

HAMILTON WATCH CO., INC.

LANCASTER, PENNSYLVANIA 17604 U S A (717)394-7161

October 2, 1985

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Dr. L. F. Friedman
United States Nuclear Regulatory Commission
Region 1
631 Park Avenue
King of Prussia, PA 19406

License No. 37-03572-06
Docket No. 30-12704
Control No. 103666

Dear Dr. L. F. Friedman:

In accordance with your request during our meeting of September 9, 1985, please review the following information.

Item 1 - Phosphor - Tritium Compound

We have contacted Radiation Physics Inc. of College Park, Md. to inform them that the nature of the paint being used on our hands and dials is a phosphor-tritium compound.

Item 2 - Turnaround Time for Tests

Radiation Physics has assured us that all tests (swipes and bioassays) will be returned to Hamilton Watch Company within one week after being analyzed. In the event of a critical requirement, test results will be analyzed and returned within two days.

Item 3 - Bioassays

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In accordance with the NRC's Draft Regulation Guide and Value Impact Statement of June 1983 (titled Application of Bioassay for Tritium), we have established guidelines and action levels for our bioassay program. Based on a seasonal production schedule, routine bioassays (one per operator-seven in total) will be required quarterly during which urinary excretion results are not to exceed levels of 3uCi/L which will be considered as non excessive and within the normal expected rates. If the urinary excretion level of an operator exceeds 5uCi/L but is less than 50uCi/L, a biweekly bioassay for that particular operator will be required until the level decreases to the aforementioned normal rate. In addition, an immediate swipe test will be required for that area in which the operator whose bioassay indicates an excess level. Finally, during production utilizing tritium components, the RSO will personally monitor all operators and operations to evaluate the potential for larger exposure and/or the possible involvement of other employees during the assembly using tritium components.

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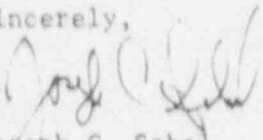
Item 4 - Swipe Tests

In accordance with the NRC's Regulatory Guide 8:21 - Health Physics Survey for Byproduct Material at NRC - Licensed Processing and Manufacturing Plants and Part 20 - Standards for Protection Against Radiation, we have established guidelines and action levels for our swipe testing program.

While the inventory of tritium hands and dials in storage or in process in any of the designated areas per our floor plan (previously supplied on September 9, 1985) is greater than or equal to 10 Ci but less than 100 Ci, monthly swipe testing will be required for that particular area. The acceptable limit for surface contamination in any unrestricted area shall not exceed 10^{-5} uCi/cm². The acceptable limit for surface contamination in any restricted area shall not exceed 10^{-3} uCi/cm². We have established action levels for either area by a decreasing factor of -2. In the event that an action level is reached in any area, production in that area will temporarily cease. The contaminated area will then be thoroughly cleansed with a non alkalide detergent/water solution and swipe tested until the aforementioned acceptable decontamination level has been regained whereupon production shall be permitted to resume. Prior to disposal, a sample of the scrub solution will be forwarded to Radiation Physics for analysis and recommendation as to the required parts of water for dilution and safe disposal into the public sewer system.

Thank you for your recent assistance and if I can provide any additional information, please do not hesitate to contact me.

Sincerely,


Joseph C. Sabol
Safety Officer

JCS:efh

cc: T. F. Deitzler
D. M. Fenwick
P. D. Karpouzis
NIC File