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ROBERT A. WELKE, DIRECTOR

October 23, 1996

United States Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

Regional Administrator, Region III  
801 Warrenville Road  
Lisle, Illinois 60532-4351

Dear Gentlemen:

Subject: Reply to a Notice of Violation

Pursuant to the provisions of 10 CFR 2.201, the Michigan Department of Transportation (MDOT) is hereby submitting a written statement and explanation to the United States Nuclear Regulatory Commission (NRC) regarding the violations noted as a result of the inspection of MDOT conducted on September 16, 1996.

Violation number one

Condition 13 (A) of License No. 21-03039-01 requires, in part, that sealed sources containing byproduct material be tested for leakage at intervals not to exceed six months.

*Reason for the violation* - MDOT has not been strictly adhering to this requirement. MDOT determined that adhering to a strict logistical scheduling system for conducting wipe tests would be burdensome, laborious, and would not significantly contribute to the integrity of the MDOT nuclear gauge program. It was also determined that complying with the spirit of the six month period requirement should reasonably satisfy the intent of this requirement. Since our original license with the NRC began, MDOT has religiously conducted wipe tests twice every year, close to a six month time interval.

*Corrective steps that have been taken and the results achieved* - A schedule has been developed to ensure that the wipe test will be conducted and reported at intervals not to exceed six months.

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*Corrective steps that will be taken to avoid further violations* - Wipe tests will be meticulously scheduled so that all wipe tests are conducted and reported at intervals not to exceed six months.

*Date when full compliance will be achieved* - MDOT is now operating under the new scheduling procedures to fully comply with the requirement.

Violation number two

Condition 21 of license No. 21-03039-01 requires that licensed material be possessed and used in accordance with statements, representations and procedures contained in an application dated May 26, 1994, and a letter dated November 9, 1994. Item 2 of the referenced letter dated November 9, 1994 requires that surveys be conducted where and when maintenance or repair of gauges is performed.

*Reason for the violation* - This operation was deemed unnecessary and impractical because, reportedly, the radioactive levels detected in MDOT's nuclear gauge repair area were always insignificant whenever they were monitored.

*Corrective steps that have been taken and the results achieved* - The following directive has been posted in large text on a bulletin board auspiciously located in the nuclear gauge repair area for all to see.

"A radiological survey must be conducted of the nuclear gauge repair area within eight hours from the time any source rod is removed from any gauge."

Robert D. Beckon  
Radiological Safety Officer  
October 1, 1996

This directive has been presented to both of the individuals that use the area exclusively. Both individuals understand the directive and are committed to participating in this activity. A log to record each monitoring effort has been created and is maintained in the nuclear gauge repair area.

*Corrective steps that will be taken to avoid further violations* - The log will be annually monitored by the Radiological Safety Officer.

*Date when full compliance will be achieved* - MDOT is now operating under the new monitoring procedure with the intent to fully comply with the requirement.

Violation number three

10 CFR 71.5(a) requires that a licensee who transports licensed material outside the confines of its plant or other place of use, or who delivers licensed material to a carrier for transport, comply with the applicable requirements of the regulations appropriate to the mode of transport of the Department of Transportation (DOT) in 49 CFR Parts 170 through 189.

49 CFR 177.817(e) requires, in part, that the driver of a motor vehicle containing hazardous material ensure that the shipping paper is readily available to, and recognizable by, authorities in the event of accident or inspection. Specifically,

- (i) when the driver is at the vehicle's controls, the shipping paper shall be:
  - (A) within his immediate reach while he is restrained by the lap belt; and
  - (B) either readily visible to a person entering the driver's compartment or in a holder which is mounted to the inside of the door on the driver's side of the vehicle;
- (ii) when the driver is not at the vehicle's controls, the shipping paper shall be:
  - (A) in a holder which is mounted to the side of the door on the driver's side of the vehicle; or
  - (B) on the driver's seat in the vehicle.

Pursuant to 49 CFR 172.101, radioactive material is classified as a hazardous material.

*Reason for the violation* - Driver chose to transport the shipping papers by locating them behind the seat of the vehicle.

*Corrective steps that have been taken and the results achieved* - A decision has been made to encase the shipping papers in plastic and attached the papers to the wooden carrier boxes MDOT uses for transporting the nuclear gauges.

*Corrective steps that will be taken to avoid further violations* - All wood boxes will be modified this winter so, when the gauges are distributed in the spring of 1997, MDOT will be in full compliance with this requirement.

*Date when full compliance will be achieved* - April 1, 1997.

In addition to the three official violations mentioned above, the NRC discovered an incident involving the inadvertent bumping of a gauge by a vehicle. MDOT understands that this is an area of concern of the NRC regarding MDOT's surveillance and control of licensed material not in

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storage. It is important to mention that although this incident did not result in exposure to, or release of radioactive material, the NRC feels that it is imperative that MDOT ensure constant control of material authorized by our license. It is our understanding that as well as responding to the official NRC violations, the NRC requests that MDOT describe what actions MDOT plans to take to prevent this particular type of incident in the future.

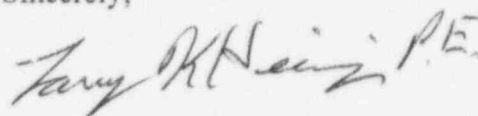
*Reason for the incident* - The temporary employee did, in fact, bump the gauge with a vehicle. Since the employee is no longer employed by MDOT, the reason why this incident occurred cannot be fully determined. MDOT's best speculation is that the employee temporarily lost her "train of thought".

*Corrective steps that have been taken and the results achieved* - MDOT's Radiological Safety Officer personally interviewed the first permanent-full time-nuclear gauge safety trained-employee to arrive at the site after the incident. It was emphasized during the interview and understood by both individuals the importance of constant surveillance of nuclear gauges.

*Corrective steps that will be taken to avoid another incident* - All the unique facts regarding this specific incident will be part of every safety and density training class conducted by MDOT for the next five years. The MDOT staff will be instructed that the NRC considers this incident a major concern regarding the MDOT license to conduct activities using nuclear gauges. It will be repetitively emphasized that all gauges will be under constant surveillance.

*Date when full compliance will be achieved* - MDOT is now operating under this new procedure with the intent to fully comply with the requirement to report any incidents involving MDOT's nuclear gauges, regardless of the apparent significance of the incident.

Sincerely,

A handwritten signature in dark ink, appearing to read "Larry K. Heinig, P.E.", with a stylized flourish at the end.

Larry K. Heinig, P.E.  
Engineer of Materials Testing