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/ A. Giambusso	1 signed	39		

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DESCRIPTION:

Ltr trans the following.....

ACKNOWLEDGED

ENCLOSURES:

Proposed change to Tech Specs...1 thru 12 to Appendix A....1 thru 5 to Appendix B

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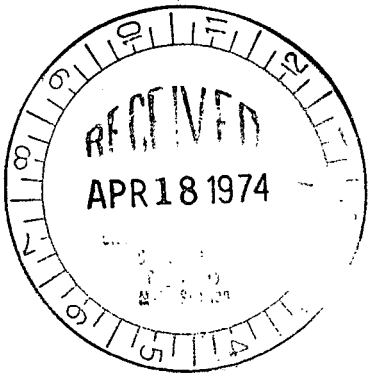
CHARLES W. SANDFORD
EXECUTIVE VICE PRESIDENT

April 17, 1974



Mr. A. Giambusso
Deputy Director for Reactor Projects
Directorate of Licensing
U.S.A.E.C.
Washington, D. C. 20545

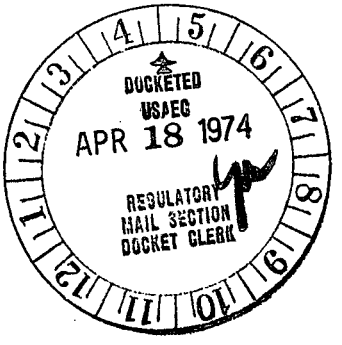
Dear Mr. Giambusso:

Transmitted herewith for your review and approval are forty (40) copies of proposed technical specification changes, numbers one through twelve to Appendix A and numbers one through five to Appendix B, for the Duane Arnold Energy Center, pursuant to DPR-49. These changes have been reviewed by the DAEC Operations Committee and Safety Committee and have been found to involve no unreviewed safety questions or significant hazards considerations.

Very truly yours,

Charles W. Sandford
CHARLES W. SANDFORD
Executive Vice President

CSW/dsb
Encl.
cc: Mr. Duane Arnold
Mr. Jack Newman



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Proposed Revisions to Appendix A to Operating
License DPR-49, Technical Specifications and Bases

50 - 331

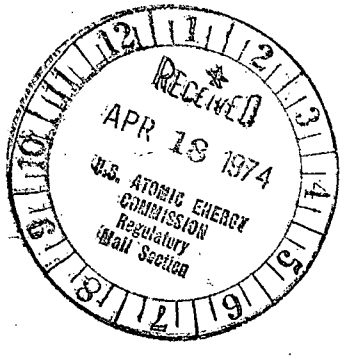
1. Reactor Protection System (SCRAM) Instrument Calibration

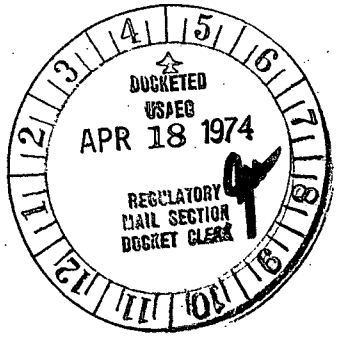
Table 4.1-2, p. 3.1-12, IRM High Flux

Change minimum frequency from "Once per Week" to "On Controlled Shutdowns".

Justification

The calibration calls for "Comparison to APRM on Controlled Shutdowns" which of course can be accomplished only on controlled shutdowns and not on a regular schedule.





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2. Instrumentation that Initiates or Controls the Core and Containment Cooling Systems, Table 3.2-B

P. 3.2-10

Remove the asterisks from the trip level settings for the Core Spray Pump Start Timer and the LPCI Pump Start Timer. Also remove the note which the asterisk refers to - "Tolerances will be added later."

Justification

It is not necessary to include tolerances in the Techanical Specification. Tolerances are given in the system design control documents as stated in Specification 1.0.2 of these Technical Specifications.

P.3.2-12

Change the trip level setting for the Core Spray Sparger to Reactor Pressure Vessel d/p from "5($\pm$1.5) psid" to "0.74 psid."

Justification

The setpoint was re-evaluated because of an occurrence at another BWR and was found to require more sensitivity.

P. 3.2-12

Change trip level setting for the Condensate Storage Tank Low Level from "$\geq$14 in. above tank bottom (10,000 gallons)" to 12 in. above tank bottom."

Justification

The trip level setting was changed to conform to the plant "as-built" condition. No system design criteria is violated by this change.

P.3.2-13

Change the trip level setting for Suppression Pool Area High Ambient Temperature from "200^{o}F" to "150^{o}F".

Justification

The previously stated value of 200^{o}F was incorrect.

3. Minimum Test and Calibration Frequency for Primary Containment Isolation System

Table 4.2-A, P.3.2-24

Add item 8, "Reactor Cleanup Area High Temp" with Instrument Functional Test showing notes "(1) and (8)", Calibration Frequency of "Once/Operating Cycle" and Instrument Check as "None".

P. 3.2-33

Add note 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."

Justification

The test and calibration requirements were added to Table 4.2-A because Table 3.2-A includes trip level settings for "Reactor Cleanup Area Ambient High Temp." and "Reactor Cleanup Area Differential High Temp." but no test and calibration requirements were included previously in Table 4.2-A. The new note number 8 was added because the temperature sensors which provide signals for the lead detection systems are not accessible during reactor operation due to their location in high radiation areas. However, these sensors and the isolation circuits which they feed are testable during normal plant operation in accordance with Paragraphs 4.9 (3) and 4.10 of IEEE Standard 279-1971. This is covered in more detail in FSAR Section G.22, page 13, revised July, 1973.

4. Minimum Test and Calibration Frequency for Surveillance Instrumentation

Table 4.2-F, P. 3.2-31

Remove "(APRM Gain Adjust)" from its present place and add it after the calibration frequency of once per day.

Add "(When in Startup or Run Mode)" after Neutron Monitoring.

Justification

"APRM Gain Adjust" was moved because only calibration is required; there is no instrument check required.

The note was added after Neutron Monitoring because this instrumentation is operable only when in the startup or run mode so surveillance testing when in any other mode does not accomplish anything.

5. Core Spray and LPCI Subsystems

P.3.5-1 and P.3.5-2, Spec. 3.5.A.1 and 3.5.A.3

In Spec. 3.5.A.1, change "3.5.F.3" to "3.5.G.3".

In Spec. 3.5.A.3, change the last two lines to read "specified in 3.5.A.4, 3.5.A.5, and 3.5.G.3 below."

Justification

These are typing errors. This information was correct in the original DAEC Technical Specifications and in the Peach Bottom Technical Specifications against which these were modeled.

6. Operation with Inoperable Components

P. 3.8-3

Under Surveillance Requirements, opposite "2.Batteries" under Limiting Conditions for Operation, add "2.Batteries".

Justification

This heading was inadvertently left out in the original draft. Without the heading added the surveillance requirements would seem to apply to the diesel generators instead of to the batteries.

7. Auxiliary Electrical Systems

P. 3.8-12, First Paragraph, Second Sentence

Remove the sentence which states "The backup fuel supply pump will also be operated."

Justification

The backup fuel supply pump was eliminated from the DAEC design.

P. 3.8-11 and 3.8-12

Change the last sentence on page 3.8-11 to read "Following the tests (at least monthly)or other operation of the units, the fuel volume remaining in the diesel oil storage tank will be checked."

Change the last sentence on page 3.8-12 to read "Logging the diesel fuel supply after each operation (at least monthly) assures that the minimum fuel supply requirements will be maintained."

Justification

At one time surveillance requirements of specification 4.8.A.1.C called for logging the quantity of diesel fuel daily and after each use. This was subsequently changed to monthly and after each use when the Technical Specification was rewritten to correspond to the new AEC requirements. At that time the bases were inadvertently not changed.

P. 3.8-11, Second Paragraph, First Line

Remove the words "redundant air start" and insert "independent starting air supply" so that the sentence will read "Each diesel-generator has two independent starting air supply systems."

Justification

The present description is inaccurate in that there are not two complete air start systems for each diesel-generator, but there are two starting air supply systems. Once the hardware connects with the diesel-generator the two air supplys come together with one starting air distributor, one starting air manifold and one set of starting air injection valves for each diesel generator.

8. Refueling Interlocks

Spec. 3.9.A.3, P. 3.9-2

Change the fuel grapple hoist load switch setting from "$\leq$ 1000 lbs." to "$\leq$ 400 lbs."

Spec. 3.9 Bases, P. 3.9-7, Second Paragraph, Third Sentence

Change "1500 lbs" and "1000 lbs" to 900 lbs" and "400 lbs" respectively so that the sentence reads "This total is approximately 900 lbs., in comparison to the load-trip setting of 400 lbs."

Justification

We are using a lighter weight fuel hoist now then when first written. Its weight is now approximately 200 lbs. so that the combined weight of the fuel grapple and the fuel assembly is approximately 900 lbs. Putting the load trip setting at 400 lbs. leaves plenty of margin.

Specification 3.9.A.5.d, P. 3.9-3

Change the reference "3.9.A" to "3.9.B".

Justification

There is no reference to the appropriate number of SRM's available in specification 3.9.A. This reference is in specification 3.9.B.

9. Administrative Controls

P. 6.1-1 and 6.5-5

In the third line on page 6.1-1 change "Vice President-Engineering" to "Executive Vice President".

In the second line on page 6.5-5 change "Vice President-Engineering" to "Executive Vice President".

Justification

The position title of the Vice President-Engineering has been changed to that of Executive Vice President.

10. Miscellaneous

P. 3.5-5, Spec. 3.5.C.2, Fifth Line

Change "nay" to "any".

P. 3.8-2, Spec. 4.8.A.1.d, Fourth Line

Change "valves" to "values".

P. 3.8-4, Spec. 3.8.B.2.b, Third Line

Change "sation" to "station".

P. 6.5-2, Spec. 6.5.1.4.c, Second Line

Change "and" to "an".

P. 3.2-39, First Paragraph, Sixth Line

Change "stream" to "steam"

Justification

Typing errors.

11. Standby Gas Treatment System, Specification 4.7.B

P. 3.7-15, Specification 4.7.B.1.c.1

Change "013 micron" to "0.3 micron".

Justification

Typing error.

P. 3.7-45, Bases, Second Paragraph, Second Line

Change "Freon 112" to "Freon-11".

Justification

Freon-112 is no longer being made and Freon-11 is the primary choice.

12. Main Control Room Ventilation, Specification 4.10.A

P. 3.10-1, Specification 4.10.A.1.b

Delete the present specification and rewrite as follows:

"Demonstrate the removal efficiency of the particulate filters is not less than 99% for particulate matter larger than 0.3 micron."

Justification

It is not possible to perform the test as previously described in the field; only at the factory. For this reason the test description is being revised.

P. 3.10-2, Specification 4.10.A.1.c

Change "Freon-112" to "Freon-11"

Justification

Freon-112 is no longer being made. It was initially a substitute for Freon-11; Freon-11 was the suggested one to use.

P. 3.10-3, Bases 3.10.1, Second Paragraph, Second Sentence

Change the sentence to read as follows: "Each main control room intake air filtration train starts when a trip signal from the detectors is given via a failure or isolate signal from its respective channel."

Justification:

This was changed to clarify the design description.

P. 3.10-5, Second Paragraph, Fourth Line

Change "Freon-112" to "Freon-11 or equivalent"

Justification

Freon-112 is no longer being made and Freon-11 is the primary choice.

Proposed Revisions to Appendix B to Operating License
DPR-49, Environmental Technical Specifications and Bases

50 - 331

1. Specification 3.3.1.C.3, Airborne Effluents, p.2.3-5

Delete present Specification 3.3.1.C.3 and replace it with the following:

"An isotopic analysis shall be made of a representative sample of gaseous activity, excluding tritium, at the discharge of the Steam Jet Air Ejectors:

a. Within one month of initial criticality,

b. At least monthly thereafter,

c. Following each refueling outage, and

d. If the gaseous waste monitors indicate an increase of greater than 50% in the steady state fission gas release after factoring out increases due to power changes."

Justification

a. The concept of measuring long-lived and short-lived gross radioactivity was originated at the Dresden - 1 plant in 1960. The intent was to measure the relative contributions of N-13 and fission gas activity at the Steam Jet Air Ejector discharge. When the fission gas release reached on the order of 1,000 uCi/sec, the short-lived count was no longer a valid measurement of N-13 release and was of no further value. This technique was originally employed because isotope identification by gamma spectrometry was not used as a routine technique by the DNPS Staff during this period. Also at this time, the process gas monitors were unproven and a secondary check on gaseous releases was felt to be desirable. Since that time the reliability and efficiency of the Duane Arnold Energy Center off-gas and stack monitors have been demonstrated in over a dozen BWR's and isotope identification

1. Continued

by gamma spectrometry is routinely employed at nuclear power plants.

b. The Duane Arnold Energy Center has an off-gas system which enables an average delay time on the order of 90 hours prior to release of the off-gas from the main stack. With a delay of this magnitude, the major nuclide released from the main stack will be Xe-133, therefore any simple routine ratio of long to short-lived activity will have little relevance.

c. In the event the recombiners are not operating, both long and short lived gases will be discharged fromthe main stack. Experience has shown that changes in the isotopic fission gas mixture only occur during periods of "abnormal" operation i.e. startup or shutdown, or when there is a substantial increase in the steady state fission gas release rate. The present section requires that a new isotopic analysis be performed whenever the long to short-lived ratio changes by more than 50%. Since the transient type of operation which induces these ratio changes only represents a minor fraction of the operating time and hence also of the total noble gas release, a calibration of the process gas monitors based on this isotopic analysis would be in error.

2. Specification 2.3.1.C.7.a, Airborne Effluents, p. 2.3-6

Remove "(β,γ)" so that the specification reads as follows: "The gross gaseous activity monitor, the iodine collection device and the particulate monitor shall be operating."

Justification

The specification as stated implies that a beta detector is used in the off-gas monitoring system. The DAEC off-gas stack monitoring system utilizes an NaI detector only, and by accounting for the gamma activity we also account for the beta activity.

3. Table 3.3-2, Radioactive Gaseous Waste Sampling and Analysis, p.2.3-9

Change the sample analysis of the continous gas same from "Gross (β,γ)" to "Gross activity".

Justification

Same as item 2.

4. Specification 4.3.1.A, Radiological Monitoring Requirements, p.4.3-1

Add to the specification so that it reads as follows:

"Environmental samples shall be collected and analyzed according to Table 4.3-1 at the locations shown in Figure 4.3-1. The frequency and location of sample collection described herein will be carried out to the maximum extent practicable with due consideration to climatalogical extremes and other infrequent events which may effect accessibility to and availability of environmental samples."

Justification

This change is propsed to take into account those infrequent periods when climatalogical conditions make it impossible or extremely difficult to obtain samples so that a tehcnical specification violation will not result.

5 Specification 2.3.1.C.6, Airborne Effluents

p. 2.3-4:

Delete the present specification 2.3.1.C.6 which states "Radioactive gases released from all environmental release points shall be continuously monitored and recorded."

Substitute, as the new Spec. 2.3.1.C.6, the following:

"The gaseous, particulate and iodine activity released from the reactor building ventilation stacks and the off-gas stack shall be monitored and recorded. The particulate filters and iodine cartridges monitoring the activity released from the turbine building exhaust fans shall be collected and analyzed in accordance with Table 3.3-2.

a. For effluent streams having continuous monitoring capability, the activity and flow rate shall be monitored and recorded.

b. For effluent streams without continous monitoring capability, the activity and release volume shall be monitored and recorded and the release rate shall be controlled to within the limits specified in 2.3.1.C.1."

p. 2.3-13, Sixth paragraph:

Delete the present statement, "Specification 2.3.1.C.6 is in accordance with Design Criterion 64."

Replace the above with the following:

"Specification 2.3.1.C.6 assures that effluent discharge paths are adequately monitored."

Justification:

The design of the turbine building ventilation system is such that the main supply from the plant supply plenum directs cool air from terminals located approximately 30 feet above the operating floor downward over the turbine generator and associated piping and valves into the lower turbine building compartment through openings in the operating floor. The lower turbine building compartment is then exhausted by the reactor building exhaust fans to the atmosphere which is a monitored release path. The intent of the design, therefore, is to sweep any radioactive materials which might be released from small steam leaks in turbine associated piping down to the lower turbine building compartment from which they would be exhausted to the atmosphere past the reactor building ventilation monitors. During summertime operation the turbine building roof ventilators may be sequentially started by means of thermostatically controlled dampers and motors as required to limit temperatures in the upper reaches of the turbine building. Due to the

limited number of weeks per year in which the roof ventilators would be operating, coupled with the design of the turbine building ventilation flow routing as described above, the potential release of noble radiogases from this source is deemed to have a negligible effect on computed exposures and therefore monitoring of this path is not required.

Because of the fact that radioiodine exposures through the air - grass - cow - milk chain due to ventilation releases are more limiting than noble gas exposures and since roof ventilator operation would coincide with the anticipated grazing period of dairy animals it was determined that precautionary monitoring of this potential path was feasible and therefore should be employed.

This monitoring capability was discussed with and found acceptable by AEC/DOL during SAR review.