

70-36



March 28, 1994
ML-94-013

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

Dr. Sean Soong
Licensing Section II, Licensing Branch
Division of Fuel Cycle Safety and Safeguards
Office of Nuclear Materials Safety and Safeguards
U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Subject: **Additional Information for Fire Safety Review (TAC No. L21637)**

Reference: S. Soong (NRC) letter to R. W. Sharkey (CE), dated February 9, 1994, "Fire Safety Review for License Renewal (TAC No. L21637)"

Dear Dr. Soong,

Through the use of a contractor, the NRC recently gathered information about fire protection at our Hematite, Missouri nuclear fuel manufacturing facility. As a result of the visit, the NRC has identified specific areas where additional information is needed to complete the review (Reference). The Enclosure to this letter provides a response to this request.

As the NRC has discussed with the industry's Facility Operations Committee, fire safety is one of the subjects being considered generically by the NRC as part of its current review of 10 CFR Part 70. We understand that the nature and scope of evolving NRC requirements and information needs in this area will be adopted and applied on an industry wide basis and schedule, rather than in renewal actions involving individual fuel cycle licensees. We trust therefore, that this subject matter will not cause any delays in our renewal process by addressing issues for which firm regulatory requirements are not yet established.

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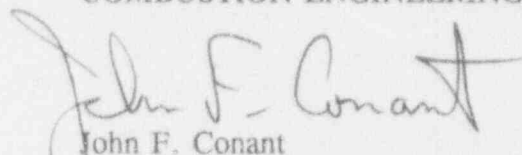
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If you have any questions regarding this matter, please contact me or Mr. Mark A. Michelsen of my staff at (203) 285-5261.

Very truly yours,

COMBUSTION ENGINEERING, INC.


John F. Conant
Manager
Nuclear Materials Licensing

Enclosures: As Stated

cc: G. France (NRC - Region III)

Enclosure I to
ML-94-013

COMBUSTION ENGINEERING, INC.
HEMATITE NUCLEAR FUEL MANUFACTURING FACILITY
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
CONCERNING
FIRE PROTECTION

March 1994

COMBUSTION ENGINEERING, INC.
HEMATITE NUCLEAR FUEL MANUFACTURING FACILITY
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
CONCERNING
FIRE PROTECTION

Responses are provided below to the February 9, 1994, NRC request for additional information concerning C-E Hematite fire protection. The NRC comments reiterated below have been abstracted for brevity; please refer to the February 9, 1994, NRC letter for the complete text of the comments. Each comment is followed by C-E's response.

1. Please provide an approved pre-fire plan which is in accordance with Section III.10 of the NRC guidance.

Response: As observed during the NRC visit, a pre-fire plan for the Hematite facility is currently being developed. The details of the plan are being coordinated with the local fire department and our property insurance company. It is scheduled to be completed in about six months, and will be available for review at our Hematite facility.

2. The pre-fire plan discussed in item 1 should include a clear definition and complete technical justification of where in the facility the use of water should be restricted. For those areas where water is restricted, alternative means of fire suppression should be identified.

Response: The Hematite SNM license application contains a clear definition of where in the facility the use of fire hoses is prohibited; this information is also included in the pre-fire plan. The prohibition is justified in the interest of criticality safety. Alternative means of fire suppression will be addressed as part of the pre-fire plan.

3. Please provide a description of the alarm system operation, including the procedures that describe how, and by whom, all alarm and trouble conditions are addressed. Also, address how alarm and trouble conditions will not be inadvertently silenced at one of the remote locations, potentially leading to an alarm or trouble condition going unnoticed by the appropriate personnel.

Response: The emergency alarm system currently consists of manual pull stations in strategic locations throughout the plant, ceiling mounted smoke detectors, ionization type duct smoke detectors, rate of rise duct thermal detectors, ceiling mounted heat detectors and gas detectors. Activation of these devices will cause an alarm. The system has a main control panel (in Building 253) and four remote indicating panels (in the entrance Guard Station, the emergency control center, the Health Physics offices, and Building 230. At these five panels, there is indication of the alarm location and alarming device, plus trouble indication including fire pump control, flow switches, tamper switches on valves, and closure status for selected doors.

There are five locations where the emergency alarms and trouble indication can be acknowledged. One location is our entrance Guard Station, which is usually manned; it is unlikely that a trouble condition would go unnoticed. It is also unlikely that an alarm condition would go unnoticed since personnel are instructed to notify emergency response personnel, in addition to activating the alarm, in the event of an emergency.

4. Please provide a description of what steps are taken to ensure that adequate compensatory measures are implemented with respect to the fire protection program.

Response: There are several purposes of the emergency alarm system: 1) detection of an abnormal condition (e.g., heat or smoke); 2) notification of emergency response personnel; and 3) notification of plant personnel of an emergency condition. Personnel are instructed to notify emergency response personnel, in addition to activating the alarm, in the event of an emergency. In the event that the emergency alarm is disabled, there exist alternative means to accomplish each of these purposes. An alternative means of detection is via Security personnel, Health Physics personnel, plant workers or other personnel observation. An alternative means of notification of emergency response personnel is via the plant telephone system or the site paging system. Alternative means of notification of plant personnel include the site paging system and/or the separate evacuation alarm.

5. Please provide a drawing which indicates smoke detector location and spacing throughout the facility.

Response: The locations of smoke detectors will be addressed in the pre-fire plan, the status of which was discussed previously. Our property insurance company participated in the establishment of types and locations of smoke detectors.

6. Please provide assurance that combustibles and flammable liquids and gases will be adequately controlled in the future.

Response: Housekeeping in order to control combustibles and flammables is a continuous task. Measures which include the installation of another incinerator to dispose of the waste, have been taken to meet the waste management needs. The facility is routinely inspected (for example, by Health Physics Technicians, as stated in the Renewal application), and increased management attention to housekeeping needs is being given.

7. While a cutting and welding procedure does exist, an unused gas welder was noticed in the conversion area, apparently left after a welding project. Please provide a description of the measures taken to ensure the cutting and welding program is properly implemented and that welding equipment is safely stored upon completion of the work.

Response: The oxide conversion building is a four floor building where an overhead crane is used to move large objects, such as the gas welder, from floor to floor. If the welder is expected to be used in the conversion area in the near future, it is typically not transported back to the maintenance area for long term storage. The welder gas is secured to a cart which is designed so that it provides a stable and safe platform for the apparatus. Under these conditions, we consider that the welder was safely stored and the existing welding and cutting program is adequate.

8. Please provide a fire hazards analysis that meets the guidance in Section III.9 of the NRC Guidance on Fire Protection for Fuel Cycle Facilities.

Response: We have worked with our property insurance company in the recent past in evaluating our Hematite facility and implementing fire protection improvements. The Emergency Plan does contain provisions for response in the event of a fire, and fire safety is an important consideration in CE's Integrated Safety Assessment process. It is intended that the need for a more formalized fire hazards analysis be evaluated as part of Combustion Engineering's license renewal commitment (renewal application Part I Section 1.6(g)) to evaluate the safety program with respect to the "Guidance On Management Controls/Quality Assurance, Requirements for Operation, Chemical Safety, and Fire Protection for Fuel Cycle Facilities".

9. Please provide an explanation of the use of facility-installed fire hoses.

Response: In the event of a fire there is no delay in requesting assistance of the off-site fire department when it is needed. Emergency response personnel are trained to fight fires within their capability and for which they are properly equipped. The NRC recently approved the revised Hematite Emergency Plan and allowed 180 days to revise procedures and provide training, etc., for its implementation. That implementation process is currently underway. The use of facility-installed fire hoses is being reviewed as part of that revised procedure development. If for no other reason, the hoses are available for use by off-site fire response personnel.

10. Please provide a description on the use of large carbon dioxide extinguisher and a detailed description of training provided to those personnel who may use them.

Response: It is policy that CE's emergency responders be trained to use the equipment they would use in an emergency. The training needs with respect to the large carbon dioxide fire extinguishers will be reviewed and the observations of the NRC's fire protection review team will be considered in light of that policy. Training records are available for review at Hematite.

11. Verify whether the ammonia cracker has automatic shutoff valves. Please verify if these valves are tested, and if not, provide a procedure to ensure they are tested in the future.

Response: The ammonia crackers do have automatic shut-off valves which isolate the ammonia supply to the cracker, not the discharge of the cracker. The ammonia crackers were designed in consideration of adequate engineered controls. CE has not yet, however, completed the process safety assessment for this area. This comment is appropriately considered during that safety assessment.