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NOTICE OF EXEMPTION

Certain High-frequency Portable or Mobile X-ray Machines

The Department of Licensing and Regulatory Affairs hereby authorizes an exemption from the 100 milliamperere (mA) requirement, R 325.5325(16) of the *Ionizing Radiation Rules* of the Michigan Administrative Code, to high-frequency mobile x-ray machines used on infants in neonatal intensive care units. An exemption was previously granted in October 1995 to portable or mobile x-ray machines used for general purpose radiography in nursing homes and in home health care that met specific conditions.

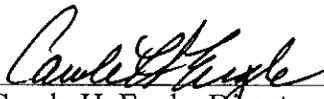
As background information, R 325.5325(16) prohibits machines whose average electrical current is less than 100 mA from being used for general radiography. Lower-output single-phase x-ray machines, used at the time the rule was promulgated (December 1975), required the higher current in order to shorten exposure times and minimize patient motion during chest radiography, particularly heart induced motion. The Department has concluded that the design and operating characteristics of certain high-frequency equipment allow for higher outputs at a lower current. This technology was not available in conventional portable or mobile x-ray equipment at the time R 325.5325(16) was promulgated.

In order to ensure exempted mobile machines are capable of sufficiently high outputs to limit patient motion, the Department requires that the following conditions be met:

- The radiation output shall be at least 75 milliroentgens (mR) per second at 80 kilovolts-peak (kVp) and 40 inches from the tube target.
- The maximum current-time product capacity shall be at least 50 milliamperere-seconds (mAs) at 80 kVp.

The scope of this exemption from R 325.5325(16) is limited to general radiography performed on patients in nursing homes, receiving home health care, or infants in neonatal intensive care units.

The Department concludes that the use of these high-frequency portable or mobile x-ray machines in the exempted situations will not result in undue hazard to public health and safety. This exemption is authorized under R 325.5031 and is effective immediately.

 7-30-13
Carole H. Engle, Director
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