

50-331

NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL

FILE NUMBER

TO: Mr. B.C. Rusche

FROM: Iowa Electric Light & Power
Co. Cedar Rapids, Iowa
Lee Liu

DATE OF DOCUMENT

4-23-76

DATE RECEIVED

5-3-76

☒ LETTER☒ NOTORIZED

PROP

INPUT FORM

☒ ORIGINAL☒ UNCLASSIFIED☐ COPY

NUMBER OF COPIES RECEIVED

3 signed 37 CC

DESCRIPTION Ltr notrized 4-23-76 request for
changes to Tech Specs for Duane Arnold
Plant & trans the following:ENCLOSURE Proposed Changes to Tech Specs for
Duane Arnold Plant...

(40 cys enclrec'd)

PLANT NAME:

Duane Arnold Plant

Do Not Remove

ACKNOWLEDGED

SAFETY

FOR ACTION/INFORMATION

ENVIRO

DHL 5-4-76

ASSIGNED AD :

BRANCH CHIEF :

PROJECT MANAGER:

LIC. ASST. :

ASSIGNED AD :

BRANCH CHIEF :

PROJECT MANAGER :

LIC. ASST. :

(6) LCAR
PAULSON
PARRISH

INTERNAL DISTRIBUTION

REG FILE

NRC PDR

I & E (2)

OELD

GOSSICK & STAFF

MIPC

CASE

HANAUER

HARLESS

SYSTEMS SAFETY

HEINEMAN

SCHROEDER

ENGINEERING

MACCARY

KNIGHT

SIHWEIL

PAWLICKI

PLANT SYSTEMS

TEDESCO

BENAROYA

LAINAS

IPPOLITO

OPERATING REACTORS

STELLO

OPERATING TECH

EISENHUT

SHAO

BAER

SCHWENCER

GRIMES

ENVIRO TECH

ERNST

BALLARD

SPANGLER

SITE TECH

GAMMILL

STAPP

HULMAN

PROJECT MANAGEMENT

BOYD

P. COLLINS

HOUSTON

PETERSON

MELTZ

HELTEMES

SKOVHOLT

REACTOR SAFETY

ROSS

NOVAK

ROSZTOCZY

CHECK

AT & I

SALTZMAN

RUTBERG

SITE SAFETY & ENVIRO
ANALYSIS

DENTON & MULLER

SITE ANALYSIS

VOLMER

BUNCH

J. COLLINS

KREGER

EXTERNAL DISTRIBUTION

LPDR: Cedar Rapids,

TIC

NSIC

ASLB

ACRS 16 / SENT

NATL LAB

REG. V-IE

LA PDR

CONSULTANTS

To L.A.

BROOKHAVEN NATL LAB

ULRIKSON (ORNL)

CONTROL NUMBER

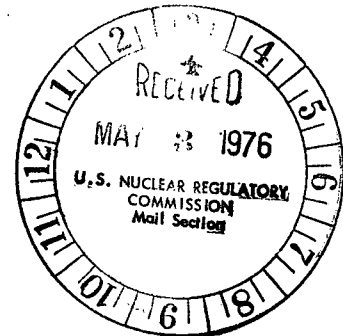
4407

Regulatory Docket File
IOWA ELECTRIC LIGHT AND POWER COMPANY

General Office
CEDAR RAPIDS, IOWA

April 23, 1976
IE-76-652

LEE LIU
VICE PRESIDENT - ENGINEERING



Mr. B. C. Rusche, Director
Office of Nuclear Reactor Regulation
Nuclear REGulatory Commission
Washington, D.C. 20545


Dear Mr. Rusche:

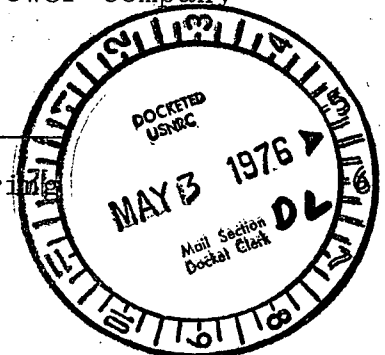
Transmitted herewith, in accordance with the requirements of 10CFR50.59 and 50.90, is an application for amendment of DPR-49 to incorporate proposed changes in the Technical Specifications (Appendices A and B to license) for the Duane Arnold Energy Center (DAEC), described in the enclosures hereto.

These proposed changes, identified as ETS-18, RTS-52, RTS-60, RTS-61 and RTS-62, have been reviewed and approved by the DAEC Operations Committee and the DAEC Safety Committee and do not involve a significant hazards consideration.

Three signed and notarized originals and 37 additional copies of this application are transmitted herewith. This application, consisting of the foregoing letter and enclosures hereto, is true and accurate to the best of my knowledge and belief.

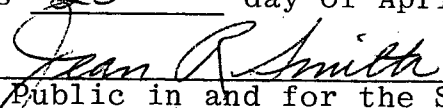
Iowa Electric Light and Power Company

By 
Lee Liu
Vice President-Engineering



LL/OS/D
cc: w/encl.
D. Arnold
J. Newman
J. Keppler
W. Paulson

Sworn and subscribed to before me
on this 23rd day of April, 1976.


Notary Public in and for the State
of Iowa.

Jean R. Smith
NOTARY PUBLIC
STATE OF IOWA
Commission Expires
September 30, 1978

4407

PROPOSED CHANGE ETS-18 TO DAEC TECHNICAL SPECIFICATIONS

Revised 12/2/76 Dated **4-23-76**

I. Affected Technical Specifications

Appendix B of the Technical Specifications for the DAEC (DPR-49) provide as follows:

Table 4.3-1, "Environmental Radioactivity Monitoring Program for the Duane Arnold Energy Center", provides, among other sample points, Sample Point 71 as "farms within 10 miles of the site" used for obtaining soil, vegetation and milk samples.

II. Proposed Change in Technical Specifications

The licensees of DPR-49 propose the following changes in the Technical Specifications set forth in I above:

On sheet 4.3-8 delete sample point "71" and add sample point "96" for both Soil and Vegetation.

On sheets 4.3-10 and 4.3-11 delete sample point "71" and add sample point "96" for Milk.

On Figure 4.3-1, "Radiological Environmental Monitoring Program Sampling Stations" delete sample point "71" and add sample point "96".

III. Justification for Proposed Change

The farm identified as sample point 71 no longer has milk available for use in the Environmental Radioactivity Monitoring Program. The new sample point being added is an adjacent farm so sample will still be available from the same area. Since the soil and vegetation monitoring programs use the same sample points as the milk monitoring program, the same sample point change has been made there also. For these reasons, the above change is proposed.

IV. Review Procedures

This proposed change has been reviewed by the DAEC Operations Committee and Safety Committee which have found that this proposed change does not involve a significant hazards consideration.

TABLE 4.3-1 (Continued)

ENVIRONMENTAL RADIOACTIVITY MONITORING PROGRAM FOR THE DUANE ARNOLD ENERGY CENTER

SAMPLING DESCRIPTION			SAMPLE FREQUENCY		ANALYSIS	REMARKS
Type of Sample	Sample Point	Sampling Point Description	Preoperational Program	Operational Program		
Bottom Sediments	49	Lewis Access	Monthly	Semi-Annually	Gross alpha Gross beta $-K^{40}$ Gamma isotopic analysis ^{90}Sr	Routine gross alpha and gross beta $-K^{40}$ during preoperational phase.
	50	Plant intake				
	51	Plant Discharge				
	61	One-half mile below plant discharge				
Soil	15	On-site	Quarterly	Annual during growing season	Gross alpha Gross beta $-K^{40}$ Gamma isotopic analysis ^{90}Sr	Routine gross alpha and gross beta $-K^{40}$ during preoperational phase. Surface sample from undisturbed area.
	16	On-site				
	62-64	Farms (within 10 miles				
	66	of the site) that				
	72-73	raise food crops				
	93-96	Irrigated farm				
Vegetation	74	downstream of plant	Annually at harvest time (as available)	Annually at harvest time	Gross alpha Gross beta $-K^{40}$ Gamma isotopic analysis ^{90}Sr	Routine gross alpha and gross beta $-K^{40}$ during preoperational phase. Only the edible portion of crops will be analyzed.
	62-64	Farms that raise				
	66	food crops				
	72-73					
Meat and Poultry	93-96		As Available	Annually during or immediately following grazing season	Gamma isotopic analysis on edible portions	The specific location of these samples will vary with availability
		Farms (within 10 miles of the site) that raise poultry or animals for human consumption				

4.3-8

TABLE 4.3-1 (Continued)

ENVIRONMENTAL RADIOACTIVITY MONITORING PROGRAM FOR THE DUANE ARNOLD ENERGY CENTER

SAMPLING DESCRIPTION			SAMPLE FREQUENCY		ANALYSIS	REMARKS
Type of Sample	Sample Point	Sampling Point Description	Preoperational Program	Operational Program		
Milk	62	Control Farm near Brendon, Iowa	Monthly	Weekly	^{131}I	Preoperationally ^{131}I will be analyzed routinely on a monthly basis and more frequently if ^{131}I is detected or suspected. Operationally during the grazing season samples from locations 63, 94 and 93 will be analyzed individually. Operationally during the grazing season samples from locations 64, 66, 67, 68, 71 & 72 will be composited and analyzed. If the composite sample is greater than 2.4 pCi/l the location will be resampled and samples analyzed individually. Operationally during the grazing season samples from locations 62 and 73 will be composited and analyzed. If the composite sample is greater than 2.4 pCi/l the location will be resampled and samples analyzed individually.
	63-64	Dairy farms within 10 mi. of site				
	66	Dairy farm within 10 mi. of site				
	72	Dairy farms within 10 mi. of site				
	73	Control farm near Amana, Iowa				
	93-96	Dairy farm within 10 mi. of site				

TABLE 4.3-1(Continued)

ENVIRONMENTAL RADIOACTIVITY MONITORING PROGRAM FOR THE DUANE ARNOLD ENERGY CENTER

SAMPLING DESCRIPTION			SAMPLE FREQUENCY		ANALYSIS	REMARKS
Type of Sample	Sample Point	Sampling Point Description	Preoperational Program	Operational Program		
Milk	62	Control farm near Brendon, Iowa	Monthly	Monthly	^{89}Sr	Operationally during the grazing season a portion of the weekly sample from each location will be composited for analysis.
	63-64	Dairy farms within 10 mi. of site			^{90}Sr	
	66	Dairy farms within 10 mi. of site			^{137}Cs	
	72	Dairy farms within 10 mi. of site			$^{140}\text{Ba} - ^{140}\text{La}$	
	73	Control farm near Amana, Iowa	Monthly	Monthly	Elemental Ca	Operationally during the non-grazing season a sample from all locations except locations 62 and 73 will be composited and analyzed.
	93-96	Dairy farm within 10 mi. of site			^{131}I	
						Operationally during the non-grazing season a sample from locations 62 & 73 will be composited and analyzed.

4.3-11

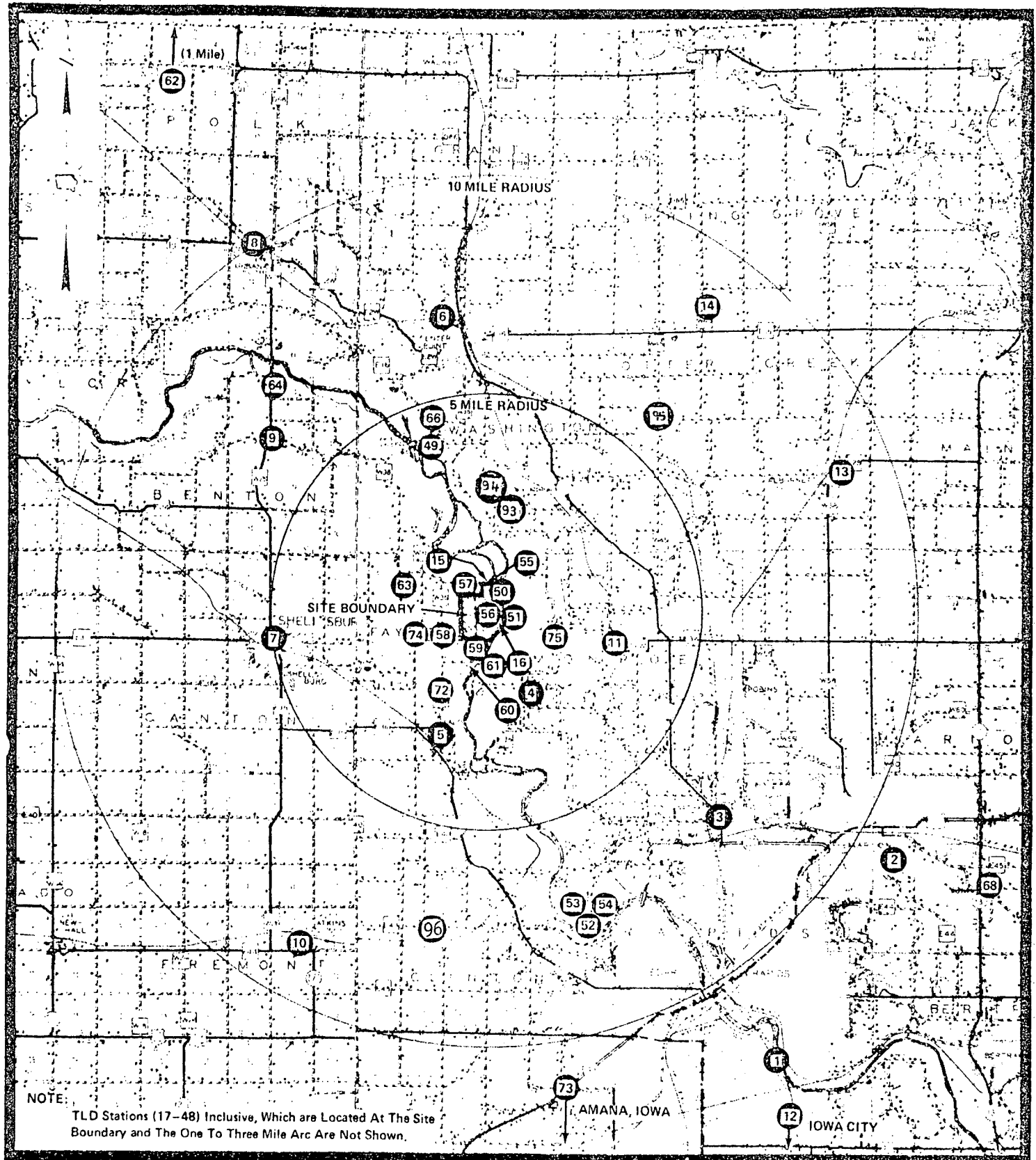


FIGURE 4.3-1 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SAMPLING STATION

PROPOSED CHANGE RTS-52 TO DAEC TECHNICAL SPECIFICATIONS

I. Affected Technical Specifications

Appendix A of the Technical Specifications for the DAEC (DPR-49) provide as follows:

Table 3.2-B, p. 3.2-13

<u>"</u>	<u>Trip Function</u>	<u>Trip Level Setting</u>	<u>"</u>
	RCIC Turbine High Flow	$\pm 180'' \text{ H}_2\text{O}$	

II. Proposed Change in Technical Specifications

The licensees of DPR-49 propose the following change in the Technical Specifications set forth in I above:

Change the trip level setting from " $\pm 180'' \text{ H}_2\text{O}$ " to " $\pm 110'' \pm 5'' \text{ H}_2\text{O}$ ".

III. Justification for Proposed Change

The design criteria for the trip level setting is for the subject switch to trip at 300% of design steam flow to prevent core uncover in the event of a RCIC steam line break. The trip level setting of 180 inches of water was erroneously based on a 3-inch line; the DAEC RCIC system, however, was designed and constructed using a 4-inch line. The differential pressure setpoint calculated analytically using the correct line size is 110 inches of water. Flow tests performed on RCIC also indicate that 110 inches of water is the correct trip level setting. For these reasons the change described in Section II above is proposed. This change constitutes the final corrective action on Abnormal Occurrence Number 50-331/74-47 which stated that the trip level setting would be temporarily changed to 110 inches of water until tests could be performed to verify that setting and a Technical Specification change submitted. The design system required tolerance is 5 percent of the trip level setting or 5.5 inches of water. The tolerance is being added to the Technical Specifications for easier reference.

IV. Review Procedure

This proposed change has been reviewed by the DAEC Operations Committee and Safety Committee which have found that this proposed change does not involve a significant hazards consideration.

TABLE 3.2-B (Continued)

INSTRUMENTATION THAT INITIATES OR CONTROLS THE CORE AND CONTAINMENT
COOLING SYSTEMS

Minimum No. of Operable Instrument Channels Per Trip System (1)	Trip Function	Trip Level Setting	Number of Instrument Channels Provided by Design	Remarks
2	Suppression Chamber HPCI Suction Level	$\leq 5"$ above normal water level	2 Inst. Channels	Transfers HPCI pump suction to suppression chamber
1	RCIC Turbine High Flow	$\pm 110" \pm 5" \text{ H}_2\text{O}$ (2)	2 Inst. Channels	
2	RCIC Turbine Equip- ment Room High Ambient Temperature	$\leq 175 \text{ deg. F}$ (2)	4 Inst.	
2	RCIC Vent High Dif- ferential Temperature	$\leq \Delta 50 \text{ deg. F}$ (2)	4 Inst.	
2	RCIC Steam Line Low Pressure	$100 > P > 50 \text{ psig}$ (2)	4 Inst.	
1	HPCI Turbine Steam Line High Flow	$\pm 225" \text{ H}_2\text{O}$ (3)	2 Inst. Channels	
2	Suppression Pool Area High Ambient Temp- erature	150°F	4 Inst. Channels	
2	Suppression Pool Area High Diff. Temperature	50°F	4 Inst. Channels	
1	HPCI Leak Detection Time Delay	15 min.	2 Inst.	

PROPOSED CHANGE RTS-60 TO DAEC TECHNICAL SPECIFICATIONS

I. Affected Technical Specifications

Appendix A of the Technical Specifications for the DAEC (DPR-49) does not provide a definition for fuel moving equipment.

II. Proposed Change in Technical Specifications

The licensees of DPR-49 propose the following change in the Technical Specifications as set forth above:

Add new Specification 1.0.27. "Fuel Moving Equipment - Refueling bridge and all associated hoists and refueling floor jib crane."

III. Justification for Proposed Change

Specification 6.2.2.1 states that "A senior licensed operator shall be responsible for all movement of new and irradiated fuel within the site boundary. A licensed operator will be required to manipulate the controls of any fuel moving equipment while under the direct supervision of a DAEC supervisor." The purpose of adding the above definition to the Technical Specifications is to clarify which equipment can be operated only by a licensed operator.

IV. Review Procedures

This proposed change has been reviewed by the DAEC Operations Committee and Safety Committee which have found that this proposed change does not involve a significant hazards consideration.

24. Shutdown

The reactor is in a shutdown condition when the reactor mode switch is in the shutdown mode position and no core alterations are being performed.

25. Engineered Safeguard

An engineered safeguard is a safety system the actions of which are essential to a safety action required in response to accidents.

26. Surveillance Frequency

Periodic surveillance tests, checks, calibrations and examinations shall be performed within the specified surveillance intervals. These intervals may be adjusted plus or minus 25%. The operating cycle interval as pertaining to instrument and electrical surveillance shall never exceed 15 months. In cases where the elapsed interval has exceeded 100% of the specified interval, the next surveillance interval shall commence at the end of the original specified interval.

27. Fuel Moving Equipment

Refueling bridge and all associated hoists and refueling floor jib crane.

PROPOSED CHANGE RTS-61 TO DAEC TECHNICAL SPECIFICATIONS

I. Affected Technical Specifications

Appendix A of the Technical Specifications for the DAEC (DPR-49) provide as follows:

Figure 6.2-1, DAEC Nuclear Plant Staffing, shows the organization and lines of responsibility as they were before at the DAEC.

II. Proposed Changes in Technical Specifications

The licensees of DPR-49 propose the following changes in the Technical Specifications set forth in I above:

Added the positions of Technical Engineer and Security Guard as reporting to the Assistant Chief Engineer.

Added the position of Maintenance Superintendent and showed the Mechanical Maintenance Supervisor, Electrical Maintenance Supervisor and Storeroom and Utility Personnel as reporting to the Maintenance Superintendent.

Added the positions of Mechanical Maintenance Supervisor Assistant, Electrical Maintenance Supervisor Assistant and Radiation Protection Engineer Assistant.

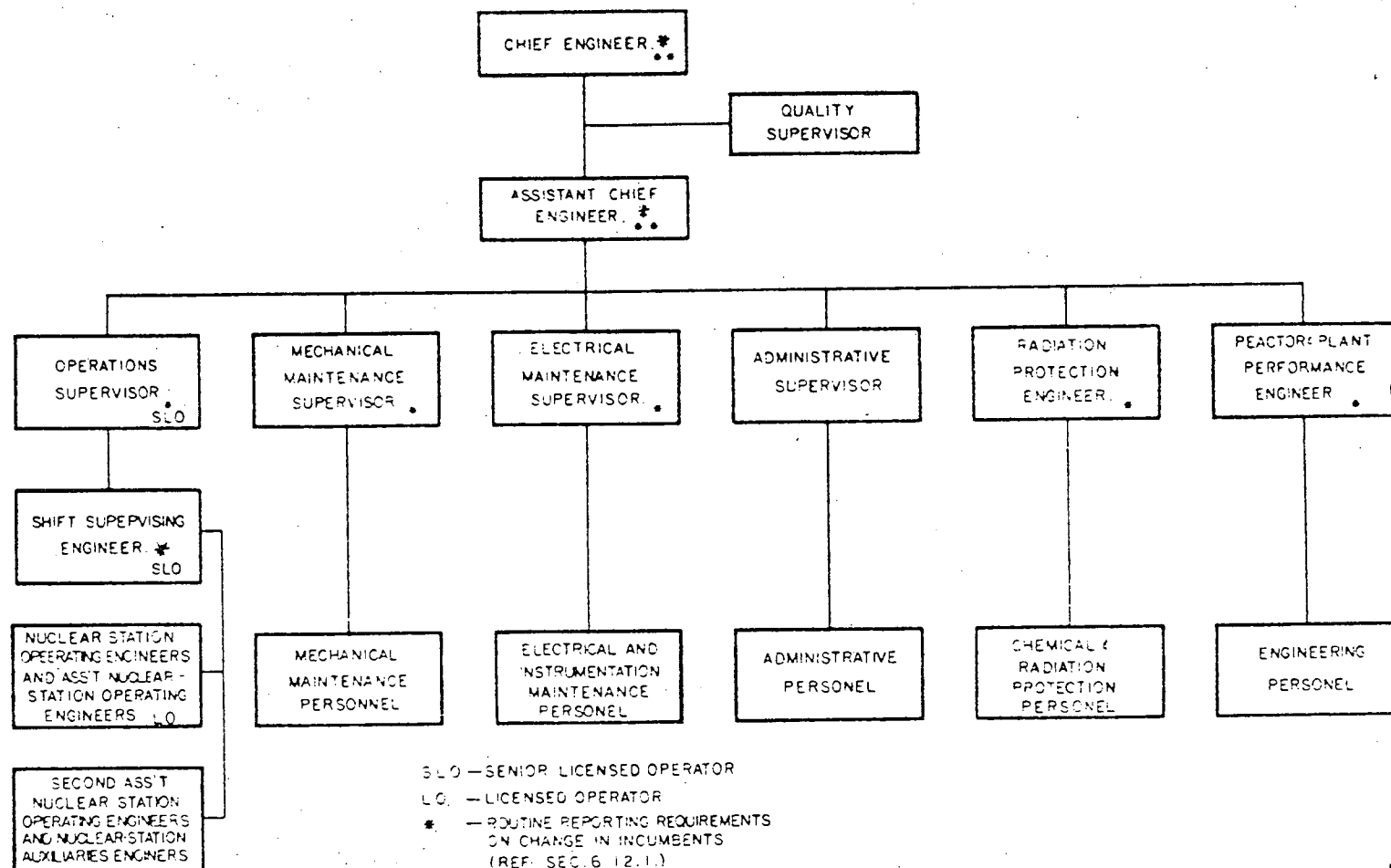
Changed reference on chart regarding routine reporting requirements on change in incumbents from "Ref. Sec. 6.12.1" to "Ref. Spec. 6.11.1".

III. Justification for Proposed Changes

These proposed changes are being submitted to reflect organizational changes made at the Duane Arnold Energy Center. These organizational changes have demonstrated themselves to result in a smoothly operating and efficient plant staff.

IV. Review Procedures

This proposed change has been reviewed by the DAEC Operations Committee and Safety Committee which have found that this proposed change does not involve a significant hazards consideration.

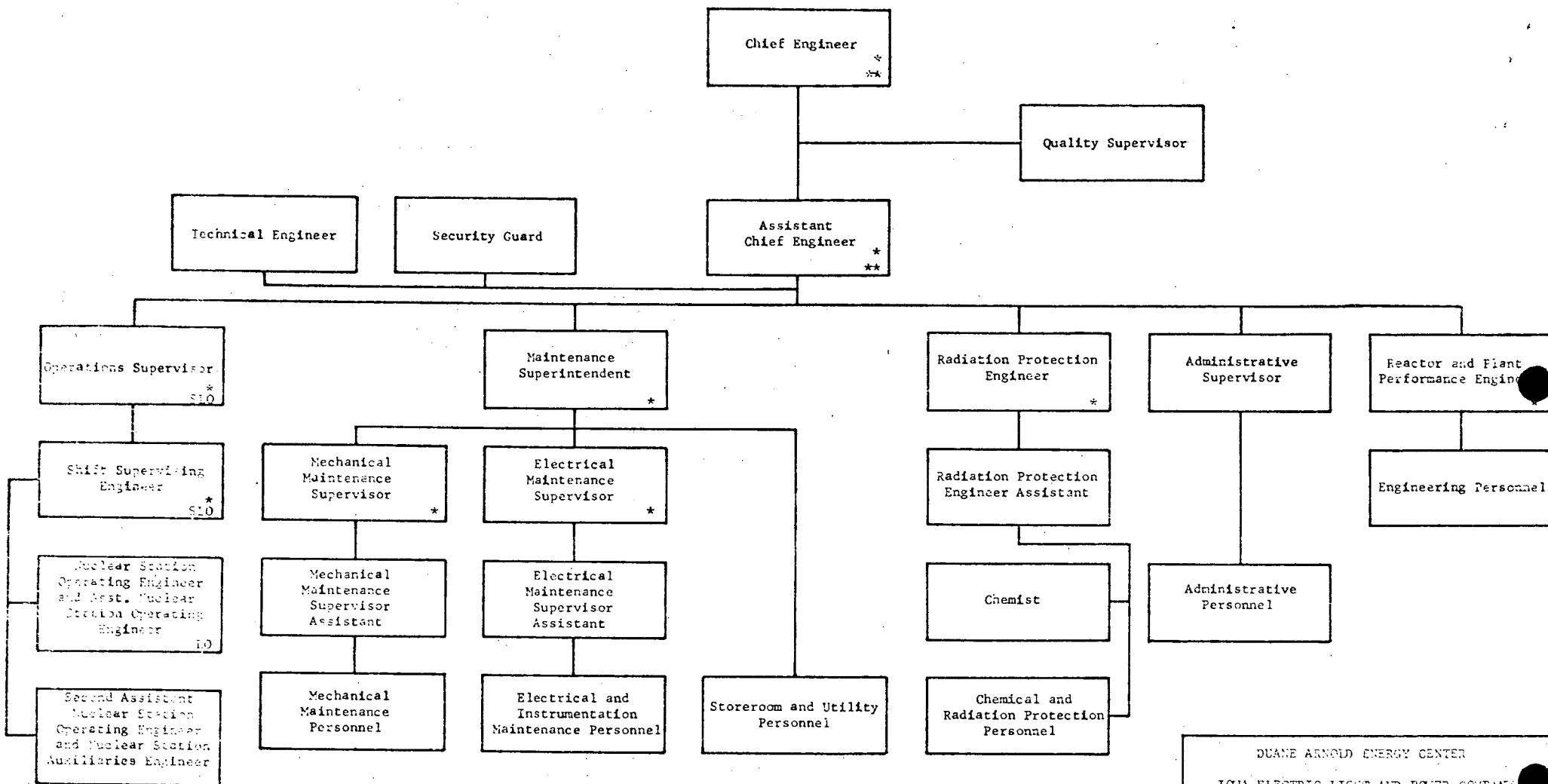


SLO — SENIOR LICENSED OPERATOR
 LO — LICENSED OPERATOR
 * — ROUTINE REPORTING REQUIREMENTS ON CHANGE IN INCUMBENTS (REF. SEC. 6.12.1.)
 ** — CHIEF OR ASSISTANT CHIEF TO MEET ANSI N18.1 1971. LICENSE REQUIREMENTS

DUANE ARNOLD ENERGY CENTER
 IOWA ELECTRIC LIGHT & POWER COMPANY
 TECHNICAL SPECIFICATIONS

DAEC Nuclear Plant Staffing

FIGURE 6.2-1



SLO - Senior Licensed Operator.

LO - Licensed Operator.

* - Routine Reporting Requirements on Change in Incumbents (Ref. Spec. 6.11.1).

** - Chief or Assistant Chief to Meet ANSI N.13.1-1971 License Requirements.

DUANE ARNOLD ENERGY CENTER
IOWA ELECTRIC LIGHT AND POWER COMPANY

TECHNICAL SPECIFICATIONS

DAEC NUCLEAR PLANT STAFFING

FIGURE 6.2-1

PROPOSED CHANGE RTS-62 TO DAEC TECHNICAL SPECIFICATIONS

I. Affected Technical Specifications

Appendix A of the Technical Specifications for the DAEC (DPR-49) provide as follows:

Table 3.2-B, page 3.2-13, provides a trip function for "Suppression Chamber High Level".

II. Proposed Change in Technical Specifications

The licensees of DPR-49 propose the following change in the Technical Specifications set forth in I above:

Change the trip function description from "Suppression Chamber High Level" to "Suppression Chamber HPCI Suction Level".

III. Justification for Proposed Change

The present trip function description is misleading. Five inches above normal water level is not the Suppression Chamber water level corresponding to 61,500 cubic feet. It is the point at which HPCI pump suction is transferred from the Condensate Storage Tank to the Suppression Chamber. For this reason this change has been proposed.

IV. Review Procedures

This proposed change has been reviewed by the DAEC Operations Committee and Safety Committee which have found that this proposed change does not involve a significant hazards consideration.

TABLE 3.2-B (Continued)

INSTRUMENTATION THAT INITIATES OR CONTROLS THE CORE AND CONTAINMENT
COOLING SYSTEMS

Minimum No. of Operable Instrument Channels Per Trip System (1)	Trip Function	Trip Level Setting	Number of Instrument Channels Provided by Design	Remarks
1	Suppression Chamber HPCI Suction Level	$\leq 5"$ above normal water level	2 Inst. Channels	Transfers HPCI pump suction to suppression chamber
1	RCIC Turbine High Flow	$\pm 110" \pm 5" \text{ H}_2\text{O}$ (2)	2 Inst. Channels	
2	RCIC Turbine Equip- ment Room High Ambient Temperature	$\leq 175 \text{ deg. F}$ (2)	4 Inst.	
2	RCIC Vent High Dif- ferential Temperature	$\leq \Delta 50 \text{ deg. F}$ (2)	4 Inst.	
2	RCIC Steam Line Low Pressure	$100 > P > 50 \text{ psig}$ (2)	4 Inst.	
1	HPCI Turbine Steam Line High Flow	$\pm 225" \text{ H}_2\text{O}$ (3)	2 Inst. Channels	
2	Suppression Pool Area High Ambient Temp- erature	150°F	4 Inst. Channels	
2	Suppression Pool Area High Diff. Temperature	50°F	4 Inst. Channels	
1	HPCI Leak Detection Time Delay	15 min.	2 Inst.	