

DATE: April 19, 2010

TO: All Dental Registered Service Providers

THRU: Roland G. Fletcher, Manager IV, Radiological Health Program (RHP)

FROM: Eva Nair, Chief, Radiation Machines Division (RMD)
Matthew Almes, Section Head, Radiation Machines Divisions (RMD)

SUBJECT: Registered Dental Service Providers Meeting, March 4, 2010

On March 4, 2010 the Maryland Department of the Environment (MDE), Radiological Health Program hosted a meeting of registered dental service providers. The following is a summary of topics discussed during the meeting.

Introduction and Opening Remarks

Roland Fletcher, Radiological Health Program Manager opened the meeting welcoming the guests to the hands on training session on how the RMD conducts dental inspections. RHP encourages the dental service providers to learn and incorporate RMD's inspection process in order to provide their clients with the best possible service and assist them in preparing for RMD's dental inspections.

RTI's Survey Meters

Rob Morrison, a representative of RTI, spoke to the service providers about multi-meters and their basic capabilities. There was discussion about the practice of evaluating generators based on the electronics of the generator and the use of high voltage splitters inside of the high voltage tank and the use of invasive techniques of measuring timers and milli-amperage outputs. The old method of evaluating a generator or an x-ray system was lengthy and invasive, often requiring the owner to lose much time getting results and making a good diagnosis of equipment problems. Often missing from the evaluation was a full system measurement of the actual output to include the tube. The industry sought a way of measuring entire systems including all of its components and systems effecting exposure. This included KVP, Timer, MA, and the tube output. Currently the RMD uses the Piranha meter to perform dental, veterinary, and mammography inspections but the RMD is not endorsing the use of RTI since other options are available. If you need additional information on RTI's meter, contact Rob Morrison at 973-439-0242 extension 602.

Dental Inspection Process

Discussion focused on RMD's dental inspection process and how registered dental service providers can assist their clients in passing dental inspections. The RMD reviewed the dental

forms with the service providers and explained what the most frequently cited violations, and the difference between a significant violation and minor violation.

An in-depth discussion centered on the variety of tests associated with RMD's dental inspection and the relevance of each test. The RMD's inspection process focuses on the following: half-value layer (HVL), beam quality, level of exposure, reproducibility of exposure and time, kilovolt potential (kVp), and timer accuracy. A hands on demonstration was provided explaining how the RMD uses the RTI's Piranha to test radiation machines and the service companies were able to test their equipment to compare their results.

Relevant darkroom testing procedures were discussed and demonstrated. The methods and equipment used during the darkroom inspection were emphasized and necessity of appropriate safe light filters was discussed. If further information is needed on dental inspections, contact Mr. Jerry Adams at 410-537-3193. The dental inspection forms are available on MDE's webpage.

http://www.mde.state.md.us/assets/document/air/Dental_Inspection_Checklist.pdf