



Jan 18<sup>th</sup> ,2018

Mr. Richard K. Struckmeyer  
Materials Safety Licensing Branch  
Division of Materials Safety, State, Tribal, and Rulemaking Programs  
Office of Nuclear Material Safety and Safeguards  
U.S Nuclear Regulatory Commission  
Mail Stop: T-8E 18  
Washington DC 20555

SUBJECT: NON-PROPRIETARY INFORMATION COPY OF  
INFORMATION REGARD ABOUT TOP SHELF  
LED., DBA GROWER'S CHOICE NRC APPLICATION,REVISION  
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Dear Mr. Struckmeyer:

Attached is a non-proprietary copy of information about our NRC application for Top Shelf LED, Inc., DBA Grower's Choice. We have black out the proprietary portions. This is a non-proprietary copy of our application.

If you have question or concerns regarding this application, please contact CEO, Leonardo Day,

at 858-381-7234,or at [info@growersc.com](mailto:info@growersc.com) .

Sincerely,

Leonardo Day

CEO



## WAREHOUSE POSSESSION LICENSES

State of California: Pending

### ITEM 7: INDIVIDUAL RESPONSIBLE FOR RADIATION SAFETY AND THEIR TRAINING AND EXPERIENCE

The person responsible for the E-Distribution license is Leonardo Day. He is the CEO for Top Shelf LED, Inc. This individual does not require to have radiation safety training as this license does not authorize possession of radioactive materials. This license does require knowledge of management of radiation safety program and requirement to maintain licenses in accordance with regulatory statutes. The person in his position is ideal for this type of role.

### ITEM 8: TRAINING FOR INDIVIDUAL FREQUENTING RESTRICTED AREA

All of the warehouse staff need to wear requirement safe vest to handling all the radioactive materials. Handle radioactive materials with special training would be hold by Leonardo Day, CEO. Employees should not sign in and sign out on the enter form of the frequenting restricted area.

### ITEM 9: FACILITY AND EQUIPMENT

All product distribution will be held at our warehouse which is located in 1500 S Milliken Ave. Unit B, Ontario, CA 91761. Possession license is pending under State of California Department of Public Health Radiologic Health Branch.. The warehouse is only distribute and possess the radioactive materials, we do not have any equipment in the warehouse.

ITEM 10: RADIATION SAFETY PROGRAM: REVISION 0.  
[The whole Top Shelf LED,.INC Radiation Protection Program Plan is Proprietary information]

[REDACTED]

## ITEM 11: WASTE MANAGEMENT

Normally we do not have any radioactive waste need to be handle. However, our CEO would be available to assist the warehouse in procuring a method of disposing of broken or otherwise damaged lamps.

## ITEMS CONTAINING KRYPTON-85

### ARC TUBE TECHNICAL DATA

MANUFACTURER: Hangzhou Hanguang Illumination Co.,Ltd, China, Huangzhou

CONSTRUCTION: 1.Quartz

2. Ceramic Poly crystalline alumina (PCA)

CONTAINMENT: 1. Sealed quartz bulb

2. Sealed PCA tube

CHEMICAL FORM: Krypton/Argon mixture

RADIOACTIVE CONTENT: Krypton-85

MAXIMUM ACTIVITY PER ARC TUBE :

### PROTOTYPE TESTS:

Prototype testing to demonstrate that byproduct material is not released to the environment under the most sever conditions of normal use is not necessary because in the unlikely event of the breakage of both the lamp and arc tube, the resultant release of the very small quantity Krypton-85 would quickly dissipate to an air concentration of equal to background levels.

### QUANLITY CONTROL:

1. After manufacture, all quartz arc tubes are tested for electrical function. A quartz arc tube failing this test is considered a possible leaker and discarded. Each tank of the Argon-Krypton-85 mixture received from the supplier comes with certification as to the Krypton-85 concentration. The quantity of Krypton-85 in an arc tube is a function of the volume of the tube and the specific activity of the gas. These parameters are set at the factory and strictly monitored during production. Krypton-85 is the only radioactive gas used at the production facility, eliminating the possible use of any other radioactive material.
2. Each tank of the Argon-Krypton-85 mixture received from the supplier comes with a certification as to the Krypton-85 concentration. During manufacture, the mixture is injected into the arc tubes so a specified pressure. The arc tube production output from each of three ovens is checked for proper pressure on an ongoing basis. The sampling rate is 18 arc tubes per every 5,000 manufactured. A destructive test is performed of each selected arc tube in a sealed chamber and the resultant pressure gradient measured. If the pressure is not within specification, the production run since the last successful QC test of the oven in question is withheld from further production and the necessary adjustments made to the oven, prior to any further production. The machine the manufacture is using for introduce the gas in and seal the tube is called tube exhaust machine.
3. All product containers are labeled with "Contains Kr-85" or "Arc Tube Contains Kr-85". All defective or broken product will be isolated in a dedicated area of the facility and disposed of properly. It would be transfer to any other facility or users. Given the very low activity of Kr-85 stored and being a chemically inert gas, radioactive waste is not expected to be generated at the TOP SHELF facility.

RADIATION LEVEL:



Detail report in attachment 1.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[Redacted]

[Redacted]

[Attachment 2. All types of bulbs' construction drawings. All of the construction drawings are proprietary information]

[Redacted]

[Redacted]

[Redacted]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Attachment 3. Package Design

GC CMH315W 3K  
53\*53\*215MM  
250g灰板纸裱白E瓦 覆亮膜

