

From: Anthony Kirkwood
To: leif vasstrom
Date: 10/29/2007 10:11:24 AM
Subject: Query: NRC question on gas quantity in Supra Lamps

Mr. Vasstrom,

I've checked with a fellow staff member to verify what Mr. Kalmbach has said. All things being equal, we don't see why the activity would decrease only because of filling the smaller volume lamp from the larger volume gas container. Can you explain further, or mathematically show how the activity goes from 50 microcuries/liter to less than 30 microcuries/30 milliliter lamp?

Sincerely, Anthony Kirkwood

>>> "leif vasstrom" <lvasstrom@covad.net> 10/29/2007 7:14 AM >>>

Dear Mr. Kirkwood, Please find the answer to your question below from Radium's Mr. Uwe Kalmbach. Please let me know if this meets with your expectations. Best Regards,

Leif Vasstrom
Supra Brands Group Ltd.

Direct: 415 725 6666 (U.S.) - 358 (0)40 856 0124 (EU)
Fax: 415 520 5318
Toll free: 800 959 1255
e-mail: lvasstrom@supratechnologies.com
www.supratechnologies.com & www.tanadvisor.net

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From: Kalmbach, Uwe [<mailto:U.Kalmbach@osram.de>]
Sent: Monday, October 29, 2007 12:48 AM
To: leif vasstrom

Subject: AW: Remaining NRC question on gas quantity in Supra Lamps

Dear Leif, What we receive from OSRAM is a mixture of Krypton-85 in Argon gas. The activity in this bottle is 50 microcuries per liter of the gas mixture. The volumes of the burners are lower than 30 milliliters. The total activity of each lamp is therefore below 30 microcuries per lamp. Best regards Uwe Kalmbach Radium Lampenwerk GmbH Development UV/IR Dr.-Eugen-Kersting-Straße 651688 Wipperfürth Telefon: +49 2267-81-209 Telefax: +49 2267-81-465 E-Mail: U.Kalmbach@radium.de Internet: www.radium.de Radium Lampenwerk GmbH, Sitz: Wipperfürth Geschäftsführer: Andreas Steinert Vorsitzender des Aufsichtsrates: Christoph Schneider Registergericht: Köln HRB 37474, WEEE-Reg-Nr. DE 36655118

Von: leif vasstrom [<mailto:lvasstrom@covad.net>]

Gesendet: Freitag, 26. Oktober 2007 18:18

An: Kalmbach, Uwe; Schwarz, Markus; Roth, Markus

Cc: Steinert, Andreas

Betreff: FW: Remaining NRC question on gas quantity in Supra Lamps

Wichtigkeit: Hoch

Gentlemen, The statement below is from the NRC based on the two pages I received from you Uwe on Tuesday. I think I know the answer, but please respond in order. Best Regards,

Leif Vasstrom
Supra Brands Group Ltd.

Direct: 415 725 6666 (U.S.) - 358 (0)40 856 0124 (EU)
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From: Anthony Kirkwood [<mailto:ASK@nrc.gov>]
Sent: Friday, October 26, 2007 9:07 AM
To: leif vasstrom
Subject: Re: Remaining NRC question on gas quantity in Supra Lamps
Mr. Vasstrom,

Just realized that the gas certificate from Osram indicates 0.05 mCi (50 microcuries) of krypton-85 gas. This quantity exceeds the exempt limit of 30 microcuries for krypton-85 electron tubes (lamps) in 10 CFR 30.15(a)(8)(iv). Please explain how the gas in your lamps will not exceed the NRC limit of 30 microcuries since the gas apparently use to fill the lamps has an activity of 50 microcuries.

Sincerely, Anthony Kirkwood

Anthony S. Kirkwood, Health Physicist
NRC/FSME/MSSA/SAIS
MS: T8E24, RM: T8F16
(301) 415-6140 (Voice), (301) 415-5370 (Fax)
E-mail: ask@nrc.gov

>>> "leif vasstrom" <lvasstrom@covad.net> 10/24/2007 12:04 PM >>>

Dear Mr. Kirkwood, 1. The 400 watt lamp, models 4500SI and 4500WL with the R7s ceramic base, does not have sufficient space for further etching on one side. These lamps are produced in an automatic machine and the etching of the other side would prove cost prohibitive. 2. I have enclosed two PDF files from Osram, depicting a KR 85 delivery and certificate. I can fax these to you as well if needed, at which time I could provide some translation if needed. Please let me know if this meets with your approval. The best number to reach me is 415 725 6666. Best Regards,

Leif Vasstrom
Supra Brands Group Ltd.

Direct: 415 725 6666 (U.S.) - 358 (0)40 856 0124 (EU)
Fax: 415 520 5318
Toll free: 800 959 1255
e-mail: lvasstrom@supratechnologies.com
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From: Anthony Kirkwood [mailto:ASK@nrc.gov]
Sent: Monday, October 22, 2007 8:18 AM
To: leif vasstrom
Subject: Action: Need response from Supra on remaining NRC questions in 10/17, e-mail Mr. Vasstrom,

I received your Fedex letter dated October 16, 2007, however, I don't see where you have responded to two of the questions in my e-mail sent to you on October 17, 2007, which asked in part, as follows:

". . . Your letter may already include the responses to my 10/15/07, questions (example drawing of lamp etching showing location and the Kr-85 symbol, the date when the lamp etching will be added, and **explanation why 400 watt lamp cannot be labeled with Kr-85**) and **also the response to my telephone request for an example of a measurement certificate from the krypton-85 gas supplier,** but I just wanted to remind you of these remaining questions. . . "

Please respond to the two bold and underlined questions above. An e-mail response with an attached sample of a gas measurement certificate would be sufficient so that I may complete the review of your application.

Sincerely,

Anthony S. Kirkwood, Health Physicist
NRC/FSME/MSSA/SAIS
MS: T8E24, RM: T8F16
(301) 415-6140 (Voice), (301) 415-5370 (Fax)
E-mail: ask@nrc.gov

CC: Duncan White; Joseph DeCicco; Richard Struckmeyer; Sami Sherbini

Mail Envelope Properties (4725EA0C.940 : 13 : 34940)

Subject: Query: NRC question on gas quantity in Supra Lamps
Creation Date 10/29/2007 10:11:24 AM
From: Anthony Kirkwood
Created By: ASK@nrc.gov

Recipients	Action	Date & Time
covad.net AM lvasstrom (leif vasstrom)	Transferred	10/29/2007 10:11:38
nrc.gov OWGWPO03.HQGWDO01 AM JXD1 CC (Joseph DeCicco)	Delivered	10/29/2007 10:11:32
nrc.gov TWGWPO02.HQGWDO01 AM RKS CC (Richard Struckmeyer) SXS2 CC (Sami Sherbini)	Delivered	10/29/2007 10:11:32
nrc.gov TWGWPO04.HQGWDO01 AM ADW CC (Duncan White)	Delivered	10/29/2007 10:11:32

Post Office	Delivered	Route
OWGWPO03.HQGWDO01	10/29/2007 10:11:32 AM	covad.net nrc.gov
TWGWPO02.HQGWDO01	10/29/2007 10:11:32 AM	nrc.gov
TWGWPO04.HQGWDO01	10/29/2007 10:11:32 AM	nrc.gov

Files	Size	Date & Time
MESSAGE	10991	10/29/2007 10:11:24 AM
TEXT.htm	23430	

Options
Auto Delete: No
Expiration Date: None
Notify Recipients: Yes
Priority: Standard

ReplyRequested:	No
Return Notification:	None
Concealed Subject:	No
Security:	Standard
To Be Delivered:	Immediate
Status Tracking:	Delivered & Opened