gov

Control # 583620

SUBJECT: ADDITIONAL INFORMATION AS REQUESTED FOR LICENSE 21-17772-01

Dear Mr. Tran,

As a follow up from our phone conversation and your email on 8/26/14, I have enclosed the additional information as you requested.

The last two sources from the Bay City site were sent to QSA Global for recycle on 8/10/10. Copies of the recipient's receipt and the wipe test records are enclosed. All licensed nuclear sources (gauges) have been removed from the Bay City site and a review of the records indicates no leaking sealed source(s) have been identified at this location.

As you reference in your email our current license list 12 models of source holders. At the time of our last license renewal application in 2004 we did have one or more of each of these models on site. I was not the RSO at that time and did not recall this when we spoke.

Since that application in 2004 our site has downsized significantly and we have reduced from the 12 models listed on our current license to only the two listed in the renewal application. We have returned the other source holders to Ohmart Vega (in 2005 and 2006), Dow Chemical (in 2009), and QSA (in 2010, 2012 and 2013). For each of these shipments I have enclosed copies of the recipient's receipts and the wipe test records.

A review of the records indicates there is no history of leaking sealed sources under our license #21-17772-01.

Please contact me with any questions or concerns.

Sincerely,

Jim Glover
Radiation Safety Officer
Occidental Chemical Corporation
1600 South Madison Street
Ludington, Mi 49431
231-845-4474

Enclosures

OHMART VEGA

Ohmart/VEGA Corporation
4170 Rosslyn Drive
Cincinnati, Ohio 45209-1183
USA

(800) FOR LEVEL Toll-Free in USA & Canada
(513) 272.0131 Telephone
(513) 272.0133 FAX

<http://www.ohmartvega.com> URL
info@ohmartvega.com E-mail

March 15, 2005

Abraham Williams
Dow Chemical
1600 South Madison Street
Ludington, MI 49431

Re: Your P.O. 93049137
Ohmart C.O. MI05-2D-8500

Sir:

This is to acknowledge the receipt of the following:

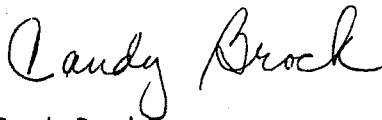
One (1) SHLG-1 source holder containing 1000 mCi (37.0 GBq) Cesium-137, serial number 6775, original Ohmart order MI93-030-0811.

This shipment was received on Ohmart Receiving Record 6802, dated March 1, 2005.

We accept this material and the transfer of ownership to Ohmart. We will handle it in strict accordance with the provisions of our license, with the regulations of the U.S. Nuclear Regulatory Commission, the regulations of the U.S. Department of Transportation and any other applicable laws or regulations.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,



Candy Brock
Customer Support Manager
Field Service Department

Ohmart's State of Ohio License Number 03212310063

c: File
Sales

NOTE: Source and holder were replaced on Ohmart order M:05-020-6152.

Ohmart/VEGA Corp.

4241 Allendorf Drive
Cincinnati, OH 45209
Phone (513) 272-0131 Fax (513) 272-0133

Leak Test Report

Customer Information:

Abraham Williams
Dow Chemical
1600 Madison Street
Ludington, MI 49431

Original SO/CO: MI93-030-0811
Source Holder: SHLG-1
Customer Tag # : 3400620 - prepared for shipment.
Test Performed On: 2/24/2005

Test Information:

Analyzed By: Mark Cornelissen Testing Interval:
Equipment #: NS-0012 Next Test Due:
Calibration Due: 6/2/2005 Analysis Date: 3/9/2005
Result OK: (Activity less than 0.005 (μ Ci) [200Bq]
Defective:

Measurement Data:

Leak Test CPM: 13
Background CPM: 14

Source Serial #:	Isotope:	mCi	GBq
6775	Cs-137	1000	37

Ohmart/VEGA's leak test analysis is done per work instruction NSI-0006 in compliance with Ohio DOH License 03212310036.

Mark A. Corbin
Signature

3.9.05
Date

OHMART VEGA

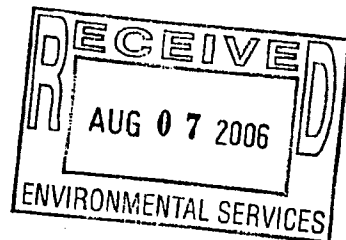
Ohmart/VEGA Corporation
4170 Rosslyn Drive
Cincinnati, Ohio 45209-1183
USA

(800) FOR LEVEL Toll-Free in USA & Canada
(513) 272.0131 Telephone
(513) 272.0133 FAX

<http://www.ohmartvega.com> URL
info@ohmartvega.com E-mail

July 31, 2006

Abraham Williams
Dow Chemical
1600 South Madison Street
Ludington, MI 49431



Re: Your P.O. # 93075658
Ohmart C.O. MI05-2D-10221

Sir:

This is to acknowledge the receipt of the following:

Sources and source holders per the attached listing.

This shipment was received on November 22, 2005 referencing Ohmart/VEGA MRA # 10221D.

We accept this material and the transfer of ownership to Ohmart/VEGA. We will handle it in strict accordance with the provisions of our license, with the regulations of the U.S. Nuclear Regulatory Commission, the regulations of the U.S. Department of Transportation and any other applicable laws or regulations.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,

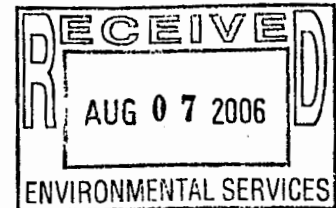
A handwritten signature in cursive script that reads "Candy Brock".

Candy Brock
Training Manager
Source Return Specialist

Ohmart's State of Ohio License Number 03212310063

C: File

Dow Chemical
July 31, 2006



Source Return

Three (3) SR1-A source holders, each containing 100 mCi (3.70 GBq) Cesium-137; serial number 70771, original Ohmart order 0030-154, Dow number 200695-6; serial number 73781, original Ohmart order 3030-02020, Dow number 570772; and serial number 68557, original Ohmart order 4030-01011, Dow number 571277

One (1) SR-1A source holder containing 150 mCi (5.55 GBq) Cesium-137, serial number 70540, original Ohmart order 2030-02027, Dow number 570192

One (1) SR-1A source holder containing 300 mCi (11.11 GBq) Cesium-137, serial number 64044, original Ohmart order 0030-154, Dow number 200695-3

One (1) SR-1A source holder containing 500 mCi (18.5 GBq) Cesium-137, serial number 60224, original Ohmart order A-5030-02016, Dow number 572146

One (1) SR-1 source holder containing 50 mCi (1.85 GBq) Cesium-137, serial number 66866, original Ohmart order 8030-049, Dow number L001952-4

One (1) SR-1 source holder containing 300 mCi (11.11 GBq) Cesium-137, serial number 62853, original Ohmart order 46320, Dow number L-01042-1

One (1) SHD source holder containing 300 mCi (11.11 GBq) Cesium-137, serial number 63252, original Ohmart order 0020-029, Dow number 880865-7

One (1) SHD source holder containing 375 mCi (13.88 GBq) Cesium-137, serial number M-2093, original Ohmart order W-8021-11092, Dow number 880865-7

Two (2) HM-8 source holders, each containing 300 mCi (11.11 GBq) Cesium-137, serial numbers 60336 and 60337, original Ohmart order 40065, Dow numbers L82086-1 and L82086-3

One (1) HM-8 source holder containing 500 mCi (18.5 GBq) Cesium-137, serial number 60224, original Ohmart order 40065, Dow number L82086-4

One (1) SHLG-1 source holder containing 750 mCi (27.77 GBq) Cesium-137, serial number 68418, original Ohmart order 0020-041, Dow number 21361

One (1) SHLG-1 source holder containing 1000 mCi (37.037 GBq) Cesium-137, serial number 69526, original Ohmart order 0030-154, Dow number 200695-2

One (1) KayRay Model 7062BP source holder containing 1 mCi (0.037 GBq) Cesium-137, serial number 17962, Dow number 571613

One (1) KayRay Model 7063 source holder containing 200 mCi (7.40 GBq) Cesium-137, serial number 09137, Dow number L-09264-1

One (1) KayRay Model 7063 source holder containing 250 mCi (9.259 GBq) Cesium-137, serial number 85023, Dow number L-04428-1

One (1) TN Model 5179A source holder containing 1000 mCi (37.037 GBq) Cesium-137, serial number 171, Dow number 2E-10741-3.

Owner	Date	Source Number	Open 1 foot	2x2				Manuf	Isotope	Serial Number	Shop Order	Size mCi	Model	
				Wipe	Tag	Paint	shtr							
E. Rule	4/1/81	200695-6 ✓						Ohmart	Cs137			100	SR1-A	
E. Rule	3/1/78	L-09264-1 ✓						Kay Ray	Cs137			200	7063	
E. Rule	9/1/73	L-01042-1 ✓						Ohmart	Cs137	62853	46320	300	SR-1	
E. Rule	9/1/79	571613 ✓						Kay Ray	Cs-137			1	7700-1	
E. Rule	6/1/1990	880865-7 ✓						Ohmart	Cs137	2876	V802111092-	375	SHD45	
E. Rule	11/1/1986	L82086-1 ✓						Ohmart	Cs-137			300	HM-8	
E. Rule	11/1/1986	L82086-3 ✓						Ohmart	Cs-137			300	HM-8	
E. Rule	11/1/1986	L82086-4 ✓						Ohmart	Cs-137			500	HM-8	
E. Rule	3/1/83	570772 ✓						Ohmart	Cs137	73781	303002020	100	SR1A	
E. Rule	3/1/84	571277 ✓						Ohmart	Cs-137			100	SR1A	
E. Rule	3/1/1978	L-04428-1 ✓						KayRay	Cs137			250	7063	
E. Rule	2/1/1985	572146 ✓						Ohmart	Cs137			500	SR1A	
E. Rule	3/4/1982	570192 ✓						Ohmart	Cs137			150	SR1A	
E. Rule	4/1/1981	200695-2 ✓						Ohmart	Cs137			1000	SHLG-1	
E. Rule	4/1/1989	L001952-4 ✓						Ohmart	Cs137	66866	8030049	50	SR-1	
E. Rule	4/1/1981	200695-3 ✓						Ohmart	Cs137			300	SR1-A	
E. Rule	8/1/1980	21361 ✓						Ohmart	Cs-137			750	SHLG-1	
E. Rule	11/1/1989	771318-1 ✓						Ohmart	Cs-137	63252		300	SHD	
E. Rule	1/5/1976	2E-10741-3 ✓						TX nuc	Cs-137			1000	5179A	
Survey Meter Used:														
Surveyor:														
Date of Survey:														

ALL WIPES BELOW
DETECTION LIMIT OF
50 dpm/WIPE (2.3×10^{-3} uCi/wipe)
INITIAL *AWD* DATE *9/26/05*

Reference ESR # 4559
Lindsay M. Alley 9/26/05

CERTIFICATION OF SOURCE/DEVICE POSSESSION TRANSFER

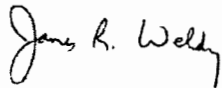
This document is to certify that on July 29, 2009, The Dow Chemical Company, Midland, Michigan (Dow Midland) took possession of and title to the following device/sources under NRC Materials license 21-00265-06.

See Attached List

These sources were transferred from:

Occidental Petroleum
Ludington, MI
License # 21-17772-01 (NRC)

Acceptance of this quantity will not exceed any possession limit of Dow Midland's NRC License #21-00265-06.



James Weldy, RSO
The Dow Chemical Company

Owner	Date	Source Number	Manuf	Isotope	Serial Number	Shop Order	Size mCi	Model
Crate #1								
D. Dunklow	10/1/1979	200351-1	Ohmart	Cs137	68206	9020051-B	100	SHLG-1
D. Dunklow	10/1/1979	200351-2	Ohmart	Cs137	68205	9020051-A	100	SHLG-1
D. Dunklow	4/1/1985	572165-2	Ohmart	Cs137	76199	503002019B	300	SR1A
D. Dunklow	12/1/91	880865-1	Ohmart	Cs137	2876	W802111092-F	250	SHD45
						Total	750 mCi	473 mCi current activity
Crate #2								
D. Dunklow	6/1/84	571452	Ohmart	Cs-137	72707	4.01E+08	10	SH100
D. Dunklow	6/1/84	571453	Ohmart	Cs-137	73997	4.01E+08	10	SH100
D. Dunklow	3/1/1984	571264	Ohmart	Cs137	74316	4.03E+08	150	SR1A
J. Rhein	7/1/1999	No Number	Ohmart	Cs137	7366GK	6330689	500	SR1A
D. Dunklow	2/1/1984	571260	Ohmart	Cs137	418	4E+08	500	SR1A
						Total	1170 mCi	768 mCi current activity

CUSTOMER REQUEST **DOW CHEMICAL U.S.A**
H & ES ANALYTICAL CHEMISTRY LABORATORY

ES AL NUMBER: 5170
 LS: 1000-2894

Date: 4/29/09	Plant Code: Y14	Cost Center: 159	Project/Task:	Date Needed By: 6/1/09	<input type="checkbox"/> Return Sample <input type="checkbox"/> Discard Sample
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SAMPLE OF: CS-137

SAMPLE NUMBER(S): 1-19

SAFETY HAZARDS *A/A*

<input type="checkbox"/> Topic	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Low Flash Point
<input type="checkbox"/> Explosive	<input type="checkbox"/> Spontaneous Flammable	<input type="checkbox"/> Non-Hazardous
<input type="checkbox"/> Lachrymator		<input type="checkbox"/> Unusual Chemical Reactive

NAME	DEPARTMENT	BUILDING	DOOR	PHONE
Jim Glover	EMS	110	1	231 245 4474
		Ludington		

RELATIVE ERROR SUFFICIENT, ETC.	APPROXIMATE LEVEL, ETC.	LOWER LIMIT, ETC.
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ANALYSIS REQUEST AND REASON FOR REQUEST. (PLANT OR PROJECT RELATED). INDICATE DOLLAR (\$) VALUE TO DOW.

Please ANALYSIS FOR RADIO ACTIVITY

RESULTS:

ALL WIPES BELOW
 DETECTION LIMIT OF
 50 dpm/WIPE (2.3 x 10⁻³ µCi/wipe)
 INITIAL KK DATE 4.30.09

SIGNATURE: <u>K Kennett</u>	PHONE: <u>8-3306</u>	BUILDING: <u>1803</u>
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DATE FINISHED: <u>4.30.09</u>	HOURS: <u>1</u>	RESULTS PHONED:	REVIEWED BY: <u>Mary Scheyer</u>
-------------------------------	-----------------	-----------------	----------------------------------

4.30.09



6765 Langley Drive
Baton Rouge, Louisiana 70809
Telephone: 225-751-5893
Fax: 225-756-0365

Date: August 13, 2010

Jim Glover
Oxy Chem
1600 South Madison
Ludington, MI 49431

MRA # 10889

This is to advise that the Radioactive Material as detailed below has been received by QSA Global, Inc as of 8-13-10 and we have taken possession of these sources.

Manufacturer	Model	S/N	Isotope	Activity
Ohmart/Vega	SH-100	75916	Cs-137	100 mci
Ohmart/Vega	SH-100	75917	Cs-137	100 mci
Ohmart/Vega	SHLG-1	63468	Cs-137	500 mci

Please retain this record for your files. Should you require further assistance, please contact us at QSA Global, Inc.

Regards,

A handwritten signature in cursive script that reads "Rusty Barrett".

Rusty Barrett
Technical Service Manager

Ohmart/VEGA Corp.

Leak Test Report

4241 Allendorf Drive
Cincinnati, OH 45209
Phone (513) 272-0131 Fax (513) 272-0133

Customer ID: 1245
Email: James_Glover@oxy.com

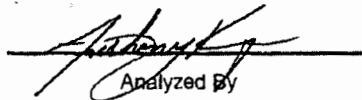
Customer Information: Jim Glover
Occidental Chemical
1600 Madison Street
Ludington, MI 49431

Analyzed By: Tony Kemper
Equipment No. NS-0095
Calibration Due: 07/23/2010
Analysis Date: 07/06/2010
Sources Analyzed: 2

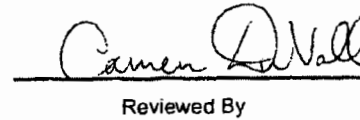
Ohio Administrative Code (OAC) - 3701:1-38-24

(E) A sealed source shall be considered to be leaking if the presence of one hundred eighty-five becquerels (0.005 microcurie) or more of removable contamination on any test sample is identified.

Serial #	Isotope	mCi	Source Holder	Customer Tag #	Notes	Test Result	Test Date	Test Interval	Next Test Date
0738CO	Cs-137	500.00	SHLG-1	701 Scrubber		< 0.005µCi	06/17/2010	3 Years	06/17/2013
* 63468	Cs-137	500.00	SHLG-1	701 Scrubber		< 0.005µCi	06/17/2010	3 Years	06/17/2013


Analyzed By

7-6-10
Analyzed Date


Reviewed By

7-6-10
Reviewed Date

Ohmart/VEGA Corp.

Leak Test Report

4241 Allendorf Drive
Cincinnati, OH 45209
Phone (513) 272-0131 Fax (513) 272-0133

Customer ID: 1245
Email: James_Glover@oxy.com

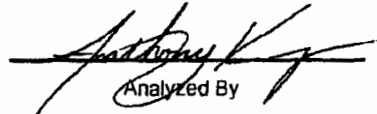
Customer Information: Jim Glover
Occidental Chemical
1600 Madison Street
Ludington, MI 49431

Analyzed By: Tony Kemper
Equipment No. NS-0012
Calibration Due: 02/22/2011
Analysis Date: 08/03/2010
Sources Analyzed: 2

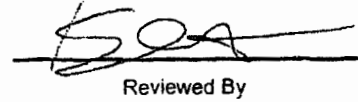
Ohio Administrative Code (OAC) - 3701:1-38-24

(E) A sealed source shall be considered to be leaking if the presence of one hundred eighty-five becquerels (0.005 microcurie) or more of removable contamination on any test sample is identified.

Serial #	Isotope	mCi	Source Holder	Customer Tag #	Notes	Test Result	Test Date	Test Interval	Next Test Date
75916	Cs-137	100.00	SH-100	Storage		< 0.005µCi	07/22/2010		
75917	Cs-137	100.00	SH-100	Storage		< 0.005µCi	07/22/2010		


Analyzed By

8-3-10
Analyzed Date


Reviewed By

8/4/10
Reviewed Date



6765 Langley Drive
Baton Rouge, Louisiana 70809

Date: June 27, 2012

Jim Glover
Occidental Chemical
1600 South Madison
Ludington, MI 49431

MRA # 30335

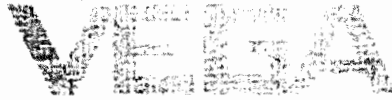
This is to advise that the Radioactive Material as detailed below has been received by QSA Global, Inc as of 6-27-12 and we have taken possession of this source.

Manufacturer	Model	Source S/N	Isotope	Activity
Ohmart	SHLG-1	2811CG	Cs-137	1000 mci

Please retain this record for your files. Should you require further assistance, please contact us at QSA Global, Inc.

Regards,

Rusty Barrett
Technical Service Manager



Leak Test Report

4241 Allendorf Drive
Cincinnati, OH 45209
Phone (513) 272-0131 Fax (513) 272-0133

Customer ID: 1245
Email: James_Glover@oxy.com

Customer Information: Jim Glover
Occidental Chemical
1600 S. Madison St.
Ludington, MI 49431

Analyzed By: Carmen DuVall
Equipment No. NS-0095
Calibration Due: 08/11/2012
Analysis Date: 05/23/2012
Sources Analyzed: 9

Ohio Administrative Code (OAC) - 3701:1-38-24

(E) A sealed source shall be considered to be leaking if the presence of one hundred eighty-five becquerels (0.005 microcurie) or more of removable contamination on any test sample is identified.

Serial #	Isotope	mCi	Source Holder	Customer Tag #	Notes	Test Result	Test Date	Test Interval	Next Test Date
8405GH	Cs-137	50.00	7062BP	3596598		< 0.005µCi	05/10/2012	3 Years	05/10/2015
3752	Cs-137	50.00	SR-1A	560932		< 0.005µCi	05/10/2012	3 Years	05/10/2015
0783CO	Cs-137	500.00	SHLG-1	A1		< 0.005µCi	05/10/2012	3 Years	05/10/2015
1519CO	Cs-137	1000.0	SHLG-1	A1		< 0.005µCi	05/09/2012	3 Years	05/09/2015
3405CN	Cs-137	100.00	SHLG-1	LT201		< 0.005µCi	05/10/2012	3 Years	05/10/2015
3429CN	Cs-137	100.00	SHLG-1	LT202		< 0.005µCi	05/10/2012	3 Years	05/10/2015
6283CM	Cs-137	1000.0	SHLG-1	OHM-S-A1		< 0.005µCi	05/09/2012	3 Years	05/09/2015
2811CG	Cs-137	1000.0	SHLG-1	OHM-S-A1		< 0.005µCi	05/09/2012	3 Years	05/09/2015
69811	Cs-137	250.00	SHLG-1	OHM-S-A1		< 0.005µCi	05/10/2012	3 Years	05/10/2015

Carmen DuVall
Analyzed By

5-23-12
Analyzed Date

[Signature]
Reviewed By

5-24-12
Reviewed Date



QSA GLOBAL

6765 Langley Drive
Baton Rouge, Louisiana 70809

Date: July 23, 2013

Jim Glover
Occidental Chemical
1600 South Madison
Ludington, MI 49431

MRA # 30628

This is to advise that the Radioactive Material as detailed below has been received by QSA Global, Inc as of 7-22-13 and we have taken possession of this source.

Manufacturer	Model	Source S/N	Isotope	Activity
Ohmart	SR-1A	3752	Cs-137	50 mci

Please retain this record for your files. Should you require further assistance, please contact us at QSA Global, Inc.

Regards,

Rusty Barrett
Technical Service Manager

Leak Test Report

4241 Allendorf Drive
Cincinnati, OH 45209
Phone (513) 272-0131 Fax (513) 272-0133

Customer ID: 1245

Email: James_Glover@oxy.com

Customer Information: Jim Glover
Occidental Chemical
1600 S. Madison St.
Ludington, MI 49431

Analyzed By: Carmen DuVall
Equipment No. NS-0095
Calibration Due: 08/21/2013
Analysis Date: 06/24/2013
Sources Analyzed: 1

Ohio Administrative Code (OAC) - 3701:1-38-24

(E) A sealed source shall be considered to be leaking if the presence of one hundred eighty-five becquerels (0.005 microcurie) or more of removable contamination on any test sample is identified.

Serial #	Isotope	mCi	Source Holder	Customer Tag #	Notes	Test Result	Test Date	Test Interval	Next Test Date
3752	Cs-137	50.00	SR-1A	560932 / 703010081		< 0.005 μ Ci	06/17/2013	3 Years	06/17/2016



Analyzed By

6-24-13

Analyzed Date



Reviewed By

6-24-13

Reviewed Date

Tran, Frank

From: James_Glover@oxy.com
Sent: Thursday, August 28, 2014 9:29 AM
To: Tran, Frank
Subject: Request for additional information regarding NRC License No. 21-17772-01
Attachments: Scanned from a Xerox multifunction device.pdf

Dear Mr. Tran,
Here is the additional information you have requested, Sincerely, Jim Glover

-----Original Message-----

From: Tran, Frank [<mailto:Frank.Tran@nrc.gov>]
Sent: Tuesday, August 26, 2014 12:04 PM
To: Glover, James M
Subject: Request for additional information regarding NRC License No. 21-17772-01

Dear Mr. Glover:

As discussed with you by telephone this morning, attached is a copy of our conversation requesting for additional information regarding the renewal application for NRC License No. 21-17772-01.

Thanks for your time,

Frank Tran