COMBUSTION ENGINEERING

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PRIORITY ROUTING

First	Second
RA	RC
DRA	RCI
DRP	SSA
DPS	RL
DRSS	OL
DRSA	OI
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ORC+I

FILE hqr

February 13, 1990

A. Bert Davis
Regional Administrator, Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Dear Mr. Davis:

As specified in 10 CFR 20.205(a)(l)(iv), enclosed is a report of the incinerator scrubber overheating event which occurred January 13, 1990. The scrubber overheated and its rubber lining was destroyed when the proper liquid level was not maintained.

This event was reported within 24 hours by telephone, as the cost of repair to the scrubber was expected to exceed $2000.00. The depreciated value of the damaged scrubber vessel was less than this amount.

Please advise if further information is required.

Cordially yours,

James A. Rode
Plant Manager

JAA/sld/8012

Enclosure

2-47

Power Systems
Combustion Engineering, Inc.

Post Office Box 107
Highway P
Hematite, Missouri 63047

(314) 937-4691
(314) 296-5640

EVENT REPORT: **OVERHEATING OF LOW LEVEL WASTE INCINERATOR SCRUBBER**

LICENSEE: **ABB-COMBUSTION ENGINEERING, INC.**
HEMATITE, MISSOURI
LICENSE NO. SNM-33

DATE: FEBRUARY 13, 1990

Incinerator Facility

Incineration is used to reduce the volume of low level contaminated waste. The incineration equipment consists of two gas fired incinerators, two scrubber systems and an air-cooled heat exchanger. Only one incinerator may be operated at a time. Individual charges of combustible waste are introduced into the operating incinerator on approximately 15 minute intervals by an MCO Operator. The operator monitors and maintains the proper liquid level in the scrubbers.

Event Description

At about 12:10 a.m. on January 13, 1990, a leak developed in the scrubber recirculation line of the #2 incinerator. A few minutes later, another leak developed at the flange above the ejector/Venturi pump. Due to the extent of the leaks, both pumps were stopped and the incinerator burners were turned off. The operator then turned off the scrubber blower and left the area to find Maintenance personnel.

When the operator returned to the incinerator area with the Maintenance man, the scrubber vessel was glowing red. Flames were coming out a welded seam which had split on the sidewall of the vessel, indicating that the rubber lining was on fire. Water was introduced into the scrubber through the top spray nozzle and through the split in the sidewall. The fire was extinguished and cooling was completed in approximately two hours.

Subsequent inspection showed that most of the rubber lining of the scrubber vessel was destroyed. However, the ceramic packing was reusable, the demister

was intact, and the scrubber blower and exhaust stack were undamaged. The #1 incinerator/scrubber system was unaffected. The rubber lined scrubber vessel was replaced at a cost of about $5000.00.

Radiological Monitoring

No radiation exposure nor releases above normal operating levels resulted from this event. Combustible waste contaminated with depleted uranium was being incinerated immediately prior to the event. The fixed air sample collected near the incinerator showed a concentration of 0.09×10^{-10} microcuries/ml (9% MPC). The exhaust stack sample was 0.59×10^{-12} microcuries/ml (15% MPC).

Corrective Action

A similar event occurred in October, 1986, when an incoming MCO Operator was not aware that the incinerator was operating and the scrubber overheated. After that event, use of a log book containing instructions and the operational status of equipment was initiated.

In the recent event, however, the operator was not aware of the necessity of maintaining proper liquid level in the scrubber while there was significant residual heat in the system. He left the area to obtain maintenance assistance, assuming that the incinerator had been safely shut down.

To prevent recurrence of a scrubber overheating event the following corrective actions are being taken:

1. An emergency cooling water spray at the scrubber inlet has been installed.
2. An emergency shutdown procedure has been added to the incinerator/scrubber operating sheets (O.S. 801.12).
3. Operators are being trained in the emergency shutdown procedure.