



CHAMPION AEROSPACE, LLC

January 9, 2015

Director
Office of Federal and State Materials and Environmental Management Programs
U.S. Nuclear Commission
Washington, DC 20555-0001

RE: Annual Record and Report of Transfer for 2014

Attn: Document Control Desk/Exempt Distribution

To whom it may concern,
This annual report is being filed for the following Licensee:

Champion Aerospace, LLC
1230 Old Norris Road
Liberty, SC 29657

NRC Materials License No. 39-23825-01E
SC DHEC Radioactive Material License No. 505

Champion Aerospace manufactures ignition exciters, some of which contain a small amount of radioactive Tritium gas in the high voltage switching component referred to in this document as a "Spark Gap". Spark gaps have been used in turbine engine ignition systems on aircraft since the 1940s. They are a simple and reliable high voltage switch. They do require a small dose of radioactive gas in their construction. The fundamental issue is that a radioactive isotope is required to maintain a consistent spark gap ionization voltage over the unit's operating life. Without the small amount of tritium gas in the spark gap, the ionization voltage of the gap can vary significantly over time and result in a potential decrease in the delivered energy of the exciter. There is no alternative material that Champion can propose for use in our spark gaps that is more benign than Tritium. Currently Champion produces six different spark gaps and transfer these in either top level exciters or as spare parts. The part numbers are as follows:

307083, 307083-1, 307083-2, 307226, 307532 and 307535

Champion currently purchases the Tritium gas from a commercial supplier of the material. That manufacturer is AECL - Chalk River Laboratories in Chalk River, Ontario Canada. Their contact information is listed below for future reference:

*Canadian Nuclear Laboratories (Formerly AECL)
286 Plant Road
Chalk River, Ontario
K0J 1J0
Phone: (613) 584-3311*

All of the spark gaps listed in this report were transferred for use under 10 CFR 30.15 (8i) and are listed by year, part number, quantity transferred, and total micro-curies transferred. See attachments.

1230 Old Norris Road
P.O. Box 686, Liberty, SC 29657-0686
Tel. (864) 843-1162 • Fax (864) 843-5414



CHAMPION AEROSPACE, LLC

If there are any questions concerning this report please contact me at 864-843-7801.

Sincerely,

Alan D. Woods
Radiation Safety Officer
Manager, Facilities, Piston and Airframe Operation
Champion Aerospace, Inc.

cc: Scott Wilson
Health Physicist
Division of Nuclear Materials Safety
Division I
scott.wilson@nrc.gov

Enclosures

Champion Aerospace LLC
1230 Old Norris Road
Liberty, SC 29657

NRC Material License No. 39-23825-01E
SC DHEC Radioactive Material License No. 505

2014 Total Tritium Transferred

Spark Gap Part Number	# Transferred	Tritium Dose/Gap μ Curie	Total Tritium Transferred μ Curie
307083	575	28	16100
307083-1	498	28	13944
307083-2	1839	28	51492
307226	729	5.9	4301.1
307532	1981	4.6	9112.6
307535	87	28	2436
Totals	5709		97385.7

From: (864) 843-5391
April Durham
CHAMPION AEROSPACE, INC
1230 OLD NORRIS ROAD
P.O. BOX 686
LIBERTY, SC 29657

Origin ID: LQKA



Ship Date: 09JAN15
ActWgt: 0.3 LB
CAD: 5474703#INET3550

Delivery Address Bar Code



SHIP TO: (864) 843-7801

BILL SENDER

Director
U.S. Nuclear Commision
Office of Federal & State Material
and Environmental Management Prg.
U S GOVERNMENT OFFIC, DC 20555

Ref #
Invoice #
PO #
Dept #

RELEASE#: 3785346

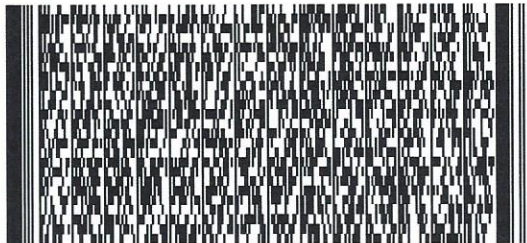
MON - 12 JAN 10:30A
PRIORITY OVERNIGHT

TRK# 7725 2644 0360

0201

20555
DC-US
IAD

XC NSFA



522G18F15/8AC9

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.