

Date: Thu, 26 Mar 1998 09:01:11 -0500
From: eub@ornl.gov (Cynthia M. Eubanks)
Subject: LMES Yellow Alert: Non-Compliance With DOT Regulations When Shipping
Cylinders

The following Lockheed Martin Energy Systems, East Tennessee Technology Park Yellow Alert is issued to increase awareness of transportation requirements. Any organization involved in the handling and movement of cylinders should review this Alert for potential applications to their own organizations. If you have any questions, please contact Joanne Schutt (s6u@ornl.gov) at (423)574-1248.

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TITLE: Non-Compliance With DOT Regulations When Shipping Cylinders

IDENTIFIER: Y-1998-OR-LMESETTP-0201

DATE: February 12, 1998

LESSONS LEARNED STATEMENT: Awareness of packaging and transportation requirements described in company procedures could have prevented noncompliance with DOT requirements for packaging and transportation of compressed gas cylinders.

DISCUSSION: Recently, East Tennessee Technology Park (ETTP) personnel packaged and loaded onto a truck more than 70 compressed gas cylinders/lab standards from the north side of K-33 Building, where they were stored. Once loaded, they were moved from K-33 Building to the Transportable Compressed Gas Cylinder Recontainerization Skid (TCGRS) facility via a route outside the ETTP main security fence and accessible by the public. Shipments along this route are subject to DOT requirements. The workers moving the cylinders did not recognize that DOT requirements for off-site shipping applied. Upon arrival at the TCGRS, the cylinders/lab standards were unloaded. The ETTP DOE Facility Representative for Waste Management Operations requested the Plant Shift Superintendent (PSS) investigate the transfer of these cylinders. Transportation, handling, and processing of compressed gas cylinders/lab standards were stopped by the PSS until a critique could be performed to determine actions required to resume operation in compliance with DOT requirements.

It was determined that DOT requirements (49 CFR) for shipping papers, marking of packages, packaging of hazardous materials, and driver training requirements were not met for this shipment of compressed gas cylinders/lab standards.

ANALYSIS: The Direct Cause was personnel tasked with packaging and transporting compressed gas cylinders to TCGRS did not follow ETTP and Lockheed Martin Energy Systems (Energy Systems) hazardous materials transportation and packaging safety policies and procedures designed to ensure off-site and on-site packaging and transportation are met.

The Root Cause was personnel tasked with packaging and transporting compressed gas cylinders to TCGRS were not aware of existing ETTP and Energy Systems hazardous materials transportation and packaging safety policies and procedures. According to these procedures, the Energy Systems Transportation and Packaging Manager (TPM) coordinates the planning of hazardous materials transportation and packaging activities by Energy Systems organizations; ensures that all off-site transportation and packaging operations are performed in compliance with applicable DOT regulations Energy Systems procedures; verifies compliance with applicable training requirements; and acts as the final approval authority for off-site shipments of hazardous materials. The TPM was not aware of this shipment prior to or during the transport of the compressed gas cylinders/lab standards.

Contributing Causes were: Personnel given responsibility for packaging and transporting the compressed gas cylinders were not trained to applicable procedure requirements for packaging and transporting compressed gas cylinders. Planning for the packaging and transportation of the compressed gas cylinders was inadequate. Transportation issues were never addressed during the planning phase. Instructions for workers to use when identifying cylinders, packaging them, and transporting them did not reflect requirements described in packaging and transportation procedures and acceptance criteria for compressed gas cylinders at TCGRS. The potential for over-pressurization of drums containing compressed gas cylinders was not considered during the planning phase of this job. Transportation specialists and compressed gas cylinder/drum handling specialists were not involved in planning for this job.

RESOLUTION/RECOMMENDED ACTIONS:

* Ensure a work plan is developed for packaging and transporting of compressed gas cylinders from TCGRS Facility to K-33 Building. This plan shall include handling, packaging, labeling, and transportation requirements. The plan will be approved by personnel representing Transportation Safety Compliance, Surveillance and Maintenance, Environmental, Safety and Health, and ETTP Shift Superintendent.

* Ensure work plan is reviewed by all personnel performing the work and all questions or concerns are answered prior to performing the work.

* Ensure personnel who perform packaging and transporting of compressed gas cylinders are trained per applicable requirements.

* Ensure ETTP management issues a bulletin/directive as Required Reading to all managers and supervisors at ETTP identifying those documents describing requirements for packaging and transporting hazardous material; emphasizing the need to understand and comply with requirements in these documents; requiring appropriate personnel to be trained per these requirements; and requiring the inclusion of Transportation personnel during planning activities for the packaging and transportation of hazardous materials at ETTP.

ORIGINATOR: Lockheed Martin Energy Systems; Joanne E. Schutt Quality Services Organization

VALIDATOR: Mae M Jacks, 423/241-2893 Project Execution

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NAME OF AUTHORIZED DERIVATIVE CLASSIFIER: C. J. Schermerhorn

NAME OF REVIEWING OFFICIAL: A. S. Quist

PRIORITY DESCRIPTOR: Yellow/Caution

DOE FUNCTIONAL CATEGORY: Packaging and Transportation, Conduct of Operations, Training and Qualification

LMES FUNCTIONAL CATEGORY: TR - Transportation Safety, OP - Conduct of Operations, TQ - Training and Qualification

KEYWORDS: DOT, Non-Compliance, shipping, transportation, packaging, lab standard

REFERENCES: Occurrence Report: ORO--LMES-K25ENVRES-1997-0007, Critique CR-97-018 "Shipment of Compressed Gas Cylinders from K-33 to the TCGRS Project"

FOLLOW-UP ACTION: Information in this report is accurate to the best of our knowledge. As means of measuring the effectiveness of this report please notify Joanne E. Schutt at 423/574-1248, e-mail at s6u@ornl.gov of any action taken as a result of this report or of any technical inaccuracies you find. Your feedback is important and appreciated.

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