DCD

IE07

September 20, 1996

EA No. 96-328

Dr. Bruce Kaiser
Vice President, Fuel Operations
ABB Combustion Engineering
3300 State Road P
Hematite, MO 63047

SUBJECT: NRC REGION III AUGMENTED INS ON TEAM REVIEW OF THE AUGUST 22, 1996, CHEMICAL REACTION EVENT (REPORT NO. 070-00036/96003(DNMS))

Dear Dr. Kaiser:

On August 22 through August 28, 1996, an NRC Augmented Inspection Team (AIT) conducted an inspection at your Hematite Fuel Fabrication Facility. The inspection focused on the circumstances surrounding an unanticipated, exothermic chemical reaction which occurred at approximately 7:50 a.m., on August 22, 1996, in the large evaporation tank just outside of Building 240. Specifically, the AIT focused on the chemical and radiological consequences of the event, your response to the event, your root cause investigation and initial corrective actions, and whether or not there were any precursor events.

The AIT was composed of Messrs. G. Shear (Team Leader), J. Jacobson, and J. House, of this office, and W. Troskoski of the Office of Nuclear Materials Safety and Safeguards (NMSS). The enclosed copy of our AIT report identifies areas examined by the team. At the conclusion of the inspection, the AIT discussed its findings with you and others of your staff during a public meeting on August 28, 1996.

The AIT concluded that there were no indications of offsite chemical or radiological consequences as a result of the event. In addition, the team concluded that the response by your management and staff appropriately implemented the guidance provided in your Emergency Plan and associated Implementing Procedures. The AIT did, however, identify weaknesses in the chemical and radiological sampling performed during the event.

The AIT determined that the root causes of the event appeared to be inadequate system design and the lack of management oversight for the evaporation process. The design of the outside hold and evaporation tank system did not meet the industry's standards for isolating acids and bases, and there were inadequate controls over material that was placed in the system. Inadequate operating procedures, out of date Process & Instrument Diagrams, inadequate labeling and component identification, inadequate operator training, and a lack of maintenance were contributing causes. Although many of the issues identified by the AIT were known by your staff, they remained unresolved.

270035

OFFICIAL RECORD COPY

In addition, the AIT concluded that your staff had opportunities to identify the problems with the system design and control. Two precursor events involving unanticipated vigorous reactions in the storage and evaporation tanks were not investigated to develop root causes and appropriate corrective actions.

It is not the responsibility of an AIT to determine compliance with NRC rules and regulations, or to recommend enforcement actions. These aspects will be reviewed during subsequent inspections.

In accordance with 10CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC Public Document Room (PDR).

We will gladly discuss any questions you have concerning this inspection. Your cooperation with us is appreciated.

Sincerely,
Original Signed by W.L. Axelson for

A. Bill Beach
Regional Administrator

Docket No. 70-36
License No. SNM-33

Enclosures: 1. Inspection Report
No. 070-00036/96003(DNMS)
2. AIT Charter
3. Chronology of Events

cc w/encls: R. W. Sharkey, Director of Regulatory Affairs
R. A. Kucera, Missouri Department of Natural Resources

See Attached Distribution:

DOCUMENT NAME: R:\INSPRPTS\FUELFAC\COM96003.DNM

To receive a copy of this document, indicate in the box "C" = Copy without attach/encl "E" = Copy with attach/encl "N" = No copy

OFFICE	DNMS:RIII	C	NMSS	C	DNMS:RIII		ORA:RIII	
NAME	Shear:ib/jk		TenEyck	WAIT for VIB feedback	Pederson		Beach	
DATE	09/19/96		09/19/96		09/19/96		09/ /96	

OFFICIAL RECORD COPY

In addition, the AIT concluded that your staff had at least two opportunities to identify the problems with the system design and control. Two precursor events within the last eight years involving unanticipated vigorous reactions in the storage and evaporation tanks were not investigated to develop root causes and appropriate corrective actions.

It is not the responsibility of an AIT to determine compliance with NRC rules and regulations, or to recommend enforcement actions. These aspects will be reviewed during subsequent inspections.

In accordance with 10CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC Public Document Room (PDR).

We will gladly discuss any questions you have concerning this inspection. Your cooperation with us is appreciated.

Sincerely,

Original Signed by W.L. Axelson for

A. Bill Beach
Regional Administrator

Docket No. 70-36
License No. SNM-33

Enclosures: 1. Inspection Report
No. 070-00036/96003(DNMS)
2. AIT Charter
3. Chronology of Events

cc w/encls: R. W. Sharkey, Director of Regulatory Affairs
R. A. Kucera, Missouri Department of Natural Resources

See Attached Distribution:

DOCUMENT NAME: R:\INSPRPTS\FUELFAC\COM96003.DNM

To receive a copy of this document, indicate in the box "C" = Copy without attach/encl "E" = Copy with attach/encl "N" = No copy

OFFICE	DNMS:RIII		NMSS		DNMS:RIII		ORA:RIII	E
NAME	Shear:ib/jk		TenEyck		Pederson		Beach for	
DATE	09/ /96		09/ /96		09/ /96		09/ /96	

OFFICIAL RECORD COPY

(See previous concurrence page)

Distribution:
Chairman Jackson
Commissioner Rogers
Commissioner Dicus
Commissioner Diaz
Commissioner McGaffigan, Jr.
R. R. Boyle, OCM
J. M. Taylor, EDO
H. L. Thompson, DEDS
V. M. McCree, OEDO
T. S. Kress, ACRS
E. L. Jordan, AEOD
C. E. Rossi, AEOD
J. Lieberman, OE
J. R. Goldberg, OGC
C. J. Paperiello, NMSS
J. T. Greeves, NMSS
E. Q. TenEyck, NMSS
E. W. Brach, NMSS
P. Ting, NMSS
R. C. Pierson, NMSS
W. M. Troskoski, NMSS
A. E. Chaffee, NRR
Regional Administrators
RI, RII and RIV
A. B. Beach, RIII
W. L. Axelson, RIII
J. L. Caldwell, RIII
G. E. Grant, RIII
J. Strasma, RIII
B. L. Burgess, RIII

bcc w/encls: PUBLIC (IE07)

OFFICIAL RECORD COPY