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May 10, 2016

Hector Rodriguez-Luccioni, Ph.D.
Materials Safety Licensing Branch
Division of Material Safety, State, Tribal
and Rulemaking Programs
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
11545 Rockville Pike
Rockville, MD 20852
RE: License Amendment Request

RE: Request for License Amendment to add new models
Docket No. 030-38834, Letter Dated April 13, 2016

Dear Dr. Rodriguez-Luccioni,

Enclosed is our reply to your letter dated April 13, 2016.

For your convenience we have listed your questions with our reply.

A. REQUEST FOR ADDITIONAL INFORMATION REGARDING EXEMPT DISTRIBUTION LICENSE AND SEALED SOURCE AND DEVICE REGISTRAITON (SSD) CERTIFICATE

1. In your letter dated February 18, 2016, you stated that the new models, Sentry Chrono and 51-30 Chrono, are constructed of the same materials and the assembly process is the same as that of the Night Ranger T81. Besides the increase in the maximum activity for the new watch models, please describe the differences and similarities among all three models, preferably in a table format.

Enclosed as Attachment A is a table listing the differences in each model.

B. REQUEST FOR ADDITIONAL INFORMATION REGARDING EXEMPT DISTRIBUTION LICENSE

The following information is required by Title 10 of the *Code of Federal Regulations* (10 CFR) 32.22, "Self-Luminous Products containing Tritium, Krypton or Prometrhium-147: Requirements for license to manufacture, process, produce, or initially transfer," and described in the relevant guidance document NUREG-1556 Volume 8 titled, "Program-Specific Guidance about Exempt Distribution Licenses."

1. **In your letter you stated that each of the models (Sentry Chrono and 51-30 Chrono) will contain a nominal activity of 100 mCi of gaseous tritium in the form of sealed**

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Gaseous Tritium Light Sources (GTLS). As required by 10 CFR 32.22(a)(2)(iv), please provide the solubility in water and body fluids of tritium gas.

Once inhaled or ingested tritium gas rapidly oxidizes in the body into tritiated water, which is soluble in water and bodily fluids. It moves relatively quickly through the body and has a short biological half life of 10-12 days.

Tritium in gaseous form has a low radiotoxicity rating. Source: Radiological Health Handbook, 3rd Edition.

2. As required by 10 CFR 32.22(a)(2)(viii), please provide the total quantity of byproduct material expected to be distributed in the product (including all models) annually.

We anticipating distributing about 150 units of each model, for a total of 450 units (42.3Ci H-3).

C. REQUEST FOR ADDITIONAL INFORMATION REGARDING SEALED SOURCE AND DEVICE REGISTRATION CERTIFICATE

1. In your letter you provided drawings for the Sentry Chrono timepiece. The second drawing for the Sentry Chrono timepiece had dimensions that could not be read, specifically the dimension on the side view. Please resubmit a copy of the drawing, with readable dimensions. In addition, please ensure that all of the dimensions in the drawing include units of measure.

See Attachment B for clearer drawings with dimensions labeled in English and Metric units.

Sincerely,

Mike Ring
Radiation Safety Officer

Attachment A Nixon NRC Reply Letter dated 04032016

MODEL NAME	RADIONUCLIDE	ACTIVITY	NUMBER OF GTLS	MB MICROTEC SOURCE MODEL
Night Ranger T81	H-3	82mCi	19	400/1
Sentry Chrono BlackLight	H-3	100mCi	19	400/1
51-30 Chrono BlackLight	H-3	100mCi	25	400/1

Attachment B

Nixon Reply to NRC Letter Dated 04132016

5/10/2016

Sentry Chrono
Tritium T100

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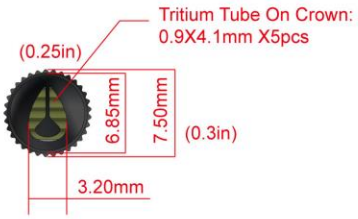
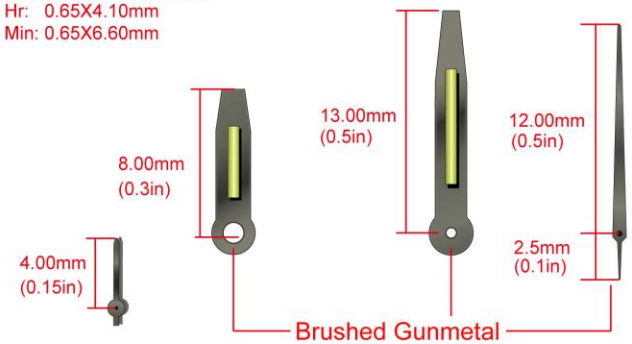
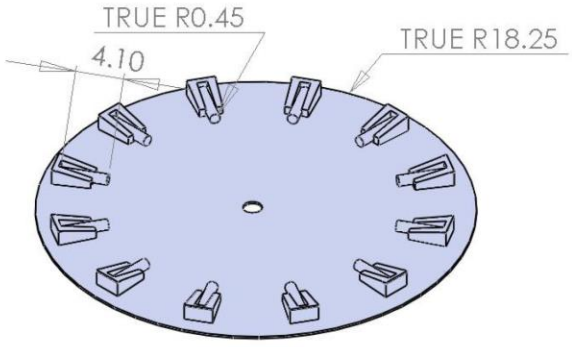
MOVT : Ronda 5050 B

3H : Small Second
6H : 1 / 10 Sec
9H : 30 Min. & 12 Hours





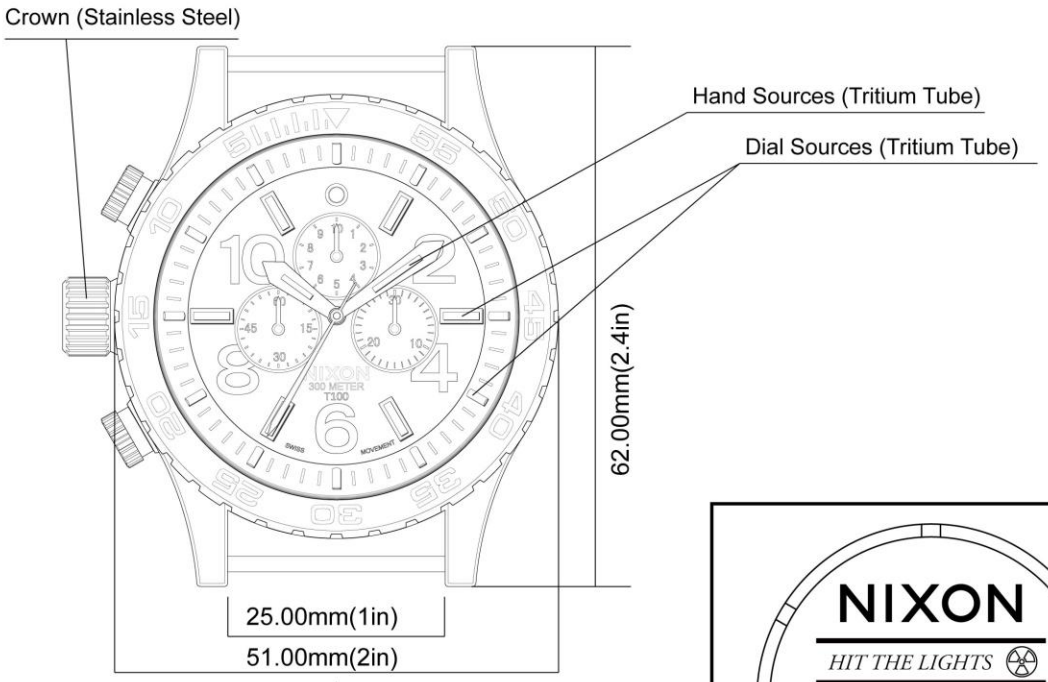


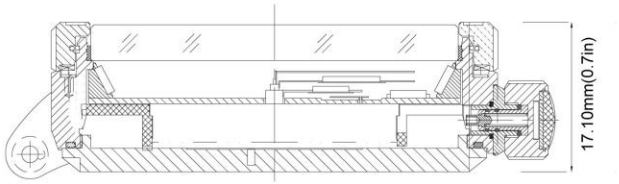
(Canada)

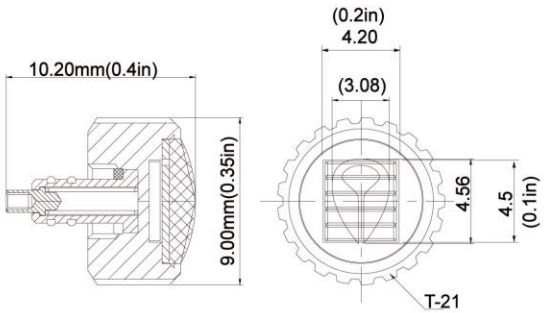
Ref:	Date: 28-01-2016	Drawing NO.:
Prepare By: 歐明杰	REV: 03	MOV'T: 5050 B

The 51-30 Chrono Tritium T100

JOHN KAISER – TIME LIMITED





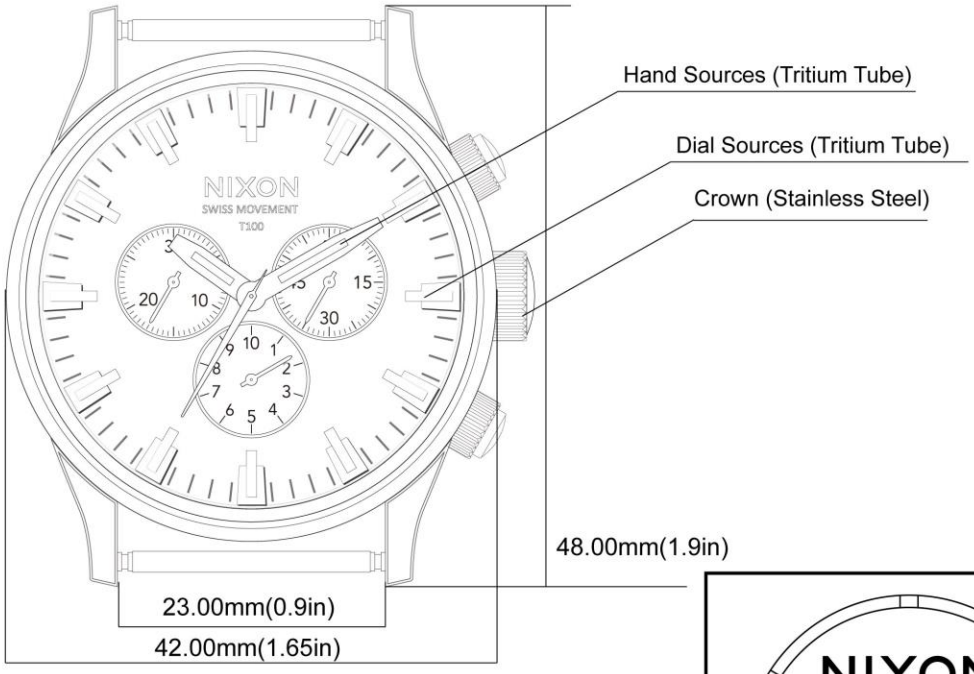


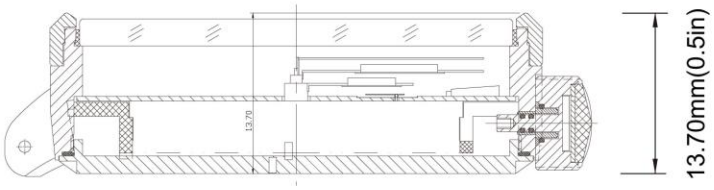
(Canada)

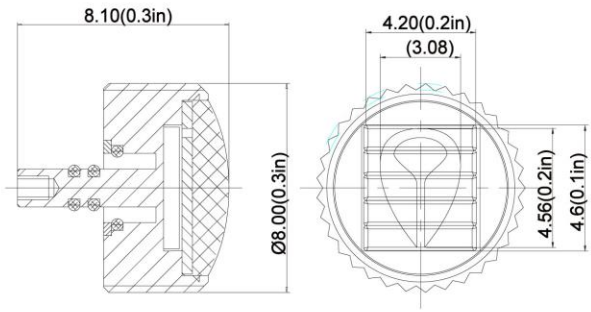
Ref:	Date: 28-01-2016	Drawing NO.:
Prepare By: 歐明杰	REV: 05	MOV'T: Ronda 5050 B

Sentry Chrono
Tritium T100

JOHN KAISER – TIME LIMITED







(Canada)

Ref:	Date: 28-01-2016	Drawing NO.:
Prepare By: 歐明杰	REV: 04	MOV'T: 5050 B

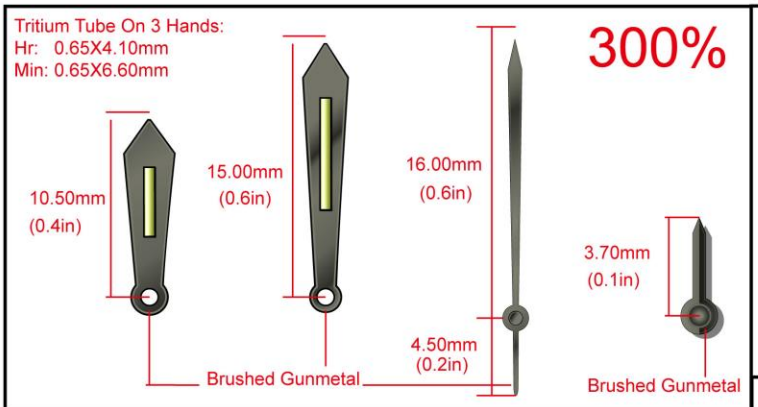
The 51-30 Chrono Tritium T100

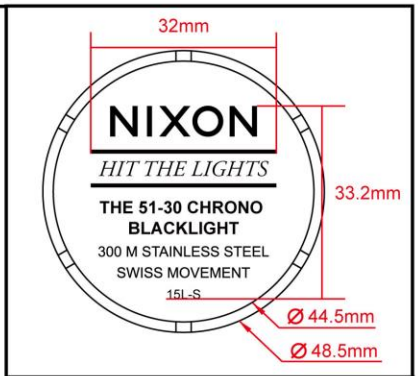
JOHN KAISER – TIME LIMITED

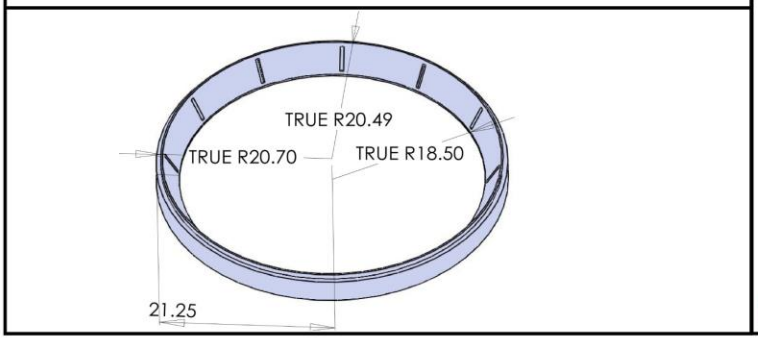
3H : Small Second

6H : 1 / 10 Sec

9H : 30 Min. & 12 Hours







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Prepare By: 歐明杰	REV: 05	MOV'T: Ronda 5050 B