

Date: Mon, 05 Apr 1999 11:39:58 -0600
From: Meredith Brown <racer@lanl.gov>
Subject: Blue Alert: Incorrect Fuel Added to Heater

Title: Inattention to Detail When Filling an Oil-fired Heater Could Cause a Fire or Explosion

Identifier: B-1999-OR-LMERX10-0401 Date: 04-05-1999

Lesson Learned Statement: Employees must give attention to detail when using flammable/combustible liquids.

Discussion: A kerosene heater was operating at a work site. An employee mistakenly retrieved gasoline from the flammable liquid storage cabinet to refuel the heater. The nine-gallon tank kerosene heater was topped off with approximately two gallons of gasoline. The heater was operated most of the day without incident using all but one-half inch of fuel. The following day another employee realized that gasoline had been added. Use of the heater was immediately discontinued and no more fuel was added. There was no injury to personnel.

Analysis: The gasoline and kerosene were stored in the same cabinet in accordance with ORNL procedure ESS-FP-102, "Handling small quantities of flammable/combustible liquids at ORNL." The fuel was stored in red, Class II, 5-gallon safety cans that were appropriately labeled. The employee had not performed the refueling operation previously and no specific training was required for the task. Although the fuel cans were labeled, the employee mistakenly selected the wrong fuel can. The manufacturer of the portable oil-fired heater warns: "Use only kerosene or No. 1 fuel oil to avoid risk of fire or explosion. Never use gasoline, naphtha, paint thinners, alcohol, or highly flammable fuels." According to the manufacturer the use of gasoline could melt the cone causing fire or explosion.

Resolution/Recommended Actions:

1. One employee at the construction site will be made responsible for controlling and issuing flammable/combustible liquids.
2. The containers were re-identified with additional color-coded labels.
3. There was no damage to the heater; however, it was taken out of operation and tagged for cleaning per the manufacturer's recommendation.

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PRIORITY DESCRIPTOR: Blue / Fact or discovery of benefit to others

DOE Functional Category: Fire Protection

LMER Functional Category: Fire Protection

KEYWORDS: gasoline, kerosene, oil-fueled heater, kerosene heater, flammable, combustible, liquids

REFERENCES: n/a

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 Connie Arnwine at 423-241-3134 or e-mail a93@ornl.gov of any action taken is a result of this report.