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ACCESSION NBR: 8706030365 DOC. DATE: 87/05/28 NOTARIZED: NO DOCKET #
FACIL: 50-315 Donald C. Cook Nuclear Power Plant, Unit 1, Indiana & 05000315
50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana & 05000316
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MURLEY, T. E. NRC - No Detailed Affiliation Given

SUBJECT: Application for amends to Licenses DPR-58 & DPR-74, changing Tech Specs to modify ESF & storage pool ventilation sys. Changes update ventilation testing stds & clarify several aspects of sys operation. Fee paid.

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May 28, 1987
AEP:NRC:0959

Donald C. Cook Nuclear Plant Unit Nos. 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
ESF AND STORAGE POOL VENTILATION SYSTEMS
TECHNICAL SPECIFICATION CHANGES

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Attn: T. E. Murley

Dear Dr. Murley:

This letter and its attachments constitute an application for amendment to the Technical Specifications (T/Ss) for the Donald C. Cook Nuclear Plant Unit Nos. 1 and 2. Specifically, we are proposing to modify the Engineered Safeguards Features (ESF) and Storage Pool Ventilation System T/Ss (3/4.7.6.1 and 3/4.9.12, respectively). The proposed changes will update our ventilation testing standards and clarify several aspects of system operation. Most of the changes were discussed with members of your staff at a meeting held in Bethesda, MD on January 13, 1986. The reasons for the proposed changes and our analyses concerning significant hazards considerations are contained in Attachment 1 to this letter. The proposed revised T/S pages are contained in Attachment 2.

At the January 13, 1986 meeting, members of your staff recommended modifications to our T/S-required test temperature for laboratory testing of charcoal adsorber methyl iodide efficiency (reference T/Ss 4.7.6.1.b, 4.7.6.1.c, 4.9.12.b, and 4.9.12.c). That recommendation is currently under review, as we have described in Item 2 of Attachment 1.

This submittal includes changes to D. C. Cook Unit 1 Bases page B 3/4 7-5. Additional changes to this page were submitted with our letter AEP:NRC:0856-O on July 10, 1986 and are still pending. The proposed changes in this submittal are in addition to our previous request and do not supersede it.

We believe that the proposed changes will not result in (1) a significant change in the types of effluents or a significant increase in the amounts of any effluent that may be released offsite, or (2) a significant increase in individual or cumulative occupational radiation exposure.

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These proposed changes have been reviewed by the Plant Nuclear Safety Review Committee (PNSRC) and will be reviewed by the Nuclear Safety and Design Review Committee (NSDRC) at their next regularly scheduled meeting.

In compliance with the requirements of 10 CFR 50.91(b)(1), copies of this letter and its attachments have been transmitted to Mr. R. C. Callen of the Michigan Public Service Commission and Mr. George Bruchmann of the Michigan Department of Public Health.

Pursuant to 10 CFR 170.12(c), we have enclosed an application fee of $150.00 for the proposed amendments.

This document has been prepared following Corporate procedures which incorporate a reasonable set of controls to insure its accuracy and completeness prior to signature by the undersigned.

Very truly yours,

M. P. Alexich
Vice President

MPA/cm

Attachments

cc: John E. Dolan
W. G. Smith, Jr. - Bridgman
G. Bruchmann
R. C. Callen
G. Charnoff
A. B. Davis - Region III
NRC Resident Inspector - Bridgman

Attachment 1 to AEP:NRC:0959

Reasons and 10 CFR 50.92 Analyses for

Changes to the

Donald C. Cook Nuclear Plant Unit Nos. 1 and 2

Technical Specifications

This license amendment request proposes to modify T/S 3/4.7.6.1 (ESF Ventilation System) and T/S 3/4.9.12 (Storage Pool Ventilation System). The modifications are intended to update our ventilation system testing standards and to clarify system operability requirements included in the T/Ss.

To facilitate your review, we have separated the changes into eight categories. Each of these is discussed below.

1. Changes to allow use of the 1980 version of ANSI N510, rather than the 1975 version.

2. Changes to allow the crane-bay motor-operated rollup door and the drumming room rollup door to be opened under administrative control during fuel movement within the storage pool or crane operation with loads over the pool.

3. Clarification of certain aspects of storage pool ventilation system operation as described in the T/Ss.

4. Deletion of requirements to test air flow distribution across the HEPA filters and charcoal adsorbers.

5. Deletion of redundant filter bypass testing requirements and clarification of the ESF ventilation system operation as described in the T/Ss.

6. Modification to leak-testing requirements for charcoal and HEPA filters.

7. Addition of footnotes related to crane operation.

8. Miscellaneous editorial changes.

1. <u>Adoption of the 1980 Version of ANSI N510</u>

The proposed change consists of replacing reference to the 1975 version of the ANSI N510 Standard with reference to the 1980 version, in T/Ss 4.7.6.1 and 4.9.12. The change will address problems we have experienced with literal application of the 1975 version, as described below.

At the D. C. Cook Plant, our Engineered Safety Features (ESF), Storage Pool, and Control Room ventilation systems are not of ANSI N509-1976 design. Thus, literal compliance with all requirements of the ANSI N510 testing standard cannot physically be achieved. The 1980 version of ANSI N510 recognizes that all ventilation systems are not of ANSI N509-1976 design. Section 1.2 of ANSI N510-1980 states:

> It is the intent of this standard that it be rigorously applied only to systems designed and built to ANSI N509; however, sections of this standard may be used for technical guidance for testing of non-N509 systems.

For the uniformity test, ANSI N510-1975 requires that values of upstream aerosol concentration in the sample plane differ by no more than 10%. ANSI-N510-1980 is less stringent, requiring individual samples in the upstream sample plane to be within ± 20% of the mean concentration.

ANSI N510 (1975 and 1980) specifies that an air-aerosol mixing uniformity test should be performed upon completion of initial system installation. ANSI N510 specifies the uniformity test as a prerequisite to T/S-required in-place leak testing of charcoal and HEPA filters. The purpose of the uniformity test, as stated in ANSI N510-1980, is "to verify that tracer injection and sample ports are located so as to provide proper mixing of the tracer (DOP or refrigerant gas) in the air approaching the component stage to be tested, or the sample plane."

The Cook Plant ESF and storage pool ventilation system filter units were designed, specified and installed prior to the issuance of ANSI N510-1975. Although air-aerosal mixing uniformity testing was performed at the time of installation, the documentation was not detailed enough to permit repetition of the test, or verification that the sample points currently used were the same points qualified by the pre-operational tests. Thus, in early 1985 we decided to repeat the testing since it is required for literal compliance with ANSI N510-1975. A testing program was instituted beginning in July 1985 to perform the testing.

The first two units tested were the ESF ventilation units designated 1-HV-AES-1 and 2-HV-AES-1. The testing indicated that the units were not capable of meeting the literal requirements of ANSI N-510-1975; i.e., values of upstream aerosol concentration in the sample plane differed by more than 10%.

The testing described above was conducted with the help of a consultant, Mr. John Hunt of Nuclear Containment Systems, Inc. Mr. Hunt is a member of the ANSI N510 Committee, although he was not representing the committee while working for us. Because of the testing results we developed correction factors to account for the non-uniformity of mixing displayed by the system. These factors will be used in lieu of the multipoint sampling technique suggested by Section 11 of ANSI N510. (As discussed previously, our ESF and storage pool ventilation systems are not of ANSI N509 design. No provisions were included in the system design to allow for multipoint sampling.) The methodology used to determine the correction factors is presented in Attachment 4 to this letter.

Mr. Hunt's report, which is included as Attachment 3 to this letter, stated in part:

> In my opinion, you have optimized the location of the injection port and technique of injection for this system. Addition of baffling or other attempts to inhance the air-aerosol mixing would be fruitless.... Your test results show conclusively that each area in the sampling plane upstream of the HEPA filter bank is being adequately challenged. While certain individual recordings differ from the mean concentration by somewhat more than ± 20%, the intent, though not the letter of ANSI N510-80 is certainly being met...

Applying a correction factor to your single point upstream DOP sample concentration in a conservative direction (i.e., effectively decreasing the upstream concentration value used in your final leak calculation) based upon your air-aerosol data will most certainly result in a very conservative test.

On September 9, 1985 we discussed our testing of filter units 1-HV-AES-1 and 2-HV-AES-1 via telephone conversation with members of your staff. We were told at that time that our results were acceptable and that the units need not be considered inoperable. We were instructed, however, to submit a T/S change to document this discussion. Subsequent to this, we have completed air-aerosol mixing uniformity testing on all the ESF, storage pool, and control room ventilation units in both of the D. C. Cook units and have developed similar correction factors for these units. The correction factors obtained from the test data are as follows:

Filter Unit	Correction Factor
ESF Ventilation Units	
1-HV-AES-1	1.4
1-HV-AES-2	1.0
2-HV-AES-1	1.2
2-HV-AES-2	1.0
Storage Pool Ventilation Unit	
12-HV-AFX	1.2
Control Room Ventilation Units	
1-HV-ACRF	1.9
2-HV-ACRF	1.5

The values cited above are the current values being utilized. They are subject to change should future air-aerosal mixing tests that we may elect to perform result in different values. Under no circumstances will a value less than 1.0 be used.

To address the issue of literal compliance with the T/Ss described above, we propose to adopt the 1980 version of ANSI N510 (which includes provisions for non-ANSI N509 systems) and to modify the Bases section of T/Ss 3/4.7.6.1 and 3/4.9.12 to take specific exemption from the literal requirements of the air-aerosol mixing uniformity test. Our comparison of the 1975 to the 1980 version of ANSI N510 has determined that the differences discussed above were the only ones of major significance, with the exception of requirements which will be discussed later in relation to methyl iodide lab testing. Several minor changes related to penetrometer sensitivity, adsorber residence time calculations, and background dust testing were also made in the 1980 edition, but our review determined these to be either more restrictive or to have minimal impact on safety.

Laboratory Testing of Adsorbent

Another issue related to the switch to the 1980 version of ANSI N510 involves the temperature used during the laboratory test of charcoal samples required by T/Ss 4.7.6.1.b, 4.7.6.1.c, 4.9.12.b, and 4.9.12.c. These tests verify charcoal adsorber removal efficiency for methyl iodides. We currently test to the RDT M 16-1T-1973 standard, which is referenced by ANSI N510-1975. This test specified test conditions of 130°C and 95% relative humidity, which have been included in our present T/Ss. The 1980 version of ANSI N510, which we are proposing to adopt, specifies ASTM D 3803-1979 as the testing standard, and states that test conditions shall be in accordance with plant T/Ss.

At a meeting in Bethesda, MD on January 13, 1986, members of your staff commented that the efficiencies determined under test conditions of 130°C might not be indicative of efficiencies which could be anticipated under accident conditions. This was because the high temperature might cause vaporization of volatile filter contaminants, including moisture, thus increasing indicated adsorber efficiency. Your staff recommended we consider a test temperature of 30°C.

We are currently evaluating your staff's concern, by conducting parallel tests (at 30°C and 130°C) whenever practicable. We plan to conduct these tests through July 1988. The ESF, Storage Pool, and Control Room Ventilation units will be evaluated during this time. Should our review determine the need for adopting different test conditions, we will submit proposed T/S changes requesting them. Until that time, we will continue to abide by our current T/S requirements.

Per 10 CFR 50.92, a proposed amendment will not involve a significant hazards consideration if the proposed amendment does not:

(1) involve a significant increase in the probability or consequences of an accident previously evaluated,

(2) create the possibility of a new or different kind of accident from any accident previously analyzed or evaluated, or

(3) involve a significant reduction in a margin of safety.

Criterion 1

The change to the 1980 version of the ANSI N510 testing standard will update our T/Ss to currently acceptable testing standards. Since the 1980 version corresponds more closely to the D. C. Cook Plant ventilation system design, we believe this change does not involve a significant increase in the probability or consequences of a previously analyzed accident.

Criterion 2

The change only involves our testing methods to verify ventilation system operability. As this change does not involve modifications to the plant or changes in operation of the systems involved, we believe it will not create the possibility of a new or different kind of accident from any previously analyzed or evaluated.

Criterion 3

We are proposing to test our ventilation systems in a manner which corresponds more closely to the system design. Since the 1980 version of the code is the current industry standard, we believe that no reduction in a margin of safety will occur.

Lastly, we note that the Commission has provided guidance concerning the determination of significant hazards by providing certain examples (48 FR 14870) of amendments considered not likely to involve significant hazards consideration. The sixth of these examples refers to changes which may result in some increase to the probability or consequences of a previously analyzed accident or may reduce in some way a safety margin, but the results of which are clearly within limits established as acceptable. Since the 1980 version of ANSI-N510 involves certain relaxations of requirements contained in the 1975 version, this change may be perceived as involving an increase in the probability or consequences of an accident or a reduction in a margin of safety. The 1980 version of the standard represents the version considered current by the industry, and corresponds more closely to the D. C. Cook ventilation system design. Additionally, we have determined correction factors to apply to the specific ANSI N510 test which we cannot literally meet. We believe these correction factors will assure that no significant decrease in safety margin should result. Thus, we believe the sixth example to be applicable and conclude that the change should not require significant hazards consideration.

2. Motor-Operated Rollup Doors

This proposed change involves the crane bay rollup door and the drumming room rollup door, which are located near and below the spent fuel pool on the 609-foot level of our auxiliary building. The crane bay rollup door, which measures approximately 16 feet x 20 feet, serves as the primary entrance into the auxiliary building for vehicles. The door is operated locally by pushing a single button. The door will completely close in less than 30 seconds. The drumming room rollup door, which measures approximately 7 feet x 8 feet, provides access to the radwaste compaction area, an instrumentation calibration room, and a loading dock which is used for removal of contaminated trash. It also operates locally by pushing a single button, and will completely close in less than 15 seconds.

As currently written, T/S 3/4.9.12 requires the spent fuel pool ventilation system to be able to maintain the spent fuel pool area at a negative pressure of at least 1/8 inch water gauge (w.g.). This pressure requirement cannot be maintained with either of the rollup doors open. Thus, per T/Ss, movement of fuel within the storage pool or crane operation with loads over the pool must be suspended whenever either of the doors is open. This can cause significant operational burdens, particularly during outages, when the rollup doors are used quite often for ingress and egress of personnel and material. During refueling operations fuel is typically moved around the clock for two or three days in a row. Opening the doors to allow vehicles or personnel to enter or exit from the crane bay area requires that fuel movement be suspended. This slows down the refueling process, and adds an additional burden to the refueling supervisors, who must ensure the doors are not opened at an

incorrect time and must schedule refueling breaks to allow ingress or egress.

We propose to add a footnote to T/S 3.9.12 and to modify the Bases section such that they would permit the doors to be placed under administrative controls. If the crane bay door needs to be opened during fuel movement, an example of an administrative control might be to station an individual at the door who would be in communication with personnel in the spent fuel pool area and could open the door when passage was necessary and close the door when passage was completed or in the event of an emergency. For the drumming room door, an example of an administrative control might be to require the door to be reclosed after normal ingress and egress of personnel or material, or to station an individual at the door if the door needs to remain open for an extended period of time. Should the doors become blocked or stuck open while under administrative controls, we will not consider T/S requirements to be violated provided the Action Statement requirements of T/S 3.9.12 are expeditiously followed, i.e., movement of fuel within the storage pool or crane operation with loads over the pool is expeditiously suspended.

The fuel-handling accident analyses are discussed in Chapter 14.2.1 of the Unit 1 Updated Final Safety Analysis Report (UFSAR), and in Chapter 14.3.5 of the Unit 2 UFSAR. Two cases are discussed, one for a fuel-handling accident in the auxiliary building, the other for a similar accident inside containment. The design-basis accident is the complete, underwater rupture of the highest-rated spent fuel assembly.

The major difference between the analyses is that no reduction in thyroid dose because of charcoal filtration was accounted for in the containment analysis. (It is noted that no credit was taken for containment isolation.) The auxiliary building analysis assumed that all of the radioiodines that escaped the pool passed through the spent fuel pool ventilation system charcoal filters prior to release to the atmosphere. However, this analysis is bounded by the accident inside containment, which, as described previously, took no credit for charcoal filtration or containment isolation. The accidents inside containment gave a 0-2 hour site boundary thyroid dose of approximately 85 rem, (as opposed to approximately 2 rem for the accident in the auxiliary building), which is still significantly lower than the 300-rem limit established in 10 CFR 100.

Per 10 CFR 50.92, a proposed amendment will not involve a significant hazards consideration if the proposed amendment does not:

(1) involve a significant increase in the probability or consequences of an accident previously evaluated,

(2) create the possibility of a new or different kind of accident from any previously analyzed or evaluated, or

(3) involve a significant reduction in a margin of safety.

Criterion 1

The design-basis fuel-handling accident is the rupture of the highest-rated fuel assembly. As discussed earlier, the consequences of an accident in the spent fuel pool area with the rollup doors open would be no worse than the fuel-handling accident inside containment which has been presented in our UFSAR. In reality, the rollup doors would be expected to be closed quickly enough to reduce the amount of unfiltered radioiodines to levels significantly below that assumed for the accident inside containment. Thus, we believe that although some increase in the consequences of a previously evaluated accident could be expected, the results are clearly within limits previously evaluated.

Criterion 2

The position of the rollup doors in no way affects the mechanism by which the spent fuel assembly is damaged. Therefore, although the change may impact the consequences of a fuel-handling accident, it would not be expected to create the possibility of a new or different kind of accident from any previously analyzed or evaluated.

Criterion 3

See Criterion 1, above.

Lastly, we note that the Commission has provided guidance concerning the determination of significant hazards by providing certain examples (48 FR 14870) of amendments considered not likely to involve significant hazards consideration. The sixth of these examples refers to changes which may result in some increase to the probability or consequences of a previously analyzed accident or may reduce in some way a safety margin, but the results of which are clearly within limits established as acceptable. This example is applicable to this group of changes, since as described above, the consequences of a fuel-handling accident occurring with the rollup doors open are bounded by previous accident analyses performed for a similar accident occurring in the containment building with no credit taken for containment isolation. The results of this analysis were shown to be well within those limits established as acceptable in 10 CFR 100. Thus, we believe the sixth example is applicable and conclude that the change should not require a significant hazards consideration.

3. Spent Fuel Pool Ventilation Configuration

This change consists of modifications to present T/S 4.9.12.d.3. The purpose of this change is to clarify certain aspects of the spent fuel pool ventilation system operation as described in this T/S.

The spent fuel pool ventilation system at the Cook Plant consists of four supply fans and two 100% capacity exhaust fans. The two exhaust fans draw air from the spent fuel pool area through a common filter train which contains both HEPA and charcoal filters. Under normal conditions, varying numbers of supply fans and one exhaust fan would be operating. Only one exhaust fan at a time may operate because of limitations on iodine residence time in the filters. The exhaust fan would be drawing

air through the filter unit, but the charcoal filters would be bypassed. In the event of a high-radiation signal from the spent fuel pool monitor, all supply fans would shut down and the charcoal filter bypass would be defeated. These actions help to mitigate a fuel-handling accident by minimizing unfiltered leakage out of the spent fuel pool area.

As currently written, T/S 4.9.12.d requires verification every 18 months:

> that on a high radiation signal, the system automatically starts (unless already operating) and directs its exhaust flow through the HEPA filters and charcoal adsorber banks.

This does not adequately describe the Cook Plant system for the following reasons:

(1) The exhaust fans do not have an auto-start on a high-radiation signal. Because of this, we run one of the two redundant fans continuously during fuel movement in the pool or crane operation with loads over the pool.

(2) As described previously, air is drawn through the HEPA filters whenever the exhaust fans are running. The T/S as currently written could be misconstrued to imply that air is directed through the HEPAs only after realignment in the high-radiation mode.

(3) This T/S does not address the fact that the supply fans will shut down following a high-radiation alarm.

Our proposed version of this T/S, which is included in Attachment 2, addresses these three issues and therefore more accurately reflects our system design. The new version requires verification every 18 months that:

> on a high radiation signal, the system automatically directs its exhaust flow through the charcoal adsorber banks and automatically shuts down the storage pool ventilation system supply fans.

These changes are considered administrative in nature, intended only to clarify the T/S operability requirements. The changes will not introduce any new modes of plant operation, nor will they permit relaxation of present requirements.

Per 10 CFR 50.92, a proposed amendment will not involve a significant hazards consideration if the proposed amendment does not:

(1) involve a significant increase in the probability or consequences of an accident previously evaluated,

(2) create the possibility of a new or different kind of accident from any previously analyzed or evaluated, or

(3) involve a significant reduction in a margin of safety.

Criterion 1

The purpose of this group of proposed changes is to clarify system operability requirements in the T/Ss. No physical changes to the plant, or changes in plant operations, are necessary because of these changes. Therefore, we believe that the proposed changes will not result in a significant increase in the probability or consequences of a previously evaluated accident.

Criterion 2

These changes will not create the possibility of a new or different kind of accident from any previously evaluated, because all accident analyses and nuclear design bases remain unchanged.

Criterion 3

Since no changes to the plant will result, these T/S changes will not involve a significant reduction in a margin of safety.

Lastly, we note that the Commission has provided guidance concerning the determination of significant hazards by providing certain examples (48 FR 14870) of amendments considered not likely to involve significant hazards consideration. The first of these examples refers to changes which are purely administrative in nature: for example, changes to achieve consistency throughout the T/Ss, correction of errors, or changes in nomenclature. The change to the T/S description of the operation of the storage pool ventilation system is intended only to clarify the T/Ss with respect to the system. Since the present wording can prove confusing or inadequate in practice, this change can be considered a correction of errors in the present text. The change will not result in any changes to plant operations or to the design of the plant. Thus, we conclude that the first example is applicable and that the change should not require significant hazards consideration.

4. Filter Unit Air Flow Distribution Testing

As presently written, T/Ss 4.9.12.d.2 (storage pool ventilation system) and 4.7.6.1.d.2 (ESF ventilation system) require air flow distribution testing across the HEPA and charcoal filters every 18 months. We believe the purpose of the test is to verify that airflow distribution across the filters is reasonably uniform at the designed volumetric flow rates. For the HEPA filters, this assures that dust loading will be uniform throughout the filter; for the charcoal adsorbers, it assures that air residence time in the charcoal will be sufficiently long to assure adequate iodine removal. The testing is not required by the Standard T/Ss (NUREG 0452, Rev. 4).

Additionally, the introductory note to Section 8.3.2 (Air Distribution Test) of ANSI N510-1980 states:

> The [air flow distribution] tests described in the following paragraphs of 8.3.2 shall be performed only as acceptance tests and after major system modification and repair. The tests are made only during acceptance testing following original installation, modification, or major repair of the air cleaning system.

Based on this, it is clear that air distribution testing is a function of the as-built condition of the system, and not a parameter that needs to be regularly reverified. Therefore, we propose to delete this requirement from T/Ss 4.7.6.1 and 4.9.12.

Per 10 CFR 50.92, a proposed amendment will not involve a significant hazards consideration if the proposed amendment does not:

(1) involve a significant increase in the probability or consequences of an accident previously evaluated,

(2) create the possibility of a new or different kind of accident from any previously analyzed or evaluated, or

(3) involve a significant reduction in a margin of safety.

Criterion 1

The deletion of the 18-month testing requirement represents a relaxation of current T/S requirements. Thus, it may involve an increase in the probability or consequences of an accident previously analyzed. However, as discussed above, air distribution across filters is not a parameter which should be subject to normal degradation. Additionally, we note that the change is consistent with guidance provided in ANSI N510 and the Standard T/Ss. Thus, we conclude that any increase in the probability or consequences of an accident or the margin of safety would be insignificant.

Criterion 2

Since these changes will involve no physical changes to the plant nor any changes to its nuclear design basis, we conclude that they will not create the possibility of a new or different kind of accident from any previously evaluated.

Criterion 3

See Criterion 1, above.

Lastly, we note that the Commission has provided guidance concerning the determination of significant hazards by providing certain examples (48 FR 14870) of amendments considered not likely to involve significant hazards consideration. The sixth of these examples refers to changes which may result in some increase to the probability of occurrence or consequences of an accident or may reduce in some way a safety margin, but the results of which are clearly within limits established as acceptable. As described above, verification of air distribution across the HEPA and charcoal banks on a regular basis is not a requirement in either the Standard T/Ss or ANSI N510. Since the air distribution is not a parameter which should be subject to routine degradation, we believe that any reduction in margin of safety would be insignificant. Therefore, we conclude that the sixth example is applicable and that the change should not require significant hazards consideration.

5. Filter Bypass Testing Requirements and ESF Ventilation Unit Operation

As presently written, T/S 4.7.6.1.b.1 requires verification that "total filter bypass of the [ESF] ventilation system to the facility vent, including leakage through the ventilation system diverting valves, is $\leq$ 1% when the system is tested by admitting cold DOP at the system intake." T/S 4.9.12.b.1 imposes similar requirements on the storage pool ventilation system. T/Ss 4.7.6.1.b.2 and 4.9.12.b.2 require a refrigerant test for the charcoal adsorbers, to verify that bypass flow around the charcoal is less than 1%. T/Ss 4.7.6.1.b.3 and 4.9.12.b.3 require a DOP test for the HEPAs to verify that bypass around the HEPAs is less than 1%. Both the refrigerant test and the HEPA DOP test are required at the same frequency as the testing specified by T/Ss 4.7.6.1.b.1 and 4.9.12.b.1.

The ESF and storage pool ventilation units at the Cook Plant are such that flow is passed continuously through the HEPA filters and then may bypass the charcoal filters via bypass dampers located between the HEPA and charcoal sections of the filter unit. (We utilize bypass dampers rather than diverting valves.) Because the bypass dampers are an integral part of the filter unit, any bypass to the unit vent would be detected by a combination of either the refrigerant test performed for the charcoal adsorbers or the DOP test performed for the HEPAs.

We believe T/Ss 4.7.6.1.b.1 and 4.9.12.b.1 to be based on ventilation unit designs that have bypass dampers or diverting valves upstream of both the HEPA and charcoal banks. For systems of this design, normal in-place leak testing of the charcoal and HEPA filters might not be adequate to determine total bypass leakage, since the refrigerant gas or DOP injection points might be downstream of the bypass dampers. Because our units are not of this design, we believe the requirements of T/Ss 4.7.6.1.b.1 and 4.9.12.b.1 are redundant to the testing required by T/Ss 4.7.6.1.b.2, 4.7.6.1.b.3, 4.9.12.b.2 and 4.9.12.b.3. Therefore, we have eliminated T/Ss 4.7.6.1.b.1 and 4.9.12.b.1 from our proposed versions of these T/Ss.

We are also proposing a minor modification to ESF Ventilation System T/S 4.7.6.1.d.3. The change is related to the description of system operation provided earlier in this section. As currently written, T/S 4.7.6.1.d.3 requires us to verify every 18 months that:

> "...the standby fan starts automatically on a Containment Pressure -- High-High Signal and diverts its exhaust flow through the HEPA filters and charcoal adsorber banks on a Containment Pressure -- High-High Signal."

As discussed earlier, the ESF ventilation system is designed such that flow is always directed through the HEPA filters whenever the fan is running, and will flow through the charcoal banks provided the bypass dampers are closed. The paragraph quoted above could be misconstrued to imply that the bypass dampers are upstream of both the HEPAs and the charcoal banks. For this reason, we propose to change the word "diverts" to "directs" to emphasize that flow is normally through the HEPAs, and also must pass through the charcoal in the event of an accident. This change is administrative in nature, intended to clarify the T/Ss, and will not in any way affect system operation.

Lastly, we propose a modification to the Bases Section for T/S 3/4.7.6.1. This change would indicate that besides the radiological filtration function served by the ESF ventilation system, the system also provides cooling for pumps in the Emergency Core Cooling System.

Per 10 CFR 50.92, a proposed amendment will not involve a significant hazards consideration if the proposed amendment does not:

(1) involve a significant increase in the probability or consequences of an accident previously evaluated,

(2) create the possibility of a new or different kind of accident from any accident previously analyzed or evaluated, or

(3) involve a significant reduction in a margin of safety.

Criterion 1

Because the testing requirements we have proposed to delete are redundant to other testing requirements, we believe this change will involve neither an increase in the probability or consequences of a previously evaluated accident nor a reduction in a margin of safety. Additionally, the change to the T/S description of ESF ventilation system filter operation description is administrative in nature and will not affect system operation or safety functions.

Criterion 2

These changes are administrative in nature and do not impact on plant safety. Therefore, they should not create the possibility of a new or different kind of accident from any previously analyzed or evaluated.

Criterion 3

See Criterion 1, above.

Lastly, we note that the Commission has provided guidance concerning the determination of significant hazards by providing certain examples (48 FR 14870) of amendments considered not likely to involve significant hazards consideration. The first of these examples refers to changes which are purely administrative in nature: for example, changes to achieve consistency throughout the T/Ss, correction of errors, or changes in nomenclature. As discussed above, these changes are intended to simplify the T/Ss by removing redundant testing requirements and to clarify them by correcting language which could be misleading. The changes will not result in any changes to the plant facilities or operations. Therefore, we conclude that the first example is applicable and that the changes should not require significant hazards consideration.

6. Leak-Testing of Charcoal and HEPA Filters

Leak-testing of the charcoal adsorber bank after adsorber tray reinstallation is required by our T/Ss 4.7.6.1.c.2 and 4.9.12.c.2, and after complete or partial replacement of a charcoal adsorber bank by T/Ss

4.7.6.1.f and 4.9.12.f. It is not, however, specifically required by T/Ss 4.7.6.1.b.4 and 4.9.12.b.4 even though these T/Ss also allow removal of a charcoal tray to obtain a sample. To achieve consistency throughout the T/Ss, we are proposing to add the leak-testing requirement to T/Ss 4.7.6.1.b.4 and 4.9.12.b.4.

In addition to leak-testing of the charcoal adsorbers, T/Ss 4.7.6.1.c.2 and 4.9.12.c.2 require leak-testing of the HEPA filters following reinstallation of the charcoal tray used to obtain a carbon sample. Charcoal trays and HEPA filters are located in different sections of the filter housing; reinstallation of a charcoal tray would not be expected to impact the leakage characteristics of the HEPA units. Leak-testing of the HEPA units following charcoal tray installation is not a recommended test per Table 1 of ANSI N510-1980, nor is it recommended by Regulatory Position C.5 of Regulatory Guide 1.52, Revision 2, March 1978, which is referenced by the Standard T/Ss. It is therefore our belief that this test requirement is an error in our present T/Ss. We have deleted the requirement in our proposed version of T/Ss 4.7.6.1.c.2 and 4.9.12.c.2.

Per 10 CFR 50.92, a proposed amendment will not involve a significant hazards consideration if the proposed amendment does not:

(1) involve a significant increase in the probability or consequences of an accident previously evaluated,

(2) create the possibility of a new or different kind of accident from any accident previously analyzed or evaluated, or

(3) involve a significant reduction in a margin of safety.

Criterion 1

The addition of testing requirements to T/Ss 4.7.6.1.b and 4.9.12.b is made to achieve consistency throughout the T/Ss. The deletion of HEPA testing requirements from T/Ss 4.7.6.1.c and 4.9.12.c is intended to correct what we consider to be an error in our present T/Ss. Since testing requirements are being deleted, this change may be perceived to involve an increase in the probability or consequences of a previously evaluated accident or a reduction in a margin of safety. However, our review has determined that leak-testing of the HEPA filters following removal of a charcoal sample is not necessary, and is believed to be an error in our T/Ss. Additionally, the testing is required by neither ANSI N510 nor the Standard T/Ss. It is therefore our belief that any increase in the probability or consequences of an accident, or reduction in a margin of safety resulting from this change will be insignificant.

Criterion 2

Since the testing requirements we propose to delete are considered to be an error in our T/Ss, and since the change is consistent with the Standard T/Ss, we do not believe the change will create the possibility of a different kind of accident from any previously analyzed or evaluated.

Criterion 3

See Criterion 1, above.

Lastly, we note that the Commission has provided guidance concerning the determination of significant hazards by providing certain examples (48 FR 14870) of amendments considered not likely to involve significant hazards consideration. The first of these examples refers to changes which are purely administrative in nature: for example, changes to achieve consistency throughout the T/Ss, correction of errors, or changes in nomenclature. This example is applicable to this group of changes in that the testing requirements which are being deleted are believed to be an error in our present T/Ss. The sixth example refers to changes which may result in some increase to the probability or consequences of a previously analyzed accident or may reduce in some way a safety margin, but the results of which are clearly within limits established as acceptable. This example is applicable to this group of changes in that the changes are consistent with the Standard T/Ss and with the requirements of ANSI N510. Therefore, we conclude that the changes should not require significant hazards consideration.

7. Addition of Footnotes Related to Crane Operation

The seventh proposed change adds a footnote to T/S 3.9.12 Action a. This footnote exempts the auxiliary building crane main load block from the restrictions on crane operation over the storage pool with an inoperable storage pool exhaust ventilation system, provided the main load block is deenergized. A similar footnote was added to T/S 3.9.7 in Unit 1 T/S Amendment 93, and Unit 2 T/S Amendment 79.

The T/S 3.9.7 footnotes were added on an emergency basis to the T/Ss when it was realized that T/S 3.9.7 prohibited operation of the auxiliary building crane with the main load block over the storage pool. (The main load block weighs more than the T/S 3.9.7 2500 pound limit.) As noted in the NRC's safety evaluation report for these amendments, "by deenergizing the main hook it becomes a passive, integral component of the auxiliary building crane and need not be considered a heavy load."

T/S 3.9.12 prohibits crane operation with loads over the storage pool if the storage pool exhaust ventilation system is inoperable. Although it is clear from the Amendment 93/79 safety evaluation report that the main hook need not be considered a heavy load if it is deenergized, we believe it would be prudent to add a footnote to T/S 3.9.12 to ensure consistency between the T/Ss and to avoid problems associated with literal T/S interpretation.

We note that our letter AEP:NRC:0514R, dated January 9, 1987, transmitted a load block drop analysis, which we believe demonstrates that a dropped main load block in the spent fuel pool would not result in violation of the 10 CFR 100 radiological limits, nor would it result in an inadvertent criticality. The radiological analyses, however, assumed credit for the operation of the storage pool exhaust ventilation system. Therefore, even after the load block drop analysis has been accepted by the NRC, it would be desirable to have the subject footnote on T/S 3.9.12 to document that the main hook is not considered a heavy load if it is deenergized.

Since the proposed footnote is consistent with a footnote already granted for T/S 3.9.7, and since it is intended primarily to achieve internal consistency in the T/Ss, we believe the change is administrative in nature.

Per 10 CFR 50.92, a proposed amendment will not involve a significant hazards consideration if the proposed amendment does not:

(1) involve a significant increase in the probability or consequences of an accident previously evaluated,

(2) create the possibility of a new or different kind of accident from any accident previously analyzed or evaluated, or

(3) involve a significant reduction in a margin of safety.

Criterion 1

The change is consistent with a change already granted in Amendment 93 to the Unit 1 T/Ss and 79 to the Unit 2 T/Ss. As discussed in the NRC's safety evaluation report for those amendments, a deenergized hook is considered a passive, integral part of the auxiliary building crane and is thus not considered to be a heavy load. Therefore, we believe that the change will not involve a significant increase in the probability or consequences of an accident previously analyzed, nor will it involve a significant reduction in a margin of safety.

Criterion 2

This change is administrative in nature in that it is intended to achieve internal consistency within the T/Ss. Additionally, it is noted that a previous change was approved which achieved essentially identical results. Therefore, we do not believe the change will create the possibility of a new or different kind of accident from any accident previously analyzed or evaluated.

Criterion 3

See Criterion 1, above.

Lastly, we note that the Commission has provided guidance concerning the determination of significant hazards by providing certain examples (48 FR 14870) of amendments considered not likely to involve significant hazards consideration. The first of these examples refers to changes which are purely administrative in nature: for example, changes to achieve consistency throughout the T/Ss, correction of errors, or changes in nomenclature. For the reasons cited above, we believe this change is administrative in nature and that, the example cited is applicable. We conclude that the change should not require significant hazards consideration.

8. Editorial Changes

In addition to the changes described in the seven groups above, we also made numerous editorial changes. These were changes to correct typographical errors in our present T/Ss, or changes that were necessary

as a result of those changes described previously. These changes are described in the table below. These changes are administrative in nature and therefore do not reduce a margin of safety, do not increase the probability or consequences of a previously analyzed accident, and do not introduce the possibility of a new accident. Therefore, we believe that these changes do not involve a significant hazards consideration as defined by 10 CFR 50.92.

Unit	T/S	Description
1	4.7.6.1.b	"or" added after "18 months"
1	4.7.6.1.b.1	word "deleted" replaces paragraph
1	4.7.6.1.c.1	"of" added after "efficiency"
1	4.7.6.1.c.2	"a" deleted; "analysis" changed to "analyses"
1	4.7.6.1.d.1	extra "c" removed from "across"
1	4.7.6.1.d.2	word "deleted" replaces paragraph
1	4.7.6.1.d.3	additional "-" added after "Containment Pressure"
1	4.7.6.1.e	"a" added after "replacement of"; "band" changed to "bank"
1	3/4.7.6	The entire T/S was retyped; thus, the location of sections on the various pages has changed.
1	3.9.12	phrase added to indicate that system is shared with D. C. Cook Unit 2
1	4.9.12.b.1	word "deleted" replaces paragraph
1	4.9.12.b.4.b	"the" added before "thickness"
1	4.9.12.b.5	"cfm" added after "30,000"
1	4.9.12.c.2	"a" deleted; "analysis" changed to "analyses"
1	4.9.12.d	Semicolon changed to colon after "18 months by"
1	4.9.12.d.1	"the" added before "pressure drop"; "Guage" changed to "Gauge"
1	4.9.12.d.2	word "deleted" replaces paragraph
1	3/4.9.12	The entire T/S was retyped; thus, the location of sections on the various pages has changed

Unit	T/S	Description
1	Bases 3/4.7.5	"t" added to "consisten"; "General Design Criteria 10" changed to "General Design Criterion 19"
1	Bases 3/4.7.6	"s" added to "room"; "was" changed to "were"
1	Bases 3/4.7.7	"is" changed to "are"
1	Bases 3/4.9.13, 3/4.9.14	Text moved to new page B 3/4 9-4
1	Bases 3/4.9.13	"ensures" changed to "ensure"
1	Bases 3/4.9.14	"provides" changed to "provide"
2	4.7.6.1.b	comma added after "system"
2	4.7.6.1.b.1	word "deleted" replaces paragraph
2	4.7.6.1.c.1	"of" added after "efficiency"
2	4.7.6.1.c.2	"a" deleted; "analysis" changed to "analyses"
2	4.7.6.1.d.2	word "deleted" replaces paragraph
2	4.7.6.1.e	"a" added after "replacement of"
2	3/4.7.6.1	The entire T/S was retyped; thus, the location of sections on the various pages has changed; page 3/4 7-19a intentionally left blank because of reduced space required for retyped T/Ss.
2	3.9.12	"*" changed to "**" in heading and footnote
2	4.9.12	"air cleanup systems" changed to "ventilation system"
2	4.9.12.b	comma added after "with the system"
2	4.9.12.b.1	word "deleted" replaces paragraph
2	4.9.12.b.4.b	"the" added before "thickness"

Unit	T/S	Description
2	4.9.12.b.5	"cfm" added after "30,000"
2	4.9.12.c.2	"a" deleted; "analysis" changed to "analyses"
2	4.9.12.d	Semicolon changed to colon after "18 months by"
2	4.9.12.d.1	"the" added before "pressure drop"; "Guage" changed to "Gauge"
2	4.9.12.d.2	word "deleted" replaces paragraph
2	3/4.9.12	The entire T/S was retyped; thus, the location of sections on the various pages has changed
2	Bases 3/4.7.6	"s" added to "room"; "was" changed to "were"
2	Bases 3/4.7.7	Comma added in paragraph 1 of Bases 3/4.7.7; "-" added to "18 month" in paragraph 5.
2	Bases 3/4.7.7	Text from page B 3/4 7-5 moved to page B 3/4 7-6
2	Bases 3/4.7.8	"is" changed to "are"; "This limitation will" changed to "These limitations"
2	Bases 3/4.7.9	"occuring" changed to "occurring" in paragraph 1 of Bases 3/4.7.9
2	Bases 3/4.9.10 and 3/4.9.11	"assemble" changed to "assembly"; paragraphs merged; "intervals" changed to "internals"
2	Bases 3/4.9.13, 3/4.9.14	text moved to new page B 3/4 9-4
2	Bases 3/4.9.13	"ensures" changed to "ensure"
2	Bases 3/4.9.14	"provides" changed to "provide"

Conclusion

In conclusion, we believe that the proposed changes do not involve significant hazards considerations because, as demonstrated in the previous discussion, operation of the D. C. Cook Plant in accordance with the changes would not:

(1) involve a significant increase in the probability of occurrence or consequences of an accident previously analyzed,

(2) create the possibility of a new or different kind of accident from any accident previously evaluated, or

(3) involve a significant reduction in a margin of safety.