70-1100

COMBUSTION ENGINEERING

January 17, 1990
LD-90-003

Docket No. 70-1100
License No. SNM-1067

Mr. Glen L. Sjoblom, Acting Chief
Fuel Cycle Safety Branch
Division of Industrial and
Medical Nuclear Safety
Office of Nuclear Material
Safety and Safeguards
U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

Subject: License Application Amendment Revisions

References: A) Letter, LD-88-149, A. E. Scherer (C-E) to L. C. Rouse (NRC), dated December 6, 1988

B) Letter, LD-89-081, A. E. Scherer (C-E) to L. C. Rouse (NRC), dated July 27, 1989

Dear Mr. Sjoblom:

Via References (A) and (B), Combustion Engineering requested that the application for License SNM-1067, for the Windsor Nuclear Fuel Manufacturing facility, be amended. As a result of Nuclear Regulatory Commission approval of license amendments filed subsequent to References (A) and (B) certain pages in the original submittals are no longer consistent with what is now the currently approved license application. To correct this situation, provided herewith are updated pages for the subject amendment requests to remove inconsistencies.

Enclosure I provides a tabulation of the affected pages in References (A) and (B). Enclosures II and III provide the updated pages for the December 6, 1988 and July 27, 1989, amendment submittals respectively.

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If I can be of further assistance in this matter, please do not hesitate to call 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:jeb

Enclosures: As stated

cc: J. Roth (NRC - Region I)

Enclosure 1 to
LD-90-003

COMBUSTION ENGINEERING, INC.

WINDSOR NUCLEAR FUEL MANUFACTURING FACILITY

REQUEST FOR LICENSE AMENDMENT

LIST OF AFFECTED PAGES

JANUARY, 1990

Docket No. 70-1100
License No. SNM-1067

WINDSOR FUEL MANUFACTURING FACILITY

REQUEST FOR LICENSE AMENDMENT

On December 6, 1988 (LD-88-149) and July 27, 1989 (LD-89-081) Combustion Engineering requested that the application for License SNM-1067, for the Windsor Fuel Manufacturing Facility, be amended. The change provided herewith reflects revisions to selected pages in each of the above amendment requests. The changes are necessary in order to update information on the original submittal pages which has been superseded because of NRC approval of other amendment requests filed subsequent to those mentioned above. Changes are denoted by a bar in the right hand margin of each affected page and are relative to the currently approved license application page. The proposed change pages to update the December 6, 1988 amendment request are provided in Enclosure II. The proposed change pages to update the July 27, 1989 amendment request are provided in Enclosure III.

The current application and/or amendment pages affected by the changes provided herewith and their revision numbers are listed below:

A. Update for Decemeber 6, 1988 Amendment Request

Current Page			Deleted Page			Added Page		
Page	Rev	Date	Page	Rev	Date	Page	Rev	Date
1	4	9/15/89	1	4	12/6/88	1	5	1/17/90
I.3-12	5	6/23/89	I.3-12	5	12/6/88	-	-	--
I.4-3	7	6/23/89	I.4.3	7	12/6/88	-	-	--
I.4-12	5	6/23/89	I.4-12	5	12/6/88	I.4-12	6	1/17/90
I.5-3	4	6/23/89	I.5-3	4	12/6/88	I.5-3	5	1/17/90
II.1-1	5	6/23/89	II.1-1	5	12/6/89	-	-	--

B. Update for July 27, 1989 Amendment Request

Current Page			Deleted Page			Added Page		
Page	Rev	Date	Page	Rev	Date	Page	Rev	Date
I.3-9	8	6/23/89	-	-	--	I.3-9	9	1/17/90
I.3-10	4	6/23/89	I.3-10	4	7/27/89	I.3-10	5	1/17/90
I.3-11	4	6/23/89	I.3-11	4	7/27/89	I.3-11	5	1/17/90
I.6-1	4	6/23/89	I.6-1	4	7/27/89	I.6-1	5	1/17/90
-	-	--	I.6-2	0	7/27/89	I.6-2	0	1/17/90

Enclosure II to
LD-90-003

COMBUSTION ENGINEERING, INC.

WINDSOR NUCLEAR FUEL MANUFACTURING FACILITY

REQUEST FOR LICENSE AMENDMENT

AFFECTED PAGES TO DECEMBER 6, 1988

AMENDMENT REQUEST

JANUARY, 1990

TABLE OF CONTENTS

PART I LICENSE CONDITIONS

SECTION

8.12, "Criticality Accident Alarm system" shall be maintained in Product Development areas and the manufacturing facility. The detectors operate in the range of 1-10,000 mR/hr. The locations of the detectors within the manufacturing facility are shown on Page II.8-75 and within the Product Development on Page II.8-76. The radiation intensity is shown on a central panel located in the main hallway in Building 17 for Building 6, 17 and 21, and in the main hallway in Building 5 of Product Development. There is an alarm which serves as a local and general audible radiation evacuation alarm. When the alarm is sounded, the Emergency Plan is immediately put into effect. The monitors are connected to the emergency power system, which is supplied to all emergency lights and alarms in the event of a general power failure within the facility. This electrical system renders the alarm system operative at all times.

Operational tests of the radiation monitors are performed monthly by Radiological Protection and Industrial Safety personnel. A radioactive source is used to perform these tests. The entire system is calibrated semi-annually and following any repair that affects the accuracy of the measurement.

4.3 Specific Criticality Safety Criteria

Specific criticality safety criteria in addition to the general criteria described in Section 4.2 are necessary to assure nuclear safety for several process operations, as described below:

In addition, all packages will be sealed, monitored for contamination and labeled as to enrichment and U235 content. All outside storage will be checked four times each year at which time contamination levels will be evaluated, and the adequate condition of the packages will be verified.

5.1.4 Liquid Wastes

All liquid wastes, in-process, and clean-up rinse water solutions are sampled to verify that MPC is not exceeded, and are then introduced to the liquid waste system as described below. Release of liquid waste will be authorized by a member of the Radiological Protection and Industrial Safety staff.

Sinks and showers in the laboratories and the manufacturing facility are drained to any one of ten (10) 2000-gallon retention tanks. The tanks fill automatically in sequence. When eight tanks become filled to capacity, a blinking warning light located in the outside wall of the building is activated to warn that two retention tanks remain in reserve to receive radioactive liquid waste before overflow might be expected. a sampling station is provided at the base of each retention tank. A 500-ml sample is withdrawn and forwarded to the Radiochemistry Laboratory for gross alpha and beta analyses. Water is discharged to the Windsor site creek which flows into the Farmington River at, or below 0.000003 uCi/ml (this is ten percent of MPC for insoluble natural uranium). The discharge level for unidentified mixtures of radionuclides is 0.000000003 uCi/ml. (This is ten percent of MPC for unidentified mixed radionuclides). Where levels of activity exceed these limits the water is diluted before being discharged. The instruments measuring the liquid-waste level in each dilution tank prior to discharge to the Farmington River shall be calibrated at least annually.

Enclosure III to
LD-90-003

COMBUSTION ENGINEERING, INC.

WINDSOR NUCLEAR FUEL MANUFACTURING FACILITY

REQUEST FOR LICENSE AMENDMENT

AFFECTED PAGES TO JULY 27, 1989

AMENDMENT REQUEST

JANUARY, 1990

Regulatory Guide 8.24, "Health Physics Survey During Enriched Uranium-235 Processing and Fuel Fabrication". The alpha counting equipment is checked daily to verify background and efficiency.

3.2.5 Internal Exposure

The room air in all areas where unclad licensed material is handled, processed, or where operations could result in worker exposure to the intake of quantities of uranium exceeding those specified in 10 CFR 20.103, shall be continuously sampled when ever work is performed in the area. Air sampling shall be accomplished using fixed position air sampling stations and/or lapel air samplers. Lapel air samplers shall be used by individuals who work with or handle unclad licensed material in powder form. For these workers, lapel air sample results will be used for the basic evaluation of the workers internal exposure. In lieu of lapel air samplers, the results from the fixed position breathing zone air samplers may be used for the basic evaluation of the internal exposure of individuals working with unclad licensed material in pellet form if the representativeness of the fixed position samplers has been validated. The average results from the fixed position air samplers shall be used for the basic evaluation of all other individuals in the area. All samples from lapel and fixed position air sampling shall be analyzed after each working shift.

During the normal operating period, if a lapel air sampler or a fixed position air sampling station indicates the airborne

concentration of radioactivity for that work area exceeds the MPC as specified in Table I Column I of 10 CFR 20, Appendix B, an investigation as to the cause shall be conducted. Any necessary corrective actions to prevent recurrence shall be taken and documented. Fixed position air samplers shall have a minimum flow of 10 lpm. Lapel air samplers shall have a minimum flow of 1.4 lpm.

The fixed position air sampling stations shall be strategically located throughout the shop and run continuously when ever work is being performed. Fixed position air sampling stations provide air samples which are representative of airborne contaminates in the working areas in order to evaluate workers internal exposure and to monitor the adequacy of ventilation in the area.

The representativeness of the fixed position air sampling stations shall be evaluated at least once every 12 months after initial validation.

Whenever an individual's seven (7) consecutive day assigned internal exposure exceeds 32 MPC hours they shall be closely monitored to preclude their exceeding 520 MPC hours in a calendar quarter.

Product Development

When the monitoring of airborne concentration of radioactivity is required as specified in 10 CFR 20.103, the air concentration of radioactivity in Product Development shall be analyzed within 24 hours after each operating shift. The required monitoring shall be conducted by breathing zone samples 100% of the time. A one MPC action level and a minimum flow rate of 1400 cc/min. shall be used for Product Development operations.

3.2.6 External Exposure (Dosimetry Requirements)

Each individual who enters a restricted area under such circumstances that he is likely to receive a dose in any calendar quarter of 25 percent of the applicable value specified in 10 CFR 20.101(a) shall be supplied with a TLD badge and indium foil for purposes of personnel dosimetry. Badges will be processed monthly. When a high exposure is suspected, the individual's badge will be sent out for immediate processing. All visitors will be supplied with indium foil badges. Area TLD badges and neutron foils are also strategically placed throughout the facility for the purpose of recording background radiation levels as well as radiation resulting from a criticality accident. The TLD badges will also be processed monthly during normal operations and immediately following a criticality accident. Procedures to determine high radiation doses immediately following a criticality accident are described in the Emergency Procedures Manual.

6.0 INDUSTRIAL SAFETY

The Program Manager, Radiological and Industrial Safety shall be responsible for defining all programs and standards related to Industrial Safety, including OSHA regulations, for all activities in the Nuclear Fuel Manufacturing Facility. The Industrial Safety Specialist, acting as a consultant to the Manager, Radiological Protection and Industrial Safety, is responsible for implementing those programs and standards. The Radiological Protection and Industrial Safety Technicians monitor the day-to-day compliance. The Director, Product Development shall be responsible for assuring compliance with all applicable industrial safety (OSHA) regulations for all activities conducted in the Product Development Laboratories under License SNM-1067. This function is satisfied by the same personnel described above for the Nuclear Fuel Manufacturing facility. These individuals provide like services in a support role to the Product Development area.

7.0 DECOMMISSIONING PLAN

At the end of plant life, Combustion Engineering shall decontaminate the facility and site in accordance with the general Decommissioning Plan submitted with the renewal application dated May 14, 1982, so that these facilities and grounds can be released for unrestricted use. The financial commitment assuring funds for decommissioning, submitted by letter dated March 23, 1982, is hereby incorporated as part of this License. The Decommissioning Plan is included as Appendix A to this License.

8.0 RADIOLOGICAL CONTINGENCY PLAN

Combustion Engineering's Radiological Contingency Plan, approved as Amendment No. 35 to SNM-1067 on March 26, 1982, is considered to be part of this license.

Combustion Engineering shall maintain and execute the response measures of the Radiological Contingency Plan and shall maintain procedures as necessary to implement the Plan. Combustion Engineering shall make no change in the Plan that will decrease the response effectiveness of the Plan without prior NRC approval as evidenced by a license amendment. Combustion Engineering shall furnish the Chief, Fuel Cycle Safety Branch, Division of Industrial and Medical Nuclear Safety, NMSS, U.S. Nuclear Regulatory Commission, Washington, DC 20555, six (6) copies of changes to the plan within six (6) months after the change is made.

9.0 FUNDAMENTAL NUCLEAR MATERIAL CONTROL PLAN (FNMCP)

Combustion Engineering's FNMCP dated November 17, 1987, approved as Safeguards Amendment SG-3 issued on Octobcer 16, 1989, is considered part of this License.