January 4, 1986

Docket No. 50-331

Mr. Lee Liu
Chairman of the Board and
Chief Executive Officer
Iowa Electric Light and Power Company
Post Office Box 351
Cedar Rapids, Iowa 52406

Dear Mr. Liu:

The Commission has issued the enclosed Amendment No. 128 to Facility Operating License No. DPR-49 for the Duane Arnold Energy Center. This to your application dated November 13, 1985.

This amendment revises the Technical Specifications to incorporate corrections to Radiological Effluent Technical Specifications (RETS) (a) for the Steam Air Ejector Post-treatment Monitor, (b) to reflect actual design and operating conditions, (c) for the use of vendor process control programs, and (d) of the errors of grammar and typing.

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's Biweekly Federal Register Notices.

Sincerely,

Original signed by

Mohan Thadani, Project Manager
BWR Project Directorate #2
Division of BWR Licensing

Enclosures:
1. Amendment No. 128 to
License No. DPR-49
2. Safety Evaluation

cc w/enclosures:
See next page

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Docket File	SNorris	BGrimes	LFMB - R. D1665
NRC PDR	MThadani	TBarnhart (4)	Gray File
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PD#2 Reading	LJHarmon	ACRS (10)	Extra - 5
HThompson	ELJordan	OPA, CMiles	

DBL:PD#2	DBL:PD#2	OELD	DBL:PD#2:D
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cc:
Jack Newman, Esquire
Harold F. Reis, Esquire
Newman and Holtzinger
1615 L Street, N. W.
Washington, D. C. 20036

Office for Planning and Programming
523 East 12th Street
Des Moines, Iowa 50319

Chairman, Linn County
Board of Supervisors
Cedar Rapids, Iowa 52406

Iowa Electric Light and Power Company
ATTN: D. L. Mineck
Post Office Box 351
Cedar Rapids, Iowa 52406

U. S. Nuclear Regulatory Commission
Resident Inspector's Office
Rural Route #1
Palo, Iowa 52324

Regional Administrator, Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Mr. Thomas Houvenagle
Regulatory Engineer
Iowa Commerce Commission
Lucas State Office Building
Des Moines, Iowa 50319

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

IOWA ELECTRIC LIGHT AND POWER COMPANY
CENTRAL IOWA POWER COOPERATIVE
CORN BELT POWER COOPERATIVE

DOCKET NO. 50-331

DUANE ARNOLD ENERGY CENTER

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 128
License No. DPR-49

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Iowa Electric Light and Power Company, et al, dated November 13, 1985, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-49 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 128, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Daniel R. Muller, Director
BWR Project Directorate #2
Division of BWR Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: January 4, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 128

FACILITY OPERATING LICENSE NO. DPR-49

DOCKET NO. 50-331

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised areas are indicated by marginal lines.

Pages

1.0-6	3.14-5	3.15-10
1.0-7	3.14-6	3.15-13
3.2-2a	3.14-7	3.15-14
3.2-3	3.14-8	3.16-2
3.2-27	3.14-9	3.16-5
3.2-29	3.14-12	3.16-12
3.2-33	3.15-1	6.8-2
3.2-43	3.15-8	6.10-3
3.2-44	3.15-2	6.11-6
3.14-1	3.15-4	6.11-7
3.14-2	3.15-5	
3.14-3	3.15-7	

22. INSTRUMENTATION

a. Instrument Calibration or Channel Calibration - An Instrument Calibration means the verification or adjustment of an instrument signal output so that it corresponds, within acceptable range and accuracy, to a known value(s) of the parameter which the instrument monitors. The acceptable range and accuracy of an instrument and its setpoint are given in the system design control document and its setpoint is used in the Technical Specifications. Instrument calibration may be performed by any series of sequential, overlapping, or total channel steps such that the entire instrument is calibrated. Instrument calibration includes the Instrument or Channel Functional Test, as appropriate.

b. Channel - A channel is an arrangement of a sensor and associated components used to evaluate plant variables and produce discrete outputs used in logic. A channel terminates and loses its identity where individual channel outputs are combined in logic.

c. Instrument or Channel Functional Test - An Instrument or Channel Functional Test for

(1) Analog channels means the injection of a simulated signal into the channel as close to the sensor as practicable to verify the proper response, alarm, and/or initiating action.

(2) Bistable channels means the injection of a simulated signal into the sensor to verify the proper response, alarm and/or initiating action.

d. Instrument or Channel Check - An instrument or channel check is a qualitative determination of acceptable operability by observation of instrument behavior during operation. This determination shall include, where possible, comparison of the instrument or channel with another independent instrument measuring the same variable.

e. Logic System Functional Test - A logic system functional test means a test of all relays and contacts of a logic circuit to insure all components are operable per design intent. Where practicable, action will go to completion; i.e., pumps will be started and valves operated.

f. Trip System - A trip system means an arrangement of instrument channel trip signals and auxiliary equipment required to initiate action to accomplish a protective trip function. A trip system may require one or more instrument channel trip signals related to one or more plant parameters in order to initiate trip system action. Initiation of protective action may require the tripping of a single trip system or the coincident tripping of two trip systems.

g. Protection Action - An action initiated by the protection system when a limit is reached. A protective action can be at a channel or system level.

22. Instrumentation - Continued

h. Protective Function - A system protective action which results from the protective action of the channels monitoring a particular plant condition.

i. Simulated Automatic Actuation - Simulated automatic actuation means applying a simulated signal to the sensor to actuate the circuit in question.

j. Logic - A logic is an arrangement of relays, contacts, and other components that produces a decision output.

1) Initiating - A logic that receives signals from channels and produces decision outputs to the actuation logic.

2) Actuation - A logic that receives signals (either from initiating logic or channels) and produces decision outputs to accomplish a protective action.

k. Primary Source Signal - The first signal, which by plant design, should initiate a reactor scram for the subject abnormal occurrence (see Updated FSAR Chapters 7 and 15).

l. Source Check - A Source Check is the assessment of channel response when the channel sensor is exposed to a source of radiation.

23. FUNCTIONAL TESTS

A functional test is the manual operation or initiation of a system, subsystem, or component to verify that it functions within design tolerances (e.g., the manual start of a core spray pump to verify that it runs and that it pumps the required volume of water).

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.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
(b) The RBM control rod block setpoints are given in Table 3.2-C. The upscale High Power Trip Setpoint shall be applied when the core thermal power is greater than or equal to 85% of rated ($P > 85\%$). The upscale Intermediate Power Trip Setpoint shall be applied when the core thermal power is greater than or equal to 65% of rated and less than 85% of rated ($65\% < P < 85\%$). The upscale Low Power Trip Setpoint shall be applied when the core thermal power is greater than or equal to 30% of rated and less than 65% of rated ($30\% < P < 65\%$). The RBM can be bypassed when core thermal power is less than 30% of rated. The RBM bypass time delay (t_{d2}) shall be less than or equal to 2.0 seconds.	
D. Radiation Monitoring Systems-Isolation & Initiation Functions	D. Radiation Monitoring Systems-Isolation & Initiation Functions
1. Steam Air Ejector Offgas System	1. Steam Air Ejector Offgas System
a) At least one post-treatment steam air ejector offgas system radiation monitor shall be operable during reactor power operation. The monitors shall be set to initiate immediate closure of the charcoal bed bypass valve and the air ejector offgas isolation valve at a setting equivalent to or below the dose rate limits in Specification 3.15.2.1.	Instrumentation shall be functionally tested, calibrated and checked as indicated in Table 4.2.D.
b) In the event no post-treatment monitor is operable, gases from the steam air ejector offgas system may be released to the environment for up to 72 hours provided (1) the charcoal bed of the offgas system is not bypassed, and (2) the offgas stack noble gas activity monitor is operable. Otherwise, be in at least HOT STANDBY within the following 24 hours.	System logic shall be functionally tested as indicated in Table 4.2-D.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENT
c) At least one pre-treatment steam air ejector offgas system radiation monitor shall be operable during reactor power operation. The monitors shall be set to initiate an alarm if the monitor exceeds a trip setting equivalent to 1.0 Ci/sec of noble gases after 30 minutes delay in the offgas holdup line. In the event the noble gas flow in the air ejector offgas exceeds the equivalent of 1.0 Ci/sec after 30 minutes delay in the offgas holdup line, restore the rate to less than this limit within 72 hours or be in at least hot standby within the next 12 hours.	
d) In the event no pre-treatment monitor is operable, gases from the steam air ejector offgas system may be released for up to 30 days provided (1) the charcoal bed of the offgas system is not bypassed, (2) Grab samples are collected and analyzed weekly, and (3) the offgas stack noble gas activity monitor is operable, or at least 1 post-treatment monitor is operable. Otherwise, be in at least HOT STANDBY within the following 24 hours.	
2. Reactor Building Isolation and Standby Gas Treatment System The limiting conditions for operation are given in Specification 3.7.B.	2. Reactor Building Isolation and Standby Gas Treatment System Instrumentation shall be functionally tested, calibrated and checked as indicated in Table 4.2-D. System logic shall be functionally tested as indicated in Table 4.2-D.

TABLE 4.2-B (Continued)

MINIMUM TEST AND CALIBRATION FREQUENCY FOR CSCS

Logic System Functional Test (4) (6)	Calibration Frequency(9)
1) Core Spray Subsystem	Once/6 months
2) Low Pressure Coolant Injection Subsystem	Once/6 months
3) Containment Spray Subsystem	Once/6 months
4) HPCI Subsystem	Once/6 months
5) HPCI Subsystem Auto Isolation	Once/6 months
6) ADS Subsystem (11)	Once/6 months
7) RCIC Subsystem Auto Isolation	Once/6 months
8) Area Cooling for Safeguard System	Once/6 months
9) Low-Low Set Function	Once/6 months

TABLE 4.2-D

MINIMUM TEST AND CALIBRATION FREQUENCY FOR RADIATION MONITORING SYSTEMS

Instrument Channels	Instrument Functional Test (9)	Calibration (9)	Source Check	Instrument Check
1) Refuel Area Exhaust Monitors	Once/3 months	Once/Refueling	Once/month	Once/day
2) Reactor Building Area Exhaust Monitors	Once/3 months	Once/Refueling	Once/month	Once/day
3) Offgas Post-treatment Radiation Monitors	Once/3 months (10)	Once/Refueling	Once/month	Once/day
4) Offgas Pre-treatment Radiation Monitors	Once/3 months (10)	Once/Refueling	Once/month	Once/day
Logic System Functional Test (4) (6)	**Frequency (9)**			
1) Reactor Building Isolation	Once/Refueling			
2) Standby Gas Treatment System Actuation	Once/Refueling			
3) Steam Jet Air Ejector Offgas Line Isolation	Once/Refueling			
4) Steam Jet Air Ejector Charcoal Bed Bypass	Once/Refueling			

These instrument channels will be calibrated using simulated electrical signals.

4. Simulated automatic actuation shall be performed once each operating cycle. Where possible, all logic system functional tests will be performed using the test jacks.

5. Reactor low water level, high drywell pressure and high radiation main steam line tunnel are also included on Table 4.1-2.

6. The logic system functional tests shall include a calibration of time delay relays and timers necessary for proper functioning of the trip systems.

7. These signals are not PCIS trip signals but isolate the Reactor Water Cleanup system only.

8. This instrumentation is excepted from the functional test definition. The functional test will consist of comparing the analog signal of the active thermocouple element feeding the isolation logic to a redundant thermocouple element.

9. Functional tests and calibrations are not required on the part of the system that is not required to be operable or is tripped. Functional tests shall be performed prior to returning the system to an operable status with a frequency not less than once per month. Calibrations shall be performed prior to returning the system to an operable status with a frequency not less than those defined in the applicable table. However, if maintenance has been performed on those components, functional tests and calibration shall be performed prior to returning to service.

10. The Instrument Functional Test shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exist:

    1. Instrument indicates measured levels above the alarm/trip setpoint.

    2. Instrument indicates a downscale failure.

    3. Instrument controls not set in operate mode.

11. A functional test shall be performed for the ADS manual inhibit switches as part of the ADS subsystem tests.

The refueling interlocks also operate one logic channel, and are required for safety only when the mode switch is in the refueling position.

For effective emergency core cooling for small pipe breaks, the HPCI system must function since reactor pressure does not decrease rapid enough to allow either core spray or LPCI to operate in time. The automatic pressure relief function is provided as a backup to the HPCI in the event the HPCI does not operate. The arrangement of the tripping contacts is such as to provide this function when necessary and minimize spurious operation. The trip settings given in the specification are adequate to assure the above criteria are met. The specification preserves the effectiveness of the system during periods of maintenance, testing, or calibration, and also minimizes the risk of inadvertent operation; i.e., only one instrument channel out of service.

Two air ejector offgas post-treatment monitors are provided. They are designed so that an instrument failure gives a downscale trip or an inoperative trip. When both instruments reach an upscale trip point, or when one reaches an upscale trip point and the other reaches a downscale trip point or an inoperative trip, a trip is actuated. The post-treatment monitors have three upscale trip setpoints, one (Hi) to initiate charcoal bed bypass valve

closure (valve CV-4134A open and CV-4134B closing to route offgas through the charcoal) and another (Hi Hi Hi) to initiate offgas system isolation valve (valve CV-4108) closure. The third trip point (Hi Hi) is for alarm initiation, and will initiate prior to the offgas isolation trip. Customarily, the trip setting for bypass valve closure is lower than the trip setting for offgas system isolation valve closure.

Two sets of two radiation monitors are provided which initiate the Reactor Building Isolation function and operation of the standby gas treatment system. Two instrument channels monitor the radiation from the refueling area ventilation exhaust ducts and two instrument channels monitor the building ventilation below the refueling floor.

Trip settings of < 9 mr/hr for the monitors in the refueling area ventilation exhaust ducts are based upon initiating normal ventilation isolation and standby gas treatment system operation so that none of the activity released during the refueling accident leaves the Reactor Building via the normal ventilation path but rather all the activity is processed by the standby gas treatment system.

Flow integrators are used to record the integrated flow of liquid from the drywell sumps. The alarm unit in each

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENT
3.14 RADIOACTIVE LIQUID EFFLUENT	
3.14.1 The radioactive liquid effluent monitoring instrumentation channels shown in Table 3.14-1 shall be OPERABLE with their alarm and trip setpoints set to ensure that the limits of Specification 3.14.2 are not exceeded. APPLICABILITY: As shown in Table 3.14-1. ACTION: a. When a radioactive liquid effluent monitoring instrumentation channel alarm and trip setpoint is less conservative than a value which will ensure that the limits of 3.14.2 are met, adjust without delay to meet Specification 3.14.2, or suspend the release of radioactive liquid effluents monitored by the affected channel, or declare the channel inoperable. b. When less than the minimum required liquid effluent monitoring instrument channel is OPERABLE, take the ACTION stated in Table 3.14-1 and make every reasonable effort to restore the instrument to operable status. In the event the minimum required instrumentation is not returned to OPERABLE status within 30 days, explain in the next Semiannual Radioactive Material Release Report, in lieu of any other report, why the instrument was not made OPERABLE in a timely manner.	4.14.1.1 Each radioactive liquid effluent monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, SOURCE CHECK, CHANNEL CALIBRATION, and CHANNEL FUNCTIONAL TEST operations during the modes and at the frequencies shown in Table 4.14-1. 4.14.1.2 The setpoints shall be determined in accordance with the method described in the ODAM.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENT
3.14.2 The concentration of radioactive material in liquid effluent released from the site to the unrestricted area (see UFSAR Figure 1.2-1) shall not exceed the concentrations specified in 10CFR Part 20, Appendix B, Table II, Column 2 for radionuclides other than dissolved or entrained noble gases. For dissolved or entrained noble gases, the concentration shall not exceed 2×10^{-4} µCi/ml total activity. APPLICABILITY: At all times. ACTION: a. With the concentration of radioactive material released from the site to unrestricted areas exceeding the limit, without delay restore the concentration within the limit.	4.14.2.1 Each radioactive liquid waste batch shall be sampled and analyzed in accordance with Table 4.14-2 before release. Alternatively, pre-release analysis of batch(es) of radioactive liquid waste may be by gross β or γ counting provided the maximum permissible concentration, 1×10^{-7} µCi/ml, is applied at the unrestricted area boundary. 4.14.2.2 The results of pre-release analyses shall be used with the calculational methods in the ODAM to establish trip setpoints for batch releases to assure that the concentration at the restricted area boundary does not exceed the limit in Specification 3.14.2. 4.14.2.3 In any week during which Service Water is released to the unrestricted area, a grab sample of water shall be collected from that Service Water System and analyzed as specified in Table 4.14-2, Item B.1 or B.2, and Item B.4. In the event the radioactivity concentration in the service water exceeds the LLD stated in Table 4.14-2 for the analytical method used, the activity concentration shall be determined by sampling and post-release analyses specified in Table 4.14-2, Items B.2 through B.5.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENT
3.14.3 The dose or dose commitment to a member of the Public from radioactive materials in liquid effluents released to the unrestricted area (see UFSAR Figure 1.2-1) shall not exceed: 1.5 mrem to the total body during any calendar quarter, 5.0 mrem to any organ during any calendar quarter, 3.0 mrem to the total body during any calendar year, or 10.0 mrem to any organ during any calendar year. APPLICABILITY: At all times. ACTION: a. With the calculated dose from the release of radioactive materials in liquid effluents exceeding the above limit, prepare and submit to the Commission within 30 days from the end of the quarter during which the release occurred, pursuant to Specification 6.11.3, and in lieu of any other report, a Special Report which identifies the cause(s) for exceeding the limit and defines the corrective actions to be taken.	4.14.3 Dose Calculations. In any quarter in which radioactive liquid effluent is discharged, an assessment shall be performed in accordance with the ODAM at least once per 30 days in order to verify that the cumulative dose commitment does not exceed the limits in Specification 3.14.3.

TABLE 3.14-1

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABILITY#	ACTION
1. Gross Radioactivity Monitors Providing Automatic Termination of Release			
a. Liquid Radwaste Effluent Line	(1)	During releases	18
2. Gross Radioactivity Monitors Not Providing Automatic Termination of Release			
a. RHR Service Water System Effluent Line	(1)	During releases	20
b. General Service Water System	(1)	During releases	20
c. RHR Rupture Disc Effluent Line	(1)	During releases	20
3. Flow Rate Measurement Devices			
a. Liquid Radwaste Effluent Line**	(1)	At all times	21
b. Liquid Radwaste Dilution Line	(1)	During releases	22

Channel(s) shall be OPERABLE and in service except that channels out of service are permitted for preventive maintenance and required tests, checks, or calibrations.

**Pump curves may be utilized to estimate flow in lieu of flow measurement devices.

TABLE 3.14-1
(Continued)

TABLE NOTATION

ACTION 18 With no channel OPERABLE, effluent may be released provided that prior to initiating a release:

1. At least two samples are analyzed in accordance with Specification 4.14.2.1, and;

2. A technically qualified member of the Facility Staff verifies the release rate calculations and discharge valving determined by another technically qualified Facility Staff member.

Otherwise, suspend release of radioactive effluents via this pathway.

ACTION 20 With no channel OPERABLE, effluent releases via the affected pathway may continue provided the effluent is sampled and analyzed for gross radioactivity at least once per eight hours during actual release. The analysis shall be capable of detecting 10^{-7} μCi/ml.

ACTION 21 With no channel OPERABLE, effluent releases via this pathway may continue provided the flow rate is estimated with pump curves at least once per batch during actual releases.

ACTION 22 With no channel OPERABLE, suspend release of radioactive effluents via this pathway.

TABLE 4.14-1

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	SOURCE CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST
1. Gross Beta or Gamma Radioactivity Monitors Providing Alarm and Automatic Isolation				
a. Liquid Radwaste Effluent Line	D*	D(6)	R(3)	Q(1)(2)
2. Gross Beta or Gamma Radioactivity Monitors Providing Alarm But Not Providing Automatic Isolation				
a. RHR Service Water System Effluent Line	D*	M	R(3)	Q(2)
b. General Service Water System Effluent Line	D*	M	R(3)	Q(2)
c. RHR Rupture Disc Effluent Line	D*	M	R(3)	Q(2)
3. Flow Rate Measurement Devices				
a. Liquid Radwaste Effluent Line	D(5)*	N.A.	R	Q
b. Liquid Radwaste Dilution Line	D(5)*	N.A.	R	Q

TABLE 4.14-1
(Continued)

TABLE NOTATION

*During releases via this pathway.
**During liquid additions to the tank.

(1) The CHANNEL FUNCTIONAL TEST shall also demonstrate that automatic isolation of this pathway if the following condition exists:

1. Instrument indicates measured levels above the alarm/trip setpoint.

(2) The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exist:

1. Instrument indicates measured levels above the alarm/trip setpoint.

2. Circuit failure.

3. Instrument indicates a downscale failure.

4. Instrument controls not set in operate mode.

(3) The CHANNEL CALIBRATION shall include the use of a known radioactive source (traceable to the National Bureau of Standards radiation measurement system or acceptable non-NBS standards) positioned in a reproducible geometry with respect to the sensor and emitting beta or gamma radiation in the range measured by the channel. CHANNEL CALIBRATION may normally be done during refueling outages.

(4) Not used

(5) CHANNEL CHECK shall consist of verifying indication of flow during periods of release. CHANNEL CHECK shall be made at least once daily on any day on which continuous, periodic, or batch releases are made.

(6) On any day on which a release is made, a SOURCE CHECK shall be made at least once, prior to the first release.

TABLE 4.14-2

RADIOACTIVE LIQUID WASTE SAMPLING AND ANALYSIS PROGRAM

Liquid Release Type	Sampling Frequency	Minimum Analysis Frequency	Type of Activity Analysis	Lower Limit of Detection (LLD)[a] (μCi/ml)
A. Batch Waste Release Tanks[c]	P Each Batch	P Each Batch	Principal Gamma Emitters[e]	5×10^{-7}
			I-131[e]	1×10^{-6}
	P One Batch/M	M[f]	Dissolved and Entrained Gases	1×10^{-5}
	P Each Batch	M[f] Composite[b]	H-3	1×10^{-5}
			Gross alpha	1×10^{-7}
	P Each Batch	Q[f] Composite[b]	Sr-89, Sr-90	5×10^{-8}
			Fe-55	1×10^{-6}
B. Continuous Service Water Release[d] Sample Points: • General Service Water • RHR Service Water System A • RHR Service Water System B	1. W Grab Sample	W[f]	Gross beta/gamma	1×10^{-7}
	2. W Grab Sample	W[f]	Principal Gamma Emitters	5×10^{-7}
			I-131	1×10^{-6}
	3. M Grab Sample	M[f]	Dissolved and Entrained Gases	1×10^{-5}
	4. W Grab Sample	M[f] Composite	H-3	1×10^{-5}
			Gross alpha	1×10^{-7}
	5. W Grab Sample	Q[f] Composite	Sr-89, Sr-90	5×10^{-8}
			Fe-55	1×10^{-6}

3.14.1 and 4.14.1 BASES

1. Radioactive Liquid Effluent Instrumentation

The radioactive liquid effluent instrumentation is provided to monitor and control, as applicable, the release of radioactive material in liquid effluents. The OPERABILITY and use of these instruments implements the requirements of 10CFR Part 50, Appendix A, General Design Criteria 60, 63, and 64. The alarm and/or trip setpoints for these instruments are calculated in the manner described in the ODAM to assure that the alarm and/or trip will occur before the limit specified in 10CFR Part 20.106 is exceeded.

Instrumentation is expected to be OPERABLE and in service when required by Specification. An instrument may be removed from service voluntarily for the purpose of tests, checks, calibration, or preventative maintenance without declaring the channel inoperable.

3.14.2 and 4.14.2 BASES

1. Liquid Effluent Concentration

Specification 3/4.14.2 is provided to satisfy the regulation governing the maximum concentration of radioactive material in liquid effluent that may be released to an unrestricted area as stated in 10CFR Part 20.106 and the regulation requiring surveys needed to determine compliance stated in Part 20.201.

Conformance to Specification 3.14.2, when applied to the activity concentration in the river at the site boundary due to liquid effluent, would assure that the average activity concentration in liquid effluent released to the unrestricted area is a small fraction of the limit specified in Part 20.106.

The sample points noted in Table 4.14-2 are adequate to ensure sampling of potential liquid radioactive effluents from the service water systems. The sample points include the General Service Water System and the RHR Service Water Systems A and B. The sample point for the RHR Service Water Systems is at a location downstream of the point where Emergency Service Water discharge joins with the RHR Service Water System, and upstream of the point where the RHR Rupture Disc Line branches off of the RHR Service Water System. This sample point will therefore provide for sampling effluents from the RHR Service Water System, Emergency Service Water System and/or RHR Rupture Disc line.

3.14.3 and 4.14.3 BASES

1. Dose Due to Radioactive Effluents

Specifications 3.14.3, 3.15.3, and 3.15.4 implement the requirements of 10CFR Part 50.36a and of 10 CFR Part 50, Appendix I, Section IV. These specifications state Limiting Conditions of Operation (LCO) to keep levels of radioactive materials in LWR effluents as low as is reasonably achievable. Compliance with these specifications will also keep average releases of radioactive material in effluents at small percentages of the limits specified in 10CFR Part 20.106. Surveillance requirements provide for the measurement of releases and calculation of doses to verify compliance with the Specifications. Action statements in these Specifications implement the requirements of 10CFR Part 50.36(c)(2) and 10CFR Part 50, Appendix I, Section IV.A in the event a LCO is not met.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENT
3.15.1 The radioactive gaseous effluent monitoring instrumentation channels shown in Table 3.15-1 shall be OPERABLE. Their radioactive noble gas monitor alarm setpoint shall be set to cause automatic alarm when the limits of Specification 3.15.2.1 are exceeded.	4.15.1.1 Each radioactive gaseous effluent monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, SOURCE CHECK, CHANNEL CALIBRATION, AND CHANNEL FUNCTIONAL TEST operations during the MODES and at the frequencies shown in Table 4.15-1.
APPLICABILITY: As shown in Table 3.15-1.	4.15.1.2 The setpoints shall be determined according to the method described in the ODAM.
ACTION:	
a. With radioactive gaseous effluent monitoring instrumentation channel alarm setpoint less conservative than a value which will ensure that the limits of 3.15.2 are met, adjust without delay to meet Specification 3.15.1, declare the channel inoperable, or immediately suspend any release via the instrumented pathway.	
b. When less than the minimum required gaseous effluent monitoring instrument channels OPERABLE, take the action stated in Table 3.15-1 and make every reasonable effort to restore the instrument to operable status. In the event the minimum required instrumentation is not returned to OPERABLE status within 30 days, explain in the next Semiannual Radioactive Material Release Report, in lieu of any other report, why the instrument was not made OPERABLE in a timely manner.	

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENT
	4.15.2 Compliance with 3.15.2 shall be assessed on the basis of results of measurements specified in Table 4.15-2 and according to methodology stated in the ODAM.
3.15.2.1 The dose rate in the unrestricted area (see UFSAR Figure 1.2-1) due to radioactive noble gas released in effluents shall not exceed 500 mrem/year to the total body or 3000 mrem/year to skin.	
3.15.2.2 The dose rate in the unrestricted area due to I-131, I-133, H-3, and to radioactive particulates having half-lives of 8 days or more that are released in effluents shall not exceed 1500 mrem/year to any organ.	
APPLICABILITY: Whenever monitoring or sampling is required.	
ACTION: When the dose rate exceeds a limit in 3.15.2, decrease the release rate without delay to comply with the limit.	

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENT
3.15.4 The dose to a member of the public from iodine-131, I-133, H-3, and from radionuclides in particulate form having half-lives greater than eight days in gaseous effluents released from the site to the unrestricted area (see UFSAR Figure 1.2-1) shall not exceed: 7.5 mrem to any organ during any calendar quarter, or, 15.0 mrem to any organ during any calendar year. APPLICABILITY: At all times when monitors are required. ACTION: a. With the calculated dose from the release of I-131, I-133, H-3, and radionuclides in particulate form having half-lives greater than eight days in gaseous effluents exceeding the above limit, prepare and submit a Special Report to the Commission within 30 days following the end of the calendar quarter during which the release occurred. The Special Report shall be made pursuant to Specification 6.11.3, shall be in lieu of any other report, and shall identify the cause(s) for exceeding the limit and define the corrective actions taken.	4.15.4.1 Dose Assessment An assessment shall be performed in accordance with the ODAM at least once every 31 days to verify that the cumulative dose commitment due to I-131, I-133, H-3, and radioactive particulates having half-lives greater than eight days in gaseous effluents does not exceed the limits in Specification 3.15.4.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENT
3.15.5 Every reasonable effort shall be made to maintain at least one train of the Offgas System OPERABLE. Within four hours after commencing operation of the main condenser air ejector, at least one train of charcoal beds in the Offgas System shall be placed in operation to treat radioactive gases from the main condenser air ejector. During continuing reactor operation, at least one train of charcoal beds in the Offgas System shall be used to treat the gases before discharge. APPLICABILITY: When the main condenser air ejector is operating. ACTION: a. If gaseous wastes are discharged for more than 7 days without treatment, prepare and submit a Special Report to the Commission within 30 days pursuant to Specification 6.11.3, in lieu of any other report, including the following information: 1. Identification of the inoperable equipment or subsystem and reason for inoperability. 2. Action(s) taken to restore the inoperable equipment to OPERABLE status. 3. Summary description of action(s) taken to prevent a recurrence.	4.15.5 The gaseous effluent monitoring systems of Specification 3.2.D shall be used to verify the operation of the offgas system.

TABLE 3.15-1

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

Instrument@	Minimum Channels Operable	Applicability#	Function	Action
1. Deleted				
2. Offgas Hydrogen Monitor (R2)	2	**	Monitor hydrogen concentration	29
3. Offgas Stack Monitoring System (R3)				
a. Noble Gas Activity Monitor	1	*	Monitor activity concentration, alarm	27
b. Iodine Sampler Cartridge	1	*	Collect iodine sample	31
c. Particulate Sampler Filter	1	*	Collect particulate sample	31
d. Effluent Flow Measuring Device	1	*	Measure air flow	26
e. Sample Flow Measuring Device	1	*	Measure air flow	26
4. Reactor Building Exhaust Vent Monitoring System (R4)				
a. Noble Gas Activity Monitor	1	*	Monitor activity concentration, alarm	27
b. Iodine Sampler Cartridge	1	*	Collect iodine sample	31
c. Particulate Sampler Filter	1	*	Collect particulate sample	31
d. Effluent Flow Measuring Device	1	*	Measure air flow	26
e. Sample Flow Measuring Device	1	*	Measure air flow	26
5. Turbine Building Exhaust Vent Monitoring System (R5)				
a. Noble Gas Activity Monitor	1	*	Monitor radioactivity concentration, alarm	27
b. Iodine Sampler Cartridge	1	*	Collect iodine sample	32
c. Particulate Sampler Filter	1	*	Collect particulate sample	32
d. Effluent Flow Measuring Device	1	*	Measure air flow	26
e. Sample Flow Measuring Device	1	*	Measure air flow	26

TABLE 3.15-1
(Continued)

TABLE NOTATION

@ Refer to ODAM Figure 3-1 for location of effluent monitoring points R1 thru R6.

Channels shall be OPERABLE and in service except that channels out of service are permitted for the purpose of required tests, checks, calibration, and preventative maintenance without declaring the channel to be inoperable.

* During releases via this pathway.

** During offgas system operation.

ACTION 25 Deleted

ACTION 26 With no channel OPERABLE, effluent releases via this pathway may continue provided the flow rate is estimated whenever operation of a main exhaust fan combination is changed in the system.

ACTION 27 With no channel OPERABLE, effluent releases via this pathway may continue if grab samples are taken at least once per eight hours and these samples are analyzed for radioactivity within 24 hours or if an alternate monitoring system is utilized. Drywell purge is permitted whenever the offgas stack monitor or its alternate monitor is operating.

ACTION 28 Deleted

ACTION 29 With one channel OPERABLE, operation of the offgas system may continue provided the recombiner temperature sensor is operable. When only one of the preceding methods is operable, the offgas system may be operated provided gas samples are collected at least once per day and analyzed for hydrogen within the ensuing four hours.

ACTION 31 With no channel OPERABLE, effluent releases via this pathway may continue, provided samples required in Table 4.15-2 are continuously collected with auxiliary sampling equipment.

ACTION 32 With no channel OPERABLE, effluent releases via this pathway may continue if grab samples are taken at least once per eight hours and these samples are analyzed for radioactivity within 24 hours or if an alternate monitoring system is utilized.

TABLE 4.15-1
(Continued)

TABLE NOTATION

Instrumentation shall be OPERABLE and in service except that channels out of service are permitted for the purpose of required tests, checks, calibrations, and preventative maintenance without declaring the channel to be inoperable.

* During releases via this pathway.

** During offgas system operation.

***During operation of the steam jet air ejector.

(1) Not used.

(2) The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exist:

1. Instrument indicates measured levels above the alarm setpoint.

2. Circuit failure.

3. Instrument indicates a downscale failure.

4. Deleted

(3) The CHANNEL CALIBRATION shall include the use of a known radioactive source (traceable to the National Bureau of Standards radiation measurement system or other acceptable non-NBS standards) positioned in a reproducible geometry with respect to the sensor and emitting beta and/or gamma radiation in the range measured by the channel in accord with established station calibration procedures. Alternately, after the initial calibration, noble gas activity monitors may be calibrated by laboratory analyzed gas samples collected and analyzed per Table 4.15-2, item A.

(4) The CHANNEL CALIBRATION shall include the use of at least two standard gas samples, each containing a known volume percent hydrogen in the range of the instrument, balance nitrogen.

3.15.1 and 4.15.1 BASES

1. Radioactive Gaseous Effluent Instrumentation

The radioactive gaseous effluent instrumentation is provided to monitor the release of radioactive materials in gaseous effluents and, as appropriate, to control potential releases. Instrumentation for monitoring the concentration of potentially explosive gas mixtures in the main condenser offgas treatment system is also provided. The presence of instruments for monitoring both radioactive and explosive gaseous effluents is depicted in ODAM Figure 3-1. The OPERABILITY and use of these instruments implements the requirements of 10CFR Part 50, Appendix A, General Design Criteria 60, 63, and 64.

Reactor building exhaust ventilation shaft radiation monitors initiate isolation of the reactor building normal ventilation and start standby gas treatment when a high trip point is reached.

DAEC is equipped with a radioactive gaseous effluent monitoring system which includes detectors at the offgas stack (R3), the reactor building vent (R4), and the turbine building vent (R5). A remote indication and control unit located near each detector displays the detector reading and, whenever the setpoint is exceeded, an indicator light. The data are also routed to a control computer and a control room display but do not cause a trip to isolate the ventilated area. In the event the control computer and/or control room display fail to function or are voluntarily taken out of service, each remote indication and control unit is designed to acquire data for up to 30 hours. It is intended that each affected remote indication and control unit display be observed at least once per 24 hours (in which case the affected channel remains OPERABLE).

If an alarm trip setpoint is exceeded at the same time the control computer and/or control room display are neither functioning nor in service, alarm annunciation will still occur in the control room. In the event the detector reading and the indication of exceeding the monitor setpoint are not provided at either the control room or the remote indication and control unit, then the affected channel is not OPERABLE and DAEC will either perform the appropriate ACTION or will provide an alternate monitoring system. This permits DAEC to retain the GE gaseous monitoring system as an alternate system for normal effluent monitoring when the Kaman system is temporarily inoperable. When used as an alternate monitoring system, the GE system is subject to the requirements stated in Specifications 3.15.1 and 4.15.1 and to LLD requirements stated in Table 4.15-2, Item C.

2. Not used

3. Gaseous Effluents

Assessments of dose required by Specifications 4.15.3 and 4.15.4 to verify compliance with Appendix I, Section IV are based on measured radioactivity in gaseous effluent and on calculational methods stated in the ODAM. Pathways of exposure and location of individuals are selected such that the dose to a nearby resident is unlikely to be underestimated. Dose assessment methodology described in the ODAM for gaseous effluent will be consistent with the methodology in Regulatory Guides 1.109 and 1.111. Cumulative and projected assessments of dose made during a quarter are based on historical average meteorological conditions measured at DAEC. Assessment made for the annual radiological environmental report will be based on annual averages of atmospheric conditions during the period of release.

3.15.2 and 4.15.2 BASES

Gaseous Effluent Concentration

This specification is intended to ensure that the concentration of radioactive material in the unrestricted area beyond the site boundary due to gaseous effluents from DAEC will maintain doses within the annual dose limits to unrestricted area provided in 10 CFR Part 20. Compliance with these limits also reasonably assures that radioactive material in gaseous effluents will not result in exposure of a member of the public in an unrestricted area to annual averaged concentrations exceeding the limit in 10 CFR Part 20.106. The occupancy time of members of the public who may occasionally be on the site is expected to be low enough to compensate for any less atmospheric dispersion on site than to the environs offsite.

Assessment of compliance is based upon an effluents measurement program defined in Table 4.15-2 and methodology stated in the ODAM. The resolving time of the measurements, ie., the sample integration time, bounds the minimum averaging time of the effluent measurements. waste streams. The Standby Gas Treatment System is considered an Engineered Safety Feature and not an exhaust ventilation treatment system. Thus the exhaust ventilation system discharges via the reactor building vent.

3.15.3 and 4.15.3 BASES

Doses due to Noble Gases

These specifications implement the requirements of 10 CFR Part 50, Appendix I.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENT
3.16.2 A radiological environmental monitoring program shall be conducted as specified in Table 3.16-1. APPLICABILITY: At all times. ACTION: a. In the event the radiological environmental monitoring program is not conducted as specified in the Table 3.16-1, prepare and submit to the Commission in the Annual Radiological Environmental Report the reasons for not conducting the program in accord with the Table 3.16-1 and the plans for preventing a recurrence. b. In the event radioactivity in a sampled environmental medium, averaged over a calendar quarter, is attributable to DAEC and exceeds an appropriate value listed in Table 3.16-3 or, if not listed, causes a potential annual dose exceeding two times the quarterly dose limit in Specification 3.14.3 or 3.15.4, prepare and submit to the Commission within 30 days after discovery a Special Report which includes an evaluation of any release conditions, environmental factors or other conditions which caused the value(s) of Table 3.16-3 or two times the quarterly dose limit to be exceeded and which defines the corrective actions to be taken. If the radioactivity in environmental sample(s) is not attributable to releases from the Station, the Special Report is not	4.16.2.1 Sampling and analyses required in Table 3.16-1 shall be performed such that the detection capabilities specified in Table 3.16-2 are achieved under routine conditions. If a sample analysis does not meet the LLD specified, report the reason attributed in the next Annual Radiological Environmental Report. 4.16.2.2 Land Use Census DAEC shall conduct annually a land use census within three miles of the Station to identify radiologically important changes in land use.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENT
3.16.4 Appropriate equipment shall be operated in accordance with a Process Control Program to process wet radioactive waste solids destined for disposal to a form that meets appropriate requirements of 10 CFR Part 61.56 before the waste is shipped from the DAEC site.	4.16.4.1 The Process Control Program shall state the essential operating parameters of the process(es), the essential characteristics of the waste form to be shipped, and the essential product verification requirements.
APPLICABILITY: During Processing of radioactive waste solids for disposal.	
ACTION:	
1. Suspend delivery to a transport carrier of any container of radioactive waste not complying with 10 CFR Part 61.56.	

environmental sample matrices are performed as part of the quality assurance program for environmental monitoring in order to demonstrate that the results are reasonably valid.

3.16.4 and 4.16.4 BASES

1. Radioactive Waste Solids

This specification implements the requirements of 10 CFR Part 50.36a(a), the General Design Criterion 60 of 10 CFR Part 50 Appendix A, and of 10 CFR Part 61.56 on characteristics of low-level radioactive wastes destined for disposal by burial. Applicable requirements on packaging and delivery of packages of radioactive material to a carrier for transport stated in 10 CFR Part 71 and on transportation of hazardous materials in 49 CFR 171-179 are not restated in the technical specifications.

Processing waste to meet characteristics permitted under 10 CFR Part 61.56 may include solidification, preparation for deposit in a high integrity container, or any form acceptable under Part 61 for shipment to and receipt by a licensed disposal facility or licensed radioactive waste processor.

It is intended that a Contractor may perform the waste processing provided he operates according to a Process Control Program approved in accordance with Technical Specification 6.15.

8. Procedures required by the plant Security Plan.

9. Operation of radioactive waste systems.

10. Fire Protection Program implementation.

11. A preventive maintenance and periodic visual examination program to reduce leakage from systems outside containment that would or could contain highly radioactive fluids during a serious transient to as low as practical levels. This program shall also include provisions for performance of periodic systems leak tests of each system no less frequently than at refueling cycle intervals.

12. Program to ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions, including training of personnel, procedures for monitoring and provisions for maintenance of sampling and analysis equipment.

13. Administrative procedures for shift overtime for Operations personnel to be consistent with the Commission's June 15, 1982, policy statement.

14. Offsite Dose Assessment Manual.

15. Process Control Plan.

16. Quality Control Program for effluents.

6.8.2 Procedures described in 6.8.1 above, and changes thereto, shall be reviewed by the Operations Committee and approved by the Plant Superintendent-Nuclear prior to implementation, except as provided in 6.8.3 below.

6.8.3 Temporary minor changes to procedures described in 6.8.1 above which do not change the intent of the original procedure may be made with the concurrence of two members of the plant management staff, at least one of whom shall hold a senior operator license. Such changes shall be documented and promptly reviewed by the Operations Committee and by the Plant Superintendent-Nuclear. Subsequent incorporation, if necessary, as a permanent change, shall be in accord with 6.8.2 above.

7. Records of training and qualification for current members of the plant staff.

8. Records of in-service inspections performed pursuant to these Technical Specifications.

9. Records of Quality Assurance activities required by the QA Manual.

10. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.

11. Records of meetings of the Operations Committee and the Safety Committee.

12. Records for Environmental Qualification which are covered under the provisions of paragraph 6.13.

13. Records of the service lives of all safety-related hydraulic and mechanical snubbers including the date at which the service life commences and associated installation and maintenance records.

14. Records of results of analyses required by the radiological environmental monitoring program.

6.11.3 UNIQUE REPORTING REQUIREMENTS

Special reports shall be submitted to the Director of Inspection and Enforcement Regional Office within the time period specified for each report. These reports shall be submitted covering the activities identified below pursuant to the requirements of the applicable reference specification.

a. Reactor vessel base, weld and heat affected zone metal test specimens (Specification 4.6.A.2).

b. I-131 dose equivalent exceeding 50% of equilibrium value (Specification 4.6.B.1.h).

c. Inservice inspection (Specification 4.6.G).

d. Reactor Containment Integrated Leakage Rate Test (Specification 4.7.A.2.f).

e. deleted

f. Fire Protection Systems (Specifications 3.13.A.3, 3.13.B.2, 3.13.B.3, 3.13.C.3, and 3.13.D.3).

g. deleted

h. Radioactive Liquid or Gaseous Effluent - calculated dose exceeding specified limit (Specifications 3.4.3, 3.15.3 and 3.15.4). (effective date 1/1/86)

i. Off-Gas System inoperable (Specification 3.15.5). (effective date 1/1/86)

j. Measured levels of radioactivity in an environmental sampling medium determined to exceed the reporting level values of Table 3.16-3 when averaged over any calendar quarter sampling period, (specification 3.16.2.b). (effective date 1/1/86)

k. Annual dose to a member of the public determined to exceed 40 CFR Part 190 dose limit, (specification 3.16.1.b). (effective date 1/1/86)

l. Radioactive liquid waste released without treatment when activity concentration exceeds 0.01 Ci/ml, (specification 3.14.4.a). (effective date 1/1/86)

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 128 TO LICENSE NO. DPR-49

IOWA ELECTRIC LIGHT AND POWER COMPANY
CENTRAL IOWA POWER COOPERATIVE
CORN BELT POWER COOPERATIVE

DUANE ARNOLD ENERGY CENTER

DOCKET NO. 50-331

1.0 INTRODUCTION

By a letter dated November 13, 1985, the Iowa Electric Light and Power Company (the licensee) requested changes to the Duane Arnold Energy Center (DAEC) Technical Specifications (TS). During the implementation of Amendment No. 109, dated January 14, 1985, incorporating Radiological Effluent Technical Specifications (RETS) to the DAEC, various problems have been noted which require corrections to the previously-approved TSs. These corrections are needed to reflect actual operation or design of the DAEC systems, or to provide clarification to the plant operations personnel, or to correct some typographic errors. These corrections should have been included in the application for Amendment No. 109 but were not noted until near the final implementation of the RETS program.

2.0 EVALUATION

The staff has evaluated the proposed changes and finds that the requested changes are primarily administrative in nature, are provided for clarification, and do not violate the intent of the NRC staff's model RETS for the Boiling Water Reactors (BWRs) in NUREG-0473, Revision 2, February 1, 1980.

Based on our evaluation, we find that the proposed changes will not remove or relax any existing requirements related to the implementation of the RETS, and the RETS will continue to meet the intent of our requirements for radiological effluents from BWRs. Therefore, we find the proposed changes acceptable.

3.0 ENVIRONMENTAL CONSIDERATIONS

This amendment involves administrative procedures or requirements. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

4.0 CONCLUSION

We have concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: C. Nichols

Dated: January 4, 1986