

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS
WASHINGTON, D.C. 20555

August 24, 1992

NRC INFORMATION NOTICE 92-62: EMERGENCY RESPONSE INFORMATION REQUIREMENTS
FOR RADIOACTIVE MATERIAL SHIPMENTS

92 SEP 10 A7:58

Addressees

All U.S. Nuclear Regulatory Commission licensees.

Purpose

The U.S. Nuclear Regulatory Commission (NRC) is issuing this information notice to alert licensees of a recent incident where emergency response information was not provided in a timely manner when the local responders called the licensee, using the emergency response telephone number listed on the shipping paper, during a transportation accident. This notice applies to licensees who prepare and deliver radioactive material packages to carriers, and to private carriers who transport packages.

It is expected that licensees will review this information for applicability to their licensed activities and consider actions, as appropriate, to avoid similar problems when shipping packages containing radioactive materials. However, suggestions contained in this notice do not constitute any new requirements, and no written response is required.

Description of Circumstances

At approximately 3:15 a.m., on December 16, 1991, a truck carrying unirradiated (fresh) nuclear fuel was involved in an accident on U.S. Interstate 91, in Springfield, Massachusetts. The fuel was being shipped by General Electric Company (GE), an NRC licensee, from its fuel fabrication plant in Wilmington, North Carolina, to the Vermont Yankee Nuclear Power Station (VY) in Vernon, Vermont. The fuel shipment consisted of 24 fresh fuel assemblies, packaged two each, in 12 Model RA-2/RA-3 shipping containers.

As a result of the accident, the truck and shipping containers carrying the fresh fuel were engulfed in a fire that lasted for almost 3 hours. Despite the collision and subsequent fire, there were no deaths nor serious injuries. However, the accident did result in substantial property loss, which included the truck, shipping containers, and damaged fuel assemblies.

After the incident, NRC staff reviewed the emergency response measures taken. The results were reported in NUREG-1458 (published June 1992), "Emergency Response to a Highway Accident in Springfield, Massachusetts, on December 16, 1991." In performing this review, NRC learned that the truck driver provided the shipping papers to the local emergency responders upon their arrival.

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Approximately 30 minutes after the accident occurred, the Springfield Fire Department proceeded to call the licensee via the 24-hour emergency response number listed on the shipping papers. The licensee did not provide specific advice for responding to the fire until approximately 1 hour after receiving the call.

NRC has also identified other instances in which calls to licensee emergency response numbers would have been unsuccessful in obtaining timely information. These instances were identified as a result of test calls placed to emergency response numbers at licensed reactor and fuel fabrication facilities, during periods when these facilities were making shipments. The problems identified during the test calls included unmonitored telephone numbers, and failure to establish effective communications with persons knowledgeable of the shipment, its hazards, and appropriate response information. Causes of the identified problems included reduced reliability of cellular phone systems in certain areas, lack of procedures and/or associated training for personnel required to transfer incoming telephone calls regarding hazardous waste shipments after normal working hours, and failure to update the documents with proper numbers after changes to the telephone system. In all cases, the effectiveness of the licensee providing the required emergency response information was compromised.

Discussion

NRC and DOT share primary responsibility for regulating the transportation of radioactive materials within the United States. NRC regulations for the transportation of radioactive materials are codified in 10 CFR Part 71, "Packaging and Transportation of Radioactive Materials." DOT's hazardous materials regulations, which include radioactive material, are codified in 49 CFR Parts 100-199. A provision in the NRC regulations, 10 CFR 71.5, requires that NRC licensees comply with DOT's hazardous material regulations.

Requirements for emergency response information are contained in DOT regulations 49 CFR 172.600 - 172.604. The specific contents of the emergency response information that must be provided are described in 49 CFR 172.602 and include the following:

- (1) Basic description and technical name of the hazardous material
- (2) Immediate hazards to health
- (3) Risks of fire or explosion
- (4) Immediate precautions to be taken in case of an accident or incident
- (5) Immediate methods for handling fires
- (6) Initial methods for handling spills or leaks in the absence of fire
- (7) Preliminary first aid measures.

This information must be legible and available away from the package and must be presented either on a shipping paper or in a separate document that cross-references with the technical name of the material as presented on the shipping paper. If this information is contained in a document separate from the shipping paper, it must be treated in the same manner as a shipping paper, that is, it must be kept within reach of the driver.

Requirements for the 24-hour emergency response telephone number are described in 49 CFR 172.604 and include the following:

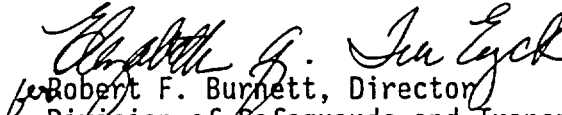
- (1) The telephone number must be monitored at all times while the hazardous material is in transit.
- (2) The telephone number must be the number of a person who is either knowledgeable of the hazardous material being shipped, and has comprehensive emergency response and incident mitigation information, or who has immediate access to such a person.
- (3) The number must be entered on the shipping paper.

Emergency response information is often critical to emergency responders when making initial decisions on how to handle an incident. Incident conditions may deteriorate during the time required by emergency responders to place calls requesting information, making prompt licensee input essential for effective emergency response.

All emergency response information required by DOT regulations must be accurately provided on shipping papers or other documents, and the licensee must be prepared to respond promptly with the information needed, when called. Emergency responders will expect the licensee to remain on the line until the information needed has been provided. Emergency responders will also expect this information to be provided within 15 minutes.

Licensees may also wish to note that the Chemical Transportation Emergency Center (CHEMTREC) will provide and monitor the 24-hour emergency response telephone number required by DOT regulations, for a fee. With this option, licensees can provide CHEMTREC with the necessary emergency response information and then list CHEMTREC's telephone number on the shipping papers as the emergency response telephone number.

This information notice requires no specific action or written response. If you have any questions about the information in this notice, please contact one of the technical contacts listed below or the appropriate regional office. Questions about DOT requirements should be directed to DOT.


for Robert F. Burnett, Director
Division of Safeguards and Transportation
Office of Nuclear Material Safety
and Safeguards

Technical contacts: John R. Cook, NMSS
(301) 504-2458

George B. Kuzo, RII
(404) 331-2560

George Brown, DOT
(202) 366-4545

Attachments:

1. List of Recently Issued NMSS Information Notices
2. List of Recently Issued NRC Information Notices

LIST OF RECENTLY ISSUED
NMSS INFORMATION NOTICES

Information Notice No.	Subject	Date of Issuance	Issued to
92-58	Uranium Hexafluoride Cylinders - Deviations in Coupling Welds	08/12/92	All Fuel Cycle Licensees.
92-38	Implementation Date for the Revision to the EPA Manual of Protective Action Guides and Protective Actions for Nuclear Incidents	05/12/92	All holders of OLs or CPs for nuclear power reactors, non-power reactors and materials licensees authorized to possess large quantities of radioactive material.
92-37	Implementation of the Deliberate Misconduct Rule	05/08/92	All Nuclear Regulatory Commission Licensees.
92-34	New Exposure Limits for Airborne Uranium and Thorium	05/06/92	All licensees whose operations can cause airborne concentrations of uranium and thorium.
92-14	Uranium Oxide Fires at Fuel Cycle Facilities	02/21/92	All fuel cycle and uranium fuel research and development licensees.
92-11	Soil and Water Contamination at Fuel Cycle Facilities	02/05/92	All uranium fuel fabrication and conversion facilities.
92-10	Brachytherapy Incidents Involving Iridium-192 Wire Used in Endobronchial Treatments	01/31/92	All Nuclear Regulatory Commission (NRC) licensees authorized to use iridium-192 for brachytherapy; manufacturers and distributors of iridium-192 wire for use in brachytherapy.

LIST OF RECENTLY ISSUED
NRC INFORMATION NOTICES

Information Notice No.	Subject	Date of Issuance	Issued to
92-61	Loss of High Head Safety Injection	08/20/92	All holders of OLs or CPs for nuclear power reactors.
92-60	Valve Stem Failure Caused by Embrittlement	08/20/92	All holders of OLs or CPs for pressurized water reactors (PWRs).
92-59	Horizontally-Installed Motor-Operated Gate Valves	08/18/92	All holders of OLs or CPs for nuclear power reactors.
92-58	Uranium Hexafluoride Cylinders - Deviations in Coupling Welds	08/12/92	All Fuel Cycle Licensees.
92-57	Radial Cracking of Shroud Support Access Hole Cover Welds	08/11/92	All holders of OLs or CPs for boiling water reactors (BWRs).
92-56	Counterfeit Valves in the Commercial Grade Supply System	08/06/92	All holders of OLs or CPs for nuclear power reactors.
92-55	Current Fire Endurance Test Results for Thermo-Lag Fire Barrier Material	07/27/92	All holders of OLs or CPs for nuclear power reactors.
92-54	Level Instrumentation Inaccuracies Caused by Rapid Depressurization	07/24/92	All holders of OLs or CPs for nuclear power reactors.
92-53	Potential Failure of Emergency Diesel Generators due to Excessive Rate of Loading	07/29/92	All holders of OLs or CPs for nuclear power reactors.
91-52, Supp. 1	Nonconservative Errors in Overtemperature Delta-Temperature (OTΔT) Set-point Caused by Improper Gain Settings	07/16/92	All holders of OLs or CPs for Westinghouse (W)-designed nuclear power reactors.