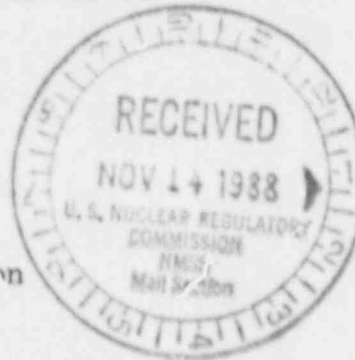


COMBUSTION ENGINEERING



August 2, 1988
LJ-88-070



Docket No. 70-1100
License No. SNM-1967

Mr. William T. Russell
Regional Administrator
Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19046

Subject: Assessment of Windsor Fuel Fabrication Facility Radiation Protection Program

- References:
- (A) Letter, W. T. Russell (NRC) to P. L. McGill (C-E), dated January 25, 1988
 - (B) Letter, J. Lieberman (NRC) to P. L. McGill (C-E), dated April 21, 1988
 - (C) Letter LD-88-041, A. E. Scherer (C-E) to W. T. Russell (NRC), dated June 6, 1988

Dear Mr. Russell:

References (A) and (B) requested that C-E describe our plans for (1) performing an assessment of the Windsor Fuel Fabrication Facility radiation protection program, and (2) instituting appropriate corrective actions to upgrade the program based on the assessment findings. Reference (C) provided an overview of our plans for reassessing the adequacy of the Windsor Fuel Fabrication Facility operations.

This letter provides additional information that supplements the information provided in Reference (C). As requested by References (A) and (B), information regarding staffing, procedures, training, and improvements in supervisory oversight of radiological control activities is provided in the Enclosure to this letter. Additional information about the corrective actions described in Reference (C) is also provided.

For some items discussed in the Enclosure, details are not available because work is still underway. We suggest that it would be mutually advantageous to schedule status briefings at which we could discuss with your staff issues involving License No. SNM-1967. These would also provide an opportunity for us to update your staff on our progress on the activities discussed in the Enclosure.

DFOB, Original To Region I

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Mr. William T. Russell
August 2, 1988

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If you have any further questions, please do not hesitate to contact me or Mr. C. M. Molnar of my staff at (203) 285-5205.

Very truly yours,

COMBUSTION ENGINEERING, INC.



A. E. Scherer
Director
Nuclear Licensing

AES:ss
Enclosure: As Stated

xc: J. Lieberman (NRC)
P. McGill (C-E)
J. Roth (NRC)

Windsor Fuel Fabrication Facility
Radiation Protection Program and Corrective Measures

A. Staffing

C-E has made several additions to the Nuclear Fuel Manufacturing management team. These are summarized in References (A) and (B) listed below.

- (A) Letter, LD-88-041, A. E. Scherer (C-E) to W. T. Russell (NRC), dated June 17, 1988
- (B) Letter, LD-88-053, A. E. Scherer (C-E) to L. C. Rouse (NRC), dated July 13, 1988

C-E has also increased the number of health physics and decontamination personnel. The health physics staff has been increased from one supervisor and three technicians, to one supervisor and nine technicians. Health physics coverage is provided around the clock.

The number of decontamination personnel has been increased from seven to eleven. Requisitions to hire three more decontamination personnel have been issued. Temporary decontamination personnel, supplied by a contractor, are being used until the staff reaches the authorized level of fourteen decontamination personnel. These personnel are engaged in decontamination activities around the clock.

B. Procedures

An outside consultant, Radiation Safety Associates (RSA), was hired to review and upgrade the radiation protection procedures for the Windsor Fuel Manufacturing Facility. RSA evaluated the existing procedures. They concluded that many of these procedures were inadequate and that additional procedures were needed. RSA identified 56 procedures which were to be written or upgraded. Drafts of 36 of these procedures were completed by RSA.

C-E felt that the work done by RSA could be improved upon to better satisfy the needs of Nuclear Fuel Manufacturing. Consequently, a task force of three full time procedure writers were assigned to Nuclear Fuel Manufacturing to revise procedures. The task force will work with the Manager of Radiological and Industrial Safety, the Manager of Accountability and Security, and the Senior Staff Consultant.

The 56 procedures identified by RSA will be consolidated into the following 22 procedures:

1. Whole Body Exposure
2. Monitoring for Skin Exposure

3. Extremity Monitoring
4. Radiation Work Permits
5. Dosimetry Program - Windsor
6. Radiological Control Areas
7. Internal Exposure Control
8. Bioassay Program
9. Monitoring for Radiation and Contamination
10. Protective Clothing
11. Ventilation System Monitoring
12. Monitoring Visitor Exposure
13. Transportation of Radioactive Material
14. Monitoring for Airborne Contamination
15. Stop Work Order
16. Respiratory Protection Program
17. Criticality Control
18. Packaging and Shipping of Dry Activated Waste
19. Environmental Monitoring Program
20. Radiation Workers Training Program
21. On Site Transfer of Radioactive Materials
22. Instrument Calibration

All these procedures are scheduled for completion by December 31, 1988.

C. Training

RSA was also contracted by C-E to revise training materials and provide training to Fuel Fabrication Facility workers. RSA has since been replaced by a task force consisting of a dedicated full time Training Coordinator and additional personnel from the Nuclear Services Training Department. This task force will be involved in preparing improved training materials and presenting training lectures.

Training materials for our present interim General Employee Training (GET) program have been revised. The interim GET program satisfies all existing regulatory requirements. On July 13, 1988 C-E began providing GET for all new personnel requiring access to the Building 17/21 areas.

All new personnel requiring access to the Building 17/21 area receive the following training:

1. Safety, security, and emergencies
2. Radiation workers rights and responsibilities
3. Radiation protection fundamentals
4. Criticality safety

In addition, new personnel requiring access to restricted areas such as the pellet shop and bundle area receive the following training:

1. Radiation work permits
2. Personal contamination monitoring and control

3. Breathing zone air samplers
4. Respiratory protection

After the training sessions, all class attendees are required to pass a written exam.

Work is under way on a permanent GET program to replace the interim program for new personnel. All the personnel requiring access to the Building 17/21 areas will receive refresher training based on the permanent GET program. This program will include the following:

1. Organization and administration
2. Facility/process overview
3. Quality control
4. Plant security
5. Industrial safety
6. Radiological fundamentals
7. Criticality safety
8. Emergency planning
9. Radiation protection for radworkers
10. Respiratory protection

Lesson plans are targeted for completion by September 30, 1988. Existing personnel are to receive refresher training in accordance with the permanent GET program by December 31, 1988.

Job specific training is also proceeding. In the health physics (HP) area, the following training has been completed:

- o The Supervisor Health Physics and Safety (HP&S) has completed a Radiation Safety Officer course.
- o All HP technicians have completed a fundamental radiation science course, training in applied HP conducted by C-F Radiation Protection Services, and training in current shop HP procedures and practices conducted by the HP&S Supervisor.

As a result of evaluation of the emergency preparedness training program, the following is planned:

- o Efforts to review and revise all emergency plans and procedures are scheduled to begin by December 31, 1988.
- o Formal training and qualification of emergency response personnel in accordance with the revised documents are targeted for completion by June 30, 1989.

Fitness for duty training of all shop supervisors has been completed. Training for newly hired or promoted supervisory personnel will be completed within 90 days of the date of the supervisory assignment.

Procedure based job specific training in other areas, including radiological, criticality, and industrial safety will be implemented by December 31, 1989.

D. Improvements in Supervisory Oversight of Radiological Control Activities

Additional contamination control instructions have been written. These have been used in the training program for all pellet shop personnel. Supervisors have received training to make sure that workers adhere to instructions.

E. Quality Improvement Program

C-E has hired an outside consultant, Philip Crosby Associates (PCA), to assist in the development of a Quality Improvement Program. All personnel Nuclear Fuels will attend a course in quality improvement. This training has begun. PCA trains C-E personnel to act as instructors and provides all course materials. The balance of Nuclear Fuels personnel are taught internally by these instructors.

The Quality Improvement Program will seek to instill attitudes and institute controls to promote quality by preventing the problems that are detrimental to quality.

F. Preventive Maintenance

Regular preventive maintenance to keep equipment in good operating condition is being improved. As was discussed for item A, additional staff has been hired. This has provided additional manpower for performing preventive maintenance. A comprehensive preventive maintenance system has been initiated, and will be fully operational by December 31, 1988.

G. Radiation Protection Standard

The Radiological Protection Program Standard for Nuclear Fuel Manufacturing, which was prepared by an internal C-E committee, has been approved by the Vice President of Nuclear Fuel Manufacturing. This document identifies the minimum set of elements necessary for an acceptable radiological protection program. All radiological protection program implementing documents must satisfy the program elements identified in the standard. Revisions to the standard will be considered should the need to further refine the radiological protection program be necessary.

H. Criticality Safety

The nuclear criticality safety program is an element of the Radiation Protection Program and is audited annually by the Nuclear Safety Committee. Any violations identified in the course of this audit are reported in writing to the cognizant managers. These

cognizant managers are required to respond in writing to the notices of violation, and identify the corrective actions to be taken. Copies of the notices of violation and the responses of the cognizant managers are retained on file.

In addition, the Nuclear Criticality Safety Consultant to the Nuclear Safety Committee performs a quarterly audit of criticality safety operations. His findings are reported to Nuclear Safety Committee.

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FCAF ☐ LPD ☐
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DATE 11/14/88 SAFEGUARDS ☒
INITIAL SLC

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