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 AUTH. NAME AUTHOR AFFILIATION
 ALEXICH, M.P. Indiana Michigan Power Co. (formerly Indiana & Michigan Ele
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SUBJECT: Application for amends to Licenses DPR-58 & DPR-74, adding footnotes to Tables 3.3-13 & 4.3-9.

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AEP:NRG:0956

Donald C. Cook Nuclear Plant Units 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
WASTE GAS HOLDUP MONITORING SYSTEM TECHNICAL
SPECIFICATION CHANGE REQUEST

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

Attn: T. E. Murley

January 27, 1989

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 Units 1 and 2. Specifically, we would like to add footnotes to Tables 3.3-13 and 4.3-9 for both Units 1 and 2 which would allow a portion of the Waste Gas Holdup System Explosive Monitoring System to be inoperable for 160 days on a one-time basis so that it may be replaced. In addition, several editorial changes are requested. The reasons for these changes and our analysis concerning significant hazards consideration are included in Attachment 1. The proposed revised Technical Specification pages are included in Attachment 2.

Replacement of the applicable portions of the system are currently scheduled for the third quarter of 1989, and we are therefore requesting review of our proposed amendment by that time.

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.

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 (NSDRG) at their next regularly scheduled meeting.

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Dr. T. E. Murley

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AEP:NRC:0956

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. G. 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 ensure its accuracy and completeness prior to signature by the undersigned.

Sincerely,



M. P. Alexich
Vice President

ldp

Attachments

cc: D. H. Williams, Jr.
W. G. Smith, Jr. - Bridgman
R. C. Callen
G. Bruchmann
G. Charnoff
NRC Resident Inspector - Bridgman
A. B. Davis - Region III

ATTACHMENT 1 TO AEP:NRC:0956

REASONS AND SIGNIFICANT HAZARDS CONSIDERATION
EVALUATION FOR THE PROPOSED TECHNICAL SPECIFICATION CHANGES

Introduction

The waste gas holdup system (WGHS) includes one hydrogen monitor and two oxygen monitors which are intended to ensure that concentrations of these gases are maintained below their explosive limits. The one oxygen monitor (QC-370) continuously monitors the oxygen content of the WGHS and serves to automatically isolate the waste gas tank being filled and place the standby tank in service if the oxygen content reaches 3%. The other oxygen monitor (QC-31) and the hydrogen monitor serve only to continuously monitor the hydrogen and oxygen content of the WGHS.

Reason For Change

The hydrogen monitor and one of the oxygen monitors (QC-31) have become high-maintenance items and require replacement. The replacement of these monitors and the associated piping is currently scheduled to begin in the third quarter of 1989 and is estimated to take no more than 160 days. Our Technical Specification (T/S) action statement for the hydrogen monitor allows operation of the waste gas holdup system for 14 days with the hydrogen monitor inoperable provided grab samples are collected and analyzed every 12 hours. The action statement for the oxygen monitors allows operation of the waste gas holdup system for 30 days with one of the two monitors inoperable with no compensatory requirement for obtaining grab samples (grab samples are only required if both monitors are inoperable). Since the hydrogen monitor and one of the oxygen monitors will be inoperable during the installation period and since the installation period is expected to exceed the out-of-service times specified in the T/S action statements, a T/S change is necessary to allow replacement of the monitors. We are therefore requesting that we be allowed to operate the waste gas holdup system with the monitors inoperable for up to 160 days, on a one-time basis, to allow the replacement of this equipment.

Justification For Change

While the monitors are inoperable, grab samples of both hydrogen and oxygen will be taken and analyzed every 12 hours. The grab sample testing is equivalent to the compensatory action required by the T/S but for an extended period of time. While the hydrogen monitor is inoperable, the hydrogen level will be assumed to be higher than the minimum flammable level (about 4%). The limiting factor then is the oxygen concentration at which hydrogen and oxygen become flammable. If the oxygen concentration were to reach its upper limit setpoint (3%), the remaining oxygen monitor (QC-370) would initiate a switching of the waste gas holdup tanks to prevent the oxygen level from reaching the point where it would

ignite the hydrogen; therefore, as long as monitor QC-370 remains operable, the oxygen monitor being replaced (QC-31) provides only redundant information and therefore is not essential to the safe operation of the WGHS. Even though grab samples are not required by our current T/Ss when only one oxygen monitor is inoperable, we intend to collect oxygen grab samples during the equipment replacement interval, which will provide the redundant information provided by QC-31. If the remaining oxygen monitor were to become inoperable during the installation period, the actions specified in our current T/Ss would be followed (i.e., operation of the WGHS would be discontinued if the remaining oxygen monitor could not be repaired within the 30 day action period). Since the hydrogen concentration is always assumed to be above the flammable level, the information provided by the hydrogen monitor is not essential to carry out the operational responses necessary to maintain safety. Nevertheless, we intend to collect hydrogen grab samples during the equipment replacement to ensure that the hydrogen concentration is known at least once every 12 hours. We therefore believe that operation of the system in the proposed manner will be adequate to ensure safe operation of the WGHS while the hydrogen and oxygen monitors are being replaced.

Significant Hazards Analyses

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 purpose of the hydrogen and oxygen monitors is to measure the concentrations of these gases in the WGHS to ensure that the gas mixture is non-flammable. We can accomplish this purpose and ensure safe operation of the WGHS by operating the system in the proposed manner. During the equipment replacement interval, we will be assuming that the hydrogen concentration is above the flammable limit and the information provided by the hydrogen monitor will therefore not be essential to the safe operation of the WGHS. In addition, evaluation of the grab samples will ensure that the hydrogen concentration is known at least every 12 hours. The information provided by the oxygen monitor being replaced is not essential to the safe operation of the WGHS since it is

redundant to information provided by the remaining oxygen monitor. In the event that the remaining oxygen monitor becomes inoperable, we will follow the currently approved T/Ss. Since operation of the WGHS in the manner we have proposed will ensure that the purpose of the oxygen and hydrogen monitors is fulfilled and safe operation of the WGHS is maintained, the proposed change will not involve a significant increase in the probability or consequences of a previously analyzed accident.

Criterion 2

During the replacement of the monitors the waste gas holdup system will continue to operate normally. The proposed method of operation will ensure that the oxygen and hydrogen gas mixture is non-flammable. For this reason, operating the explosive gas monitoring system in the proposed manner will not place the plant in a new or unanalyzed condition. Therefore we believe that this change will not introduce a new or different kind of accident than previously analyzed.

Criterion 3

The remaining oxygen monitor will be available to maintain the oxygen concentration below the limit required for hydrogen flammability in oxygen. In addition, the oxygen grab samples will provide redundant information and will serve as a check of the monitor's readings. If the remaining monitor becomes inoperable, we will follow the actions of our current T/Ss. Since continuous monitoring of the hydrogen concentration will not be possible, we will assume the concentration is above the flammable limit. However, the evaluation of grab samples will ensure that the hydrogen concentration is known at least every 12 hours. These proposed interim measures will not significantly affect our ability to maintain the hydrogen and oxygen concentration within the limits to prevent flammability. Therefore we believe that operation of the system in this manner does 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 sixth of these examples refers to changes which may result in some increase to the probability of occurrence or consequences of a previously analyzed accident, but where the results are clearly within limits established as acceptable. As discussed above, these changes relax requirements related to operation of the waste gas holdup system but maintain the integrity of the system through adherence to the approved compensatory actions. Thus, we conclude that the example

cited is applicable and that the changes do not involve a significant hazards considerations as defined by 10 CFR 50.92.

In addition, several editorial changes were made.

1. The extra parenthesis was deleted from Item 2b of Table 3.3-13 on Unit 1 Page 3/4 3-63.
2. Several editorial changes were made to Footnote 1 on Unit 1 Page 3/4 3-64 and Unit 2 Page 3/4 3-60.

The word "non-purging" was added to the Unit 1 footnote to be consistent with Unit 2. This clarifies that the other requirements specified in Items 3a and 5a are non-purging requirements.

The word "non-purging" was hyphenated in the Unit 2 footnote to make it grammatically correct.

The word "other" was deleted from the footnote for both units. Use of the word other implies the requirements of Item 4a are also non-purging requirements.

The phrase "in both tables" was added to the footnote of both units to clarify that the statement within the parentheses applies to both tables and not just Table 4.3-9.

3. In Tables 3.3-13 and 4.3-9 for both units, the words action, channel check, source check, channel calibration, and channel functional test were put in all capital letters because they are terms defined in Section 1 of the T/Ss.
4. The extra parenthesis was deleted and a comma was added to Item 1.c of Table 4.3-9 on Unit 1 Page 3/4 3-66 and Unit 2 Page 3/4 3-62.

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 margin of safety.

Criterion 1

These changes, being editorial in nature and intended to correct errors in the T/Ss, will not reduce in any way requirements or commitments in the existing T/Ss. Thus, no increase in the probability or consequences of a previously evaluated accident would be expected.

Criterion 2

These purely editorial changes will not create the possibility of a new or different kind of accident from any previously evaluated, because these changes will not place the plant in a new or unanalyzed condition.

Criterion 3

The proposed amendment will not involve a significant reduction in margin of safety, because all accident analyses and nuclear design bases remain unchanged.

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 that are purely administrative in nature: for example, changes to achieve consistency throughout the T/Ss, correction of an error, or a change in nomenclature. This group of proposed changes is intended to correct errors in the T/Ss. As these changes are purely editorial and do not impact safety in any way, we believe the Federal Register example cited is applicable and that the changes involve no significant hazards consideration.