



Protecting, Maintaining and Improving  
the Life of All Minnesotans



**MARCH 2009**

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## ***New email address***

Our general email account has changed to [health.xray@state.mn.us](mailto:health.xray@state.mn.us). If you have tried emailing us at our new address and experienced problems, we've corrected the issue and you shouldn't have any problems in the future. Please notify us immediately if you encounter errors, thank you!

## ***Service Providers:***

### ***Updated MDH forms***

It has come to our attention that facilities are receiving outdated forms from their Service Providers. Registration forms have been updated several times within the last couple years, and include a new fee schedule as well. Service Providers, please be sure to download the most recent version of our registration forms on our website at [www.health.state.mn.us/xray](http://www.health.state.mn.us/xray), click on Registration Forms. Thank you!



Chapter 4732 is available at the Minnesota Bookstore for \$13.95 plus shipping and tax .  
Call 651.297.3000 or 1.800.657.3757 or order online at [www.comm.media.state.mn.us/bookstore/bookstore.asp](http://www.comm.media.state.mn.us/bookstore/bookstore.asp)

## ***Accounts Payable departments***

We are still receiving numerous Annual Registration overpayments. Please be sure to alert your Accounts Payable to our new annual schedule for registrations. The total amount due is on the invoice, please pay that amount only if there aren't any changes.

## ***Pan Unit Available***

Dr. Greg Hanson contacted us regarding his newer film, panoramic unit. He has converted to digital and is willing to donate his non-digital unit. If you are interested, please call him at 952.835.0666.

## ***Intraoral Linearity Testing***

Linearity testing may be required to be performed on any dental unit where the mA and kVp can be adjusted independently from each other. Most dental x-ray equipment are not configured to work this way, so this test would not apply in most situations, but many newer pieces do have this capability.

Rule 4732 states that equipment performance tests must be performed over "all clinical ranges" and linearity testing is no different. It defines clinical range as "the range of control console technique settings that a facility would use in its routine x-ray projections." If the techniques a facility uses are established, linearity testing would have to be performed at those mA and kVp settings the facility uses. If they only use one mA station, then linearity testing is not required. If the techniques are not established, as with initial testing, linearity testing should be performed over the range of possible mA and kVp settings. If facilities and vendors have overlooked this requirement during routine testing, the facility will be cited for non-compliance. We will not require vendors to revisit the site to come into compliance unless the unit does not pass linearity testing performed by the state inspector.

To receive bulletins by email, please submit your request to [Kelly.Sabanjo@state.mn.us](mailto:Kelly.Sabanjo@state.mn.us). You can visit our website at [www.health.state.mn.us/xray](http://www.health.state.mn.us/xray), click on Publications, to see our past Bulletins.



## Lead Apron Testing

Many questions have come up regarding lead integrity testing (done at intervals not to exceed 24 months). Facilities need to determine what criteria will be used to reject aprons. MDH does not specify a criteria, as it depends on how often the apron is used, under what conditions and the location of holes/tears. An article that may help facilities decide on rejection criteria is from *Health Physics, volume 95, No. 2, August, 2008 "Inspection of Lead Aprons: A Practical Rejection Model"*, W. Stam and M. Pillay. The authors suggest using: 1.7 cm tear over the gonads, 1.8 cm tear over the thyroid and 5.4 cm tear (s) whole body. These values are for a single apron of .5 mm lead/equivalent. These are suggested guidelines put forth by the authors. MDH makes no recommendations regarding their usage. The guidelines are a resource for facilities in determining their criteria.

## Transdermal Drug Patches with Metallic Backings

Although the X-ray Unit does not regulate MRI, MDH feels it is important that this information get the widest possible circulation:

FDA notified healthcare professionals and patients that certain transdermal patches (medicated patches applied to the skin), containing aluminum or other metals in the backing of the patches, can overheat during an MRI scan and cause skin burns in the immediate area of the patch. FDA is in the process of reviewing the labeling and composition of all medicated patches to ensure that those made with materials containing metal provide a warning about the risk of burns to patients who wear the patches during an MRI scan. Until this review is complete, FDA recommends that healthcare professionals referring patients to have an MRI scan identify those patients who are wearing a patch before the patients have the MRI scan. The healthcare professional should advise these patients about the procedures for removing and disposing of the patch before the MRI scan, and replacing the patch after the MRI scan. MRI facilities should follow published safe practice recommendations concerning patients who are wearing patches. The full FDA Public Health Advisory is available at the following link:

<http://www.fda.gov/medwatch/safety/2009/safety09.htm#Transdermal>

## Inspector's Corner



### Dental X-ray Film Storage and Handling

What is the best way to store unexposed x-ray film? Unexposed film is sensitive to light, heat, humidity and radiation. It is also sensitive to gases and vapors, such as solvents and cleaning solutions.

As a general rule, film should be stored in a cool, dark environment. Temperatures should be below 68 degrees (refrigeration is ok), with a relative humidity between 40- 60%. Higher temperatures/humidity can result in a loss of contrast due to increased film fog. Static artifacts can also result in a low humidity environment. Film should never be stored by steam pipes or heat sources. **Intraoral:** If it is kept in its box, it can be stored in a bottom drawer or shelf, assuming the general rules stated earlier are met. **Pan film:** Is additionally sensitive to handling issues, such as hand lotions and pressure artifacts (fingernails.) It should not be stored lying down since this could cause a pressure artifact. If you have any questions, please contact the X-ray Unit.

### Digital Motion X-ray

Digital Motion X-ray units are appearing in Minnesota, used primarily by Chiropractors in video fluoroscopy of the spine. These units are sold out of Florida and are marketed as "low dose units." Contrary to this marketing claim, these units are not considered low dose.

The dosage is determined by the length of time that the unit is in operation (typically 90 seconds-2 minutes.) The company's website cites an article that compared its unit's dosage to that of CT. CT and fluoroscopy have higher radiation outputs than standard x-ray. These units are legal in Minnesota, but anyone purchasing a unit should be aware of fluoroscopy regulations (4732.0825) and should not tell their patients that the exam is low dose.



Happy first day of  
*Spring*