



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

January 23, 2006

Docket No. 03029462  
Control No. 137893

License No. 45-23645-01

Chief of Naval Operations  
Environmental Readiness Division (N45)  
ATTN: CAPT Lino Fragoso, Ph.D.  
Executive Secretary, Navy Radiation Safety Committee  
Radiological Controls and Health Branch  
2000 Navy Pentagon (NC1 Suite #2000)  
Washington, DC 20350-2000

SUBJECT: AMENDMENT NOT NEEDED, CONTROL NO. 137893

Dear Captain Fragoso:

Your letter dated October 13, 2005, requests the Navy's Master Materials License (MML) be amended to authorize the use of the rate alarm feature in specific electronic personal dosimeters (EPDs) in lieu of an additional alarm rate-meter.

10 CFR 34.47(a) requires that radiographers wear a direct reading dosimeter, an operating alarm ratemeter, and a personal dosimeter that is processed and evaluated by an accredited National Voluntary Laboratory Accreditation Program (NVLAP) processor. It does not require that the direct reading dosimeter and alarm ratemeter be two separate devices. 10 CFR 34.47(a)(1) allows electronic personal dosimeters to be used in place of ion-chamber pocket dosimeters.

10 CFR 34.47(g) requires that each alarm ratemeter: (1) be checked to ensure that the alarm functions properly (sounds) before use at the start of each shift; (2) be set to give an alarm signal at a preset dose rate of 5 mSv/hr (500 mrem/hr); with an accuracy of plus or minus 20 percent of the true radiation dose rate; (3) require special means to change the preset alarm function; and, (4) be calibrated at periods not to exceed 12 months for correct response to radiation.

During a discussion on January 11, 2006, you explained how the Navy's EPDs meet the requirements described above. The alarming ratemeters currently used by the Navy were manufactured by XETEX (Minirate 317B) and are no longer in production and you plan to replace them with the EPDs. The EPDs currently used by the Navy are the Siemens EPD Mark 2; EPDs purchased by the Navy in the future will operate in an equivalent manner. The EPDs are calibrated annually by a NVLAP approved facility, are "zeroed" at the beginning of the shift when radiography is scheduled and the alarm feature is tested at this time. The EPDs are "zeroed" and the alarm set point is programmed at 500 mrem/hr by password protected software. Radiographers who will use the EPDs are not granted access to this software.

L. Fragoso

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You also explained that before EPDs are used as alarm ratemeters, each permit authorizing radiography will be amended to ensure that the EPDs are appropriately used. Each permittee will be required to implement appropriate procedures and provide training to staff involved in radiographic operations.

Since the Navy's proposed use of EPDs as alarm ratemeters meets the requirements contained in 10 CFR 34.47, an amendment to the MML is not required.

Your cooperation with us is appreciated.

Sincerely,

***Original signed by Judith A. Joustra for***

Orysia Masnyk Bailey  
Health Physicist  
Materials Security and Industrial Branch  
Division of Nuclear Materials Safety

cc:

LCDR Marvin Earles, Recording Secretary, NRSC

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**SISP Review Complete: OMBailey**

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