

April 22, 1996

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Brett

Carly P. et al.

Greg S. as

John J. Grogg

JAR

Dr. Bruce Kaiser
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3300 State Road P
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*just reading this, I think
would have voted File in LPR
"SAP 3" on the case. file last*

SUBJECT: NRC LICENSEE PERFORMANCE REVIEW - ABB COMBUSTION ENGINEERING
HEMATITE, MISSOURI

Dear Dr. Kaiser:

*I did not recognize that
Hematite had this number
of problems.*

This letter is to provide you with the results of our Licensee Performance Review (LPR) of the ABB Combustion Engineering (CE) Hematite Facility. On February 22, 1996, managers and staff from Region III and the Office of Nuclear Materials Safety and Safeguards (NMSS) met to conduct an assessment of your safety and safeguards performance. This LPR is part of a pilot program initiated by the NRC to give us a perspective of your performance in order to facilitate planning and allocation of inspection resources. This initial LPR for the Hematite facility included evaluation of inspection results and safety and safeguards performance for the period from January 1994 through December 1995. The results of the review are detailed below, and, as agreed to, will be discussed with you at the Hematite facility on May 2, 1996, at 1:00 p.m.

*Carl P's
idea*

Overall facility operational safety performance was good. Operations were conducted safely with few operator challenges caused by material condition deficiencies. However, the review identified a number of weaknesses associated with plant programs related to chemical safety, criticality safety, and maintenance and surveillance. These weaknesses involved the self-assessment program, the completeness and accuracy of information provided to the NRC, the communications between groups onsite and the corporate office in Windsor, Connecticut, and the use of written procedures.

Within the self-assessment program, audits and quarterly inspections have, in general, not been of sufficient breadth and depth to identify certain problems at the facility. In particular, audits did not identify the failure to implement certain criticality safety requirements after the license was renewed in July 1994. Also, follow-up by responsible management has not always been timely and documentation of corrective actions for findings has been poor. The program appeared to improve during the last three months after continued NRC emphasis, but long-term performance is yet to be demonstrated.

*plants in other Regions
It is not as good as Hematite*

*of doing these integrated
assessments was good idea
Sorry didn't think of it first.
Report also helps me understand
NMSS answer to my question on how
Hematite stacks up against fuel*

L-107

Some information provided to the NRC has not been complete and accurate in all material respects. Due to a lack of thorough review by appropriate personnel, letters provided to the NRC contained information which did not accurately reflect the status of the chemical safety program or the maintenance of criticality controls on the uranium hexafluoride cylinder steam chests. This resulted in the NRC issuing a Notice of Violation and Proposed Imposition of Civil Penalty based on inspection findings identified in June 1995.

Communications between onsite Regulatory Compliance and Operations personnel and between personnel based at Hematite, Missouri, and at the corporate office in Windsor, Connecticut, at times, have not been fully effective. Communication problems appeared, at least in part, to cause the submittal of inaccurate information to the NRC, the contamination control problems, and poor performance during the physical inventory of 1994. A recent relocation of the licensing function from Windsor to Hematite should improve communications between the licensing staff and other plant staff.

we should predict outcome

Procedure use and quality was noted as an area for improvement. The facility previously relied upon skill of the craft for job performance. Historically, written operating sheets or travelers and other plant procedures have not been sufficiently detailed. In addition, plant management did not appear to have established clear expectations on procedure use and adherence, nor evaluated all procedures to ensure that they were appropriate. Recently written or revised procedures have improved and have provided a more sufficient level of guidance and detail.

In addition to the broad issues addressed above, the NRC also assessed your performance in specific functional areas discussed below.

Chemical safety performance requires improvement as indicated by management's failure to fully establish a process safety management (PSM) program and failure to maintain the material condition of the anhydrous ammonia system. Combustible materials were stored around the anhydrous ammonia bulk storage tank; dissimilar materials were used in a section of the ammonia supply line; and, no procedure existed for the startup, operation and shutdown of the system. Corrective actions were developed in response to an NRC Demand for Information and the subsequent predecisional enforcement conference. The adequacy of these corrective actions has yet to be demonstrated.

Performance in the material control and accounting (MC&A) area improved markedly during the assessment period. As a result of the 1994 NRC inventory inspection and a subsequent predecisional enforcement conference, CE initiated a program to improve the inventory process, critical MC&A procedures, and the Fundamental Nuclear Material Control Plan. The program also involved the addition of a new staff position and increased training for personnel involved in the inventory process. Those program improvements resulted in a markedly improved 1995 inventory and improved MC&A performance.

Problems were also identified in the maintenance and surveillance areas. It was noted that an effort to develop a preventive maintenance program was initiated during the evaluation period, but the results are yet to be demonstrated. Observations indicated that facility maintenance workers are skilled and generally performed quality repairs. However, the facility staff primarily relied upon corrective maintenance to fix identified equipment problems when they arose (such as operators identifying inoperable chemical conversion reaction chamber safety valves).

Tracking for some planned maintenance and surveillance activities was not always effective. For example, certain surveillances for cranes, chemical reaction chamber inlet pressure switches, and reactor temperature alarm set points were missed or not conducted within specified timeframes. In addition, in the criticality safety program, the facility staff failed to develop a procedure and failed to functionally test criticality controls associated with the steam chests for vaporizing solid uranium hexafluoride to ensure their continued operability. Also, computer interlocks for safety system actuators were not routinely tested. In general, it was noted that preventive maintenance and surveillances for conversion plant systems, including associated safety systems, are areas in need of improvement.

Performance in the environmental protection, radiological control, and physical security programs was good. Air and liquid effluent concentrations have been near or below 10 percent of the annual average concentrations in 10 CFR Part 20, Appendix B. Personnel exposures at the facility have been well within the limits in 10 CFR Part 20. The NRC noted some problems, however, with the contamination control program and the radioactive waste management program. These included surveys for items leaving the plant, control of access to the contaminated area, control and disposal of wastes (including proper storage of combustibles), and the performance of the modified sewage treatment plant.

Based on the results of the review, the NRC will modify its inspection program over the next year. The areas of chemical safety, criticality safety, and fire protection will be emphasized by increasing the frequency of inspections in these areas. In addition, your progress in self-assessment, maintenance, surveillance, procedural adherence, and the material condition of the conversion plant will be emphasized. Other areas of your program will receive the normal level of inspection effort.

In accordance with Section 2.790 of the NRC's "Rules of Practice," a copy of this letter will be placed in the NRC Public Document Room.

Dr. Bruce Kaiser

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We are looking forward to discussing these findings with you in some detail, and are interested in your assessment of your performance in the areas identified.

Sincerely,
(Original signed by A. Bill Beach for)

Hubert J. Miller
Regional Administrator
Region III

Docket No. 070-00036
License No. SNM-33

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