JAN 8 1973

Docket No. 50-237

Commonwealth Edison Company
ATTN: Mr. L. D. Butterfield, Jr.
Nuclear Licensing Administrator
Post Office Box 767
Chicago, Illinois 60690

Change No. ~~19~~ 17
License No. DPR-19

Gentlemen:

We have reviewed your Proposed Change No. 17 dated January 31, 1972, as supplemented by letter dated July 31, 1972, requesting changes to Table 4.6.1 to the Technical Specifications for Facility Operating License No. DPR-19 for Dresden Unit 2. It is our understanding that Proposed Change No. 17 supersedes Proposed Change No. 10 dated April 14, 1971. Proposed Change No. 17 would bring certain inservice inspection requirements for Dresden Unit 2 into conformance with those of Section XI of the ASME Boiler and Pressure Vessel Code.

Based on our review of use and inspections of furnace sensitized steel, we have modified your proposed specifications to require a special inservice inspection of the furnace sensitized stainless steel components at the first refueling outage after five years of operation.

We have concluded that the proposed changes, as modified, do not present significant hazards considerations not described or implicit in the Dresden Safety Analysis Report and there is reasonable assurance that the health and safety of the public will not be endangered.

Pursuant to Section 50.59 of 10 CFR Part 50, the Technical Specifications of Facility Operating License No. DPR-19 are hereby changed

RW

to include a revised inservice inspection program by replacing the existing pages 98, and 100 through 107 with the revised pages 98, and 100 through 107 appended hereto.

Sincerely,

/S/

Donald J. Skovholt
Assistant Director for
Operating Reactors
Directorate of Licensing

Enclosures:
Revised pages 98, and
100 through 107

cc w/enclosures:
John W. Rowe, Esquire
Isham, Lincoln & Beale
Counselors at Law
One First National Plaza
Chicago, Illinois 60670

Morris Public Library
604 Liberty Street
Morris, Illinois 60451

Distribution
Docket File
PDR
Local PDR
RP Reading
Branch Reading
JRBuchanan, ORNL
TWLaughlin, DTIE
EPA (3)
RBoyd, L:BWR
DJSkovholt, L:OR
TJCarter, L:OR
ACRS (16)
RLTedesco, L:CS
RO (3)
JScinto, OGC
RHVollmer, L:QA
DLZiemann, L:ORB #2
RDSilver, L:ORB #2
RMDiggs, L:ORB #2
NDube, L:OPS
MJinks, DRA (4)
SKari, L:RP
SPawlicki, L:ME
RMaccary, L:RS

Dispatched 1-9-73.

72272

OFFICE ▶	L:ORB #2	L:ORB #2	L:ORB #2	L:OR	L:RS	L:OR
SURNAME ▶	RDSilver:sjh	RMDiggs	DLZiemann	DJSkovholt	RMaccary	DJSkovholt
DATE ▶	1/4/73	1/4/73	1/4/73	1/ /73	1/5/73	1/8/73

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

January 8, 1973

Docket No. 50-237

Commonwealth Edison Company
ATTN: Mr. L. D. Butterfield, Jr.
Nuclear Licensing Administrator
Post Office Box 767
Chicago, Illinois 60690

Change No. 19
License No. DPR-19

Gentlemen:

We have reviewed your Proposed Change No. 17 dated January 31, 1972, as supplemented by letter dated July 31, 1972, requesting changes to Table 4.6.1 to the Technical Specifications for Facility Operating License No. DPR-19 for Dresden Unit 2. It is our understanding that Proposed Change No. 17 supersedes Proposed Change No. 10 dated April 14, 1971. Proposed Change No. 17 would bring certain inservice inspection requirements for Dresden Unit 2 into conformance with those of Section XI of the ASME Boiler and Pressure Vessel Code.

Based on our review of use and inspections of furnace sensitized steel, we have modified your proposed specifications to require a special inservice inspection of the furnace sensitized stainless steel components at the first refueling outage after five years of operation.

We have concluded that the proposed changes, as modified, do not present significant hazards considerations not described or implicit in the Dresden Safety Analysis Report and there is reasonable assurance that the health and safety of the public will not be endangered.

Pursuant to Section 50.59 of 10 CFR Part 50, the Technical Specifications of Facility Operating License No. DPR-19 are hereby changed

to include a revised inservice inspection program by replacing the existing pages 98, and 100 through 107 with the revised pages 98, and 100 through 107 appended hereto.

Sincerely,

Donald J. Skovholt
Assistant Director for
Operating Reactors
Directorate of Licensing

Enclosures:
Revised pages 98, and
100 through 107

cc w/enclosures:
John W. Rowe, Esquire
Isham, Lincoln & Beale
Counselors at Law
One First National Plaza
Chicago, Illinois 60670

Morris Public Library
604 Liberty Street
Morris, Illinois 60451

The performance of reactor coolant leakage detection system will be evaluated during the first five years of station operation and the conclusions of this evaluation will be reported to the AEC.

It is estimated that the main steam line tunnel leakage detection system is capable of detecting of the order of 3000 lb/hr. The system performance will be evaluated during the first five years of plant operation and the conclusions of the evaluation will be reported to the AEC.

E. Safety and Relief Valves - Experience in safety valve operation shows that a testing of 50% of the safety valves per refueling outage is adequate to detect failures or deterioration. The tolerance value is specified in Section III of the ASME Boiler and Pressure Vessel Code as ± 1% of design pressure. An analysis has been performed which shows that with all safety valves set 1% higher the reactor coolant pressure safety limit of 1375 psig is not exceeded. Solenoid actuated relief valves are used to avoid activation of the safety valves. In view of the fact that the solenoid activated relief valves are more complicated, it is prudent to test them at each refueling outage. The safety valves are required to be operable above the design pressure (90 psig) at which the core spray subsystems are not designed to deliver full flow.

F. Structural Integrity - A pre-service inspection of the components listed in Table 4.6.1 will be conducted after site erection to assure the system is free of gross defects and as a reference base for later inspections. Prior to operation, the reactor primary system will be free of gross defects. In addition, the facility has been designed such that gross defects should not occur through life. The inspection program given in Table 4.6.1 was based on Section XI of the ASME Boiler and Pressure Vessel Code, 1971 which was followed except where accessibility for inspection was not provided. The Commonwealth Edison Company recognizes the importance of inspection of those areas which are presently not accessible and will study and implement, if practicable, new means to include those areas within the inspection program. This inspection provides further assurance that gross defects are not occurring after the system is in service. This inspection will reveal problem areas should they occur before a leak develops.

The special inspection of the main feed and steam lines is to provide added protection against pipe whip. The Category J GRP I welds are selected on the basis of an analysis that shows these welds are the highest stress welds and that due to their physical location, a break would result in the least interference and maximum energy upon impact with the drywell. These welds are the only ones which offer any significant risk and are therefore inspected four times as often as the other welds within the drywells.

Category J GRP II welds are selected because without regard for the operating stress levels and interfering equipment, they have sufficient theoretical energy to penetrate and would propel the pipe toward the containment. They are therefore included in first inspection. Upon consideration of impact angle, interfering equipment and distance pipe travels, no substantial risk is involved and no extra inspection is needed.

In addition, extensive visual inspection for leaks will be made periodically on critical systems. The inspection program specified encompasses the major areas of the vessel and piping systems within the drywell. The inspection period is based on the observed rate of growth of defects from fatigue studies sponsored by the AEC.

TABLE 4.6.1

IN-SERVICE INSPECTION REQUIREMENTS FOR DRESDEN UNIT 2

Category	Component Parts to be Examined	Exam Method	Frequency of Examination	Extent of Examinations (1)
A	Longitudinal and Circumferential Shell Welds in Core Region	Volumetric	10% of each longitudinal weld and 5% of each circumferential weld during each 10 year inspection interval	Note: Not applicable with present plant design
B	Longitudinal and Circumferential Welds in Shell (other than those of Category A & C) and meridional and circumferential welds in bottom head and closure head (other than those of Category C)	Volumetric	10% of each longitudinal weld and 5% of each meridional weld during each 10 year inspection interval	Accessible top 10 ft. of vertical vessel weld @ 2 places (100% inspected in 10 years for approximately 2 ft. each year) 10% of meridional welds and 5% of circumferential welds in vessel closure head Note: Bottom head closure not applicable with present plant design
C	Vessel-to-flange and head-to-flange-circumferential welds	Volumetric	Cumulative 100% coverage at end of 10 year interval	10% of vessel-to-flange and head-to-flange circumferential weld area each year

TABLE 4.6.1 (cont)

Category	Component Parts to be Examined	Exam Method	Frequency of Examination	Extent of Examination(1)
D	Primary nozzle-to vessel and nozzle-to-head welds and nozzle-to-vessel and nozzle-to-head inside radiused section	Volumetric	Cumulative 100% coverage at end of 10 year interval	Nozzle Welds: Recirc. Outlet (2) - 1/5 years Recirc. Inlet (10) - 1/year Isolation Condenser Outlet (2) 1/5 years Core Spray Inlet (2) - 1/5 years Control Rod Drive Return (1) - 1/10 years Standby Liquid Control (1) - 1/10 years Head Instrumentation (2) - 1/5 years Head Spray Inlet (1) - 1/10 years
E-1	Vessel penetrations including instrument connections, control rod drive penetrations and control rod drive pressure boundary welds	Volumetric	Cumulative 25% coverage at end of 10 year interval	Not applicable in accordance with ASME B&PV Code Section XI, IS-121
E-2	Vessel penetrations including instrument connections and control rod drive penetration and pressure boundary welds	Visual	Cumulative 25% coverage at end of 10 year inspection interval	Visual examination during hydrostatic test as specified by ASME B&PV Code Section XI, IS-520

TABLE 4.6.1 (cont)

Category	Component Parts to be Examined	Exam Method	Frequency of Examination	Extent of Examinations(1)
F	Primary nozzles to safe-end welds	Visual and surface and volumetric	Cumulative 100% coverage at end of 10 year interval	Safe-ended nozzles: Recirc. Outlet (2) - 1/5 years Recirc. Inlet (10) - 1/year Isolation Condenser Outlet (2) - 1/5 years Core Spray Inlet (2) - 1/5 years Control Rod Drive Return (1) - 1/10 years Standby Liquid Control (1) - 1/10 years Head Instrumentation (2) - 1/5 years Head Spray Inlet (1) - 1/10 years
G-1	Closure studs and nuts	Volumetric and visual or surface	Cumulative 100% coverage at end of 10 year interval	
	Ligaments between threaded stud holes	Volumetric	"	10% of ligaments each year. Examination of bushings, threads and ligaments in base material of flanges may be performed from the face of the flange and are required to be examined only when the connection is disassembled.

TABLE 4.6.1 (cont)

Category	Component Parts to be Examined	Exam Method	Frequency of Examination	Extent of Examinations(1)
G-1(cont)	Closure washers, bushings	Visual	Cumulative 100% coverage at end of 10 year interval	Not applicable with present plant design
	Pressure-retaining bolting ≥ 2" in. diameter	Visual and Volumetric	"	10% of recirculating pump bolts each year
G-2	Pressure-retaining bolting < 2" in diameter which is not excluded from examination in accordance with ASME B&PV Section XI, IS-121	Visual	"	Bolting will be examined when bolting is removed or when the bolted connection is broken or disassembled. For bolting which is not removed, or the bolted connection is not broken, the inspection will consist of a visual exam to detect signs of distress or evidence of leaking
H	Integrally welded vessel supports	Volumetric	During 10 year interval	10% (approximately 8 ft.) of lineal ft. or vessel support skirt welding in 10th year
I	Closure head cladding	Visual and surface or volumetric	During 10 year interval	During the 10 year interval, at least 6 patches (each 36 sq. in.) evenly distributed in the closure head.

TABLE 4.6.1 (cont)

Category	Component Parts to be Examined	Exam Method	Frequency of Examination	Extent of Examinations(1)
I (cont)	Vessel Cladding	Visual	During 10 year interval	6 patches (each 36 sq. in.) evenly distributed in the accessible sections of the vessel shell shall be examined.
J(2)	Circumferential and longitudinal pipe welds	Visual and Volumetric	Cumulative 25% of all weld joints (selectively distributed among the higher stress joints in entire system) every 10 years Group I and Group II welds (see note (2) for breakdown) on main feed and main steam lines shall be inspected in 10 years during the first interval. At least 25% of the welds shall be inspected at approximately each 2½ year interval. Group I welds shall be inspected during each 10 year interval thereafter.	

System	Pipe Sizes	Total Welds
Shutdown cooling	14" 16"	68
Isolation Con.	12" 14"	39
Reactor Water Cleanup	8" 10"	36
CRD Hyd. System	4"	12
L.P.Coolant Inj.	14" 16" 18"	43
Core Spray Piping	10"	74
H.P.Coolant Inj.	10"	22
Feed Piping	12" 18"	61
Recirculation	4" 12" 22" 28"	123
Main Steam	8"	129

TABLE 4.6.1 (cont)

Category	Component Parts to be Examined	Exam Method	Frequency of Examination	Extent of Examinations(1)
K-1	Integrally-welded external support attachments for piping, valve and pumps	Visual and Volumetric	100% cumulative in first 10 years. 25% cumulative in each following 10-year inspection interval.	Welds to the pressure-containing boundary, the base metal beneath the weld zone and along the support attachment member for a distance of two base metal thicknesses.
K-2	Support members and structures for piping, valves and pumps whose structural integrity is relied upon to withstand design loads and seismic-induced displacements.	Visual	100% cumulative during each 10-year inspection interval.	Support settings of constant and variable spring type hangers, snubbers and shock absorbers shall be inspected to verify proper distribution of design loads among the associated support components.
L-1	Pump casing welds	Visual and Volumetric	One pump of each type during 10 year interval.	Not applicable with present plant design.
L-2	Pump casings	Visual	One pump of each type during 10 year interval.	One recirculating pump in 10 years.

TABLE 4.6.1 (cont)

Category	Component Parts to be Examined	Exam Method	Frequency of Examination	Extent of Examinations(1)
M-1	Welds in valve bodies 3" and above	Visual and Volumetric	One valve of each type during 10 year interval	Not applicable with present plant design
M-2	Valve bodies 3" and above.	Visual	One valve of each type during 10 year interval	One disassembled valve (with or without welds and 3" over in normal size) in each category and type shall be subject to visual examination. Individual examinations shall cover 100% of the pressure boundary welds and may be performed at or near the end of the 10 year interval.
N	Interior surfaces and internals & integrally welded internal supports of the reactor vessel, including core spray spargers, core spray nozzles, and upper portions of jet pumps.	Visual	During first refueling outage and during subsequent refueling outages at approximately 3-year intervals.	Interior surfaces and internal components of the reactor vessel, including the space at the bottom head, and internal attachments which are welded to the vessel, made accessible by the removal of components during normal refueling operations. All internal attachments, whose failure may adversely affect core integrity, shall be examined.

Notes to Table 4.6.1:

(1) Examinations which reveal unacceptable structural defects in a category shall be extended to include an additional number (or areas) of system components or piping in the same category approximately equal to that initially examined. In the event further unacceptable structural defects are revealed, all remaining system components or piping in the category shall be examined to the extent specified in that examination category.

(2)
Category J Weld Breakdown:

Main Steam Line

Group I Welds

Line	Weld Identification
3001A	K-6
3001B	K-5A
3001C	K-6
3001D	K-6

Group II Welds

Line	Weld Identification
3001A	4,5,K-10,K-11,K-12
3001B	4,5,K-10,K-11,K-12
3001C	4,5,K-6A,K-10,K-11,K-12
3001D	4,5,K-10,K-11,K-12

Feedwater Line

Group I Welds

Line	Weld Identification
3204A	K-3
3204B	K-3

Group II Welds

Line	Weld Identification
3204A	K-4, K-5,9,K-2
3204B	K-4, K-5,K-6,11,K-2
3204C	10
3204F	12, 1

Note: The following component parts shall be examined at the first refueling outage occurring after five years of operation.

a. All of the furnace sensitized wrought stainless steel safe ends and their welds.

b. The sensitized heat affected zones adjacent to the welds and the welds in the stainless steel reactor coolant piping will be PT and UT examined in accordance with a program which will provice for examination of 10% of the welds.

c. The furnace sensitized stainless steel internal brackets and their attaching welds inside the reactor pressure vessel, including the jet pump riser supports, shall be visually inspected.

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

JAN 8 1973

Files (Docket No. 50-237)
THRU: D. L. Ziemann, Chief, ORB #2, L

SAFETY EVALUATION FOR TECHNICAL SPECIFICATION CHANGE NO. 19 FOR DRESDEN UNIT 2 (COMMONWEALTH EDISON COMPANY)

Commonwealth Edison proposed, by letter dated January 31, 1972, that changes be made to the inservice inspection program for Dresden Unit 2 to bring this program into conformance with Section XI of the ASME Boiler and Pressure Vessel Code. Technical Review evaluated these changes and reported their conclusions and recommendations in a memo from R. R. Maccary to R. L. Tedesco dated March 17, 1972 (copy enclosed). The Regulatory staff had previously concluded that the margin of safety in the design of the safe ends is adequate and recommended that an augmented inservice inspection program for sensitized stainless steel components be continued through the second refueling outage. Commonwealth Edison performed the augmented inspection recommended in that memo during the second refueling outage in the spring of 1972 and reported the results by letter dated July 31, 1972. According to Commonwealth Edison's letter, the inspection revealed "only very minor, acceptable surface defects, which were removed with a light polishing" and a defect in a jet pump instrumentation nozzle which, according to CE, appeared to be a surface defect. Technical Review reviewed the results of this inspection and has concluded that the inservice inspection program proposed by Commonwealth Edison is acceptable with the exception that a special inservice inspection of the furnace sensitized stainless steel components should be performed by CE during the first refueling outage after five years of operation and the results should be evaluated by the AEC.

On the basis of the Technical Review evaluation, we conclude that the proposed changes to the Technical Specifications as modified to provide a special inservice inspection of the furnace sensitized stainless steel components at the first refueling outage after five years of operation (about January 1975) do not present significant hazards

considerations not described or implicit in the Dresden Safety Analysis Report and there is reasonable assurance that the health and safety of the public will not be endangered.

Richard D. Silver

Richard D. Silver
Operating Reactors Branch #2
Directorate of Licensing

Enclosure:
Memo, Maccary to Tedesco,
dtd 3/17/72

cc w/enclosure:
AEC PDR
Local PDR

cc w/o enclosure:
RTedesco, L:CS (2)
DJSkovholt, L:OR
RO (3)
TJCarter, L:OR
DLZiemann, L:ORB #2
RDSilver, L:ORB #2
MJinks, DRA (2)
RMDiggs, L:ORB #2
SPawlicki, L:ME
RMaccary, L:RS

JAN 8 1973

Files (Docket No. 50-237)
THRU: D. L. Ziemann, Chief, ORB #2, L /s/ F. D. Anderson for

SAFETY EVALUATION FOR TECHNICAL SPECIFICATION CHANGE NO. 19 FOR DRESDEN UNIT 2 (COMMONWEALTH EDISON COMPANY)

Commonwealth Edison proposed, by letter dated January 31, 1972, that changes be made to the inservice inspection program for Dresden Unit 2 to bring this program into conformance with Section XI of the ASME Boiler and Pressure Vessel Code. Technical Review evaluated these changes and reported their conclusions and recommendations in a memo from R. R. Maccary to R. L. Tedesco dated March 17, 1972 (copy enclosed). The Regulatory staff had previously concluded that the margin of safety in the design of the safe ends is adequate and recommended that an augmented inservice inspection program for sensitized stainless steel components be continued through the second refueling outage. Commonwealth Edison performed the augmented inspection recommended in that memo during the second refueling outage in the spring of 1972 and reported the results by letter dated July 31, 1972. According to Commonwealth Edison's letter, the inspection revealed "only very minor, acceptable surface defects, which were removed with a light polishing" and a defect in a jet pump instrumentation nozzle which, according to CE, appeared to be a surface defect. Technical Review reviewed the results of this inspection and has concluded that the inservice inspection program proposed by Commonwealth Edison is acceptable with the exception that a special inservice inspection of the furnace sensitized stainless steel components should be performed by CE during the first refueling outage after five years of operation and the results should be evaluated by the AEC.

On the basis of the Technical Review evaluation, we conclude that the proposed changes to the Technical Specifications as modified to provide a special inservice inspection of the furnace sensitized stainless steel components at the first refueling outage after five years of operation (about January 1975) do not present significant hazards

considerations not described or implicit in the Dresden Safety Analysis Report and there is reasonable assurance that the health and safety of the public will not be endangered.

Richard D. Silver

Richard D. Silver
Operating Reactors Branch #2
Directorate of Licensing

Enclosure:
Memo, Maccary to Tedesco, dtd 3/17/72

cc w/enclosure:
AEC PDR
Local PDR

cc w/o enclosure:
RTedesco, L:CS (2)
DJSkovholt, L:OR
RO (3)
TJCarter, L:OR
DLZiemann, L:ORB #2
RDSilver, L:ORB #2
MJinks, DRA (2)
RMDiggs, L:ORB #2
SPawlicki, L:ME
RMaccary, L:RS

Distribution
Docket File
RP Reading
Branch Reading
ORB #2 File

OFFICE ▶	L:ORB #2	L:ORB #2	L:ME	L:RS		
SURNAME ▶	RDSilver:sjh	DLZiemann	SPawlicki	RMaccary		
DATE ▶	1/4/73	1/4/73	1/5/73	1/5/73		