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NUCLEAR MANAGEMENT AND RESOURCES COUNCIL

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February 9, 1994

Mr. David L. Meyer, Chief
Rules Review and Directives Branch
Division of Freedom of Information
and Publication Services
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: Comments on the draft Generic Letter, *Guidance for Modification of Technical Specifications to Reflect (A) Revisions to 10CFR Part 20, "Standards for Protection Against Radiation" and 10CFR50.36a, "Technical Specifications on Effluents from Nuclear Power Reactors", (B) Related Current Industry Initiatives, and (C) Miscellaneous Related Editorial Clarifications*

Dear Mr. Meyer:

This letter provides the Nuclear Management and Resources Council, Inc. (NUMARC)[1] comments on the draft generic letter (GL), "*Guidance for Modification of Technical Specifications to Reflect (A) Revisions to 10 CFR Part 20, "Standards for Protection Against Radiation" and 10 CFR 50.36a, "Technical specifications on effluents from nuclear power reactors", (B) Related Current Industry Initiatives, and (C) Miscellaneous Related Editorial Clarifications*," in response to the Federal Register notice of December 23, 1993 (58 Fed. Reg. 68170). The draft GL has received extensive and careful review by the nuclear power industry. The results of this review are reflected in these general comments and the detailed comments in Enclosure 1.

[1] NUMARC is the organization of the nuclear power industry that is responsible for coordinating the combined efforts of all utilities licensed by the NRC to construct or operate nuclear power plants, and of other nuclear industry organizations, in all matters involving generic regulatory policy issues and on the regulatory aspects of generic operational and technical issues affecting the nuclear power industry. Every utility responsible for constructing or operating a commercial nuclear power plant in the United States is a member of NUMARC. In addition, NUMARC's members include major architect/engineering firms and all of the major nuclear steam supply system vendors.

111

The Summary section of the Federal Register notice requests comments "...on the Commission's policy for continued use of appendix B to 10 CFR 20.1 - 20.602 as a valid reference for gaseous and liquid effluent [technical specifications] until licensees elect to implement guidance proposed in the draft GL." It also requests specific comments "on whether there should be a time limit on the use of appendix B to 10 CFR 20.1 - 20.602 and, if a time limit is set, what is an appropriate time period to allow licensees to switch to Appendix B to 10 CFR 20.1001 - 20.2402." Our position is that no time limit is needed because the Commission's policy allowing continued use of appendix B to 10 CFR 20.1 - 20.602 as a valid reference for gaseous and liquid effluent technical specifications (TS) will maintain the existing adequate level of required protection of public health and safety and will be consistent with the requirements of 10 CFR 20.1001 - 20.2402. The basis for this position was articulated in my letter of April 28, 1993, to Dr. Murley requesting that NRC affirm that our understanding is accurate. In Dr. Murley's response to NUMARC, dated June 30, 1993, he stated, "after careful review of your position and other relevant factors, we have determined that it is acceptable to the staff for licensees to retain their existing level of effluent control as implementing the ALARA requirement after January 1,1994, without submitting individual requests for amending their specifications to comply with new 10CFR20.1101(b). Therefore, the instantaneous release rate limits, which are specified by reference to the values in Appendix B, will continue to be the values in Appendix B prior to the revision, until the technical specifications are changed." Since there is no health and safety issue that requires a time limit, none should be imposed.

This position is also consistent with NRC's approach of establishing no time limit regarding correction of the basic inconsistencies between the dose concepts and methods underlying Part 20 and Part 50 radiation protection standards and the associated implementation guidance, as we requested in our letter to the Chairman, dated December 21, 1992. The changes to 10 CFR50 are more necessary and far reaching than the changes to TS proposed in the GL. The GL does not address the root cause of the "possible confusion or improper implementation of the revised 10 CFR Part 20 requirements", that NRC states the model TS provided in the GL "are specifically intended to eliminate." Consideration of time limits to potentially mandate related technical specification changes to obtain consistency should be done in the overall context of regulation and guidance changes needed to address larger concerns. A discussion of our views and actions to date are contained in Enclosure 2.

The draft GL may prove helpful to licensees who opt to prepare license amendment requests to modify effluent TS in order to reflect the revised 10 CFR Part 20 (i.e., 10 CFR 20.1001 - 20.2402) because it provides model TS. However, some items need correction or further clarification to make this guidance more appropriate and useful. The specific comments and recommendations intended to correct and clarify

those items and to enhance the model TS are as described in Enclosure 1. For example, we acknowledge the stated intent of the draft GL with regard to high radiation area TS "to reflect current industry technology in controlling access to high radiation areas." However, some of the present wording in the draft GL is unclear and overly prescriptive.

We want to confirm the implied acknowledgment contained in the GL that licensees may pursue "TS amendment proposals to implement any or all of the guidance in this generic letter, or alternate TS amendment proposals that include adequate justification." It is our understanding that the licensee may select parts of the model TS or make alternate proposals to reflect unique situations. For example, the licensee's existing TS are not standard and adoption of the model TS proposed in the draft GL may impose unwarranted restrictions that are not currently applicable. This GL, when final, should not be used to preclude justified license amendment prerogatives.

The draft GL also addresses definitions of Member of the Public, Site Boundary, and Unrestricted Area that may potentially be affected by proposed changes to Part 20 noticed in the Federal Register on February 3, 1994 (59 Fed. Reg. 5132) for public comment. The final GL should be consistent with any Part 20 rule changes that affect the proposed definitions or other aspects of the GL. Also, NUMARC may provide supplemental comments on the draft GL after we have had an opportunity to review the proposed changes.

We appreciate the opportunity to provide our input on the draft GL and wish to express our support of NRC's initiatives to enhance the opportunity for public comment on proposed generic communications. Please contact Ralph Andersen, John Schmitt, or me if NRC staff would like to discuss our comments.

Sincerely,

Thomas E. Tipton

TET/RLA:slr
Enclosures

Specific Comments on the draft Generic Letter, *"Guidance for Modification of Technical Specifications to Reflect (A) Revisions to 10 CFR Part 20, "Standards for Protection Against Radiation" and 10 CFR 50.36a, "Technical Specifications on Effluents from Nuclear Power Reactors", (B) Related Current Industry Initiatives, and (C) Miscellaneous Related Editorial Clarifications"*

Enclosure 1 Model Standard Technical Specifications

1.16 Member of the Public

The proposed standard technical specifications (STS) in enclosure 1 of the draft GL reference the definition of "Member of the Public" in 10 CFR 20.1003, which is more restrictive than the definition in current STS (NUREGs 0472 and 0473) and in 40 CFR 190. Without further clarification, the 10 CFR 20.1003 definition might incorrectly be inferred to apply to the dose design objectives in appendix I to 10 CFR 50 or the dose limits in 40 CFR 190, which is an increase in requirements beyond those in the respective rules. We recommend that the current STS definition be used; increased requirements are not warranted and go beyond the purpose of this generic letter.

Also, to improve clarity, we suggest that wording similar to the following be added: "For purposes of demonstrating compliance with 40 CFR 190, Member of the Public only includes individuals in the general environment (i.e., at or beyond the site boundary). For demonstrating compliance with 10 CFR 20, the definition of Member of the Public in 10 CFR 20 shall be used." The proposed wording applicable to 40 CFR 190 appropriately reflects the respective definition of member of the public: "any individual...in the general environment..."; "general environment" is defined in 40 CFR 190 as "...environments outside sites upon which any operation which is part of a nuclear fuel cycle is conducted." The proposed wording applicable to 10 CFR 20 will retain the relationship between the respective definition of member of the public and dose limits for members of the public contained in Part 20.

1.17 Offsite Dose Calculation Manual (ODCM)

The definition in the proposed STS is in error because it describes the ODCM definition relevant to GL 89-01 implementation. The ODCM definition in the current STS should be used.

1.30 Site Boundary

The proposed STS definition refers to 10 CFR 20.1003. To improve clarity, we suggest that the definition be changed to wording similar to the following: "Site Boundary means that line beyond which the land or property is not owned, leased, or otherwise controlled by the licensee. For purposes of demonstrating compliance with 10 CFR 20, the definition in 10 CFR 20 shall be used." We acknowledge that the current STS definition, the proposed STS definition, and the 10 CFR 20 definition are consistent at present, but we believe our proposed wording will alleviate potential confusion should the 10 CFR 20 definition of Site Boundary be changed in the future.

1.38 Unrestricted Area

We acknowledge that the definition in the proposed STS is consistent with the expanded definition in the current STS. To improve clarity, we suggest that wording similar to the following be added: "Unrestricted Area does not include areas over water bodies. For calculations performed pursuant to 10 CFR 50.36a that are utilized in the Limiting Conditions for Operation (or Controls), and for demonstrating compliance with 40 CFR 190, Unrestricted Area only includes areas that are at or beyond the site boundary. For demonstrating compliance with 10 CFR 20, the definition of Unrestricted Area in 10 CFR 20 shall be used."

Table 4.3.9 Radioactive Gaseous Effluent Monitoring Instrumentation

A discussion regarding changes to Table 4.3-9 should be added to the "Summary of Recommended Changes." Also, the table is incorrectly numbered as "Table 4.3.8" and should be changed.

3/4.11.1 Liquid Effluents Concentration - Limiting Condition for Operation (LCO)

The proposed STS establish instantaneous release rate limitation on liquid effluent concentrations that are a factor of 10 times the effluent concentration values in appendix B to 10 CFR 20.1001-20.2402. NRC's intent in increasing the effluent concentration values by a factor of 10, as stated in the draft GL, is "...to maintain the level of effluent control and operational flexibility that existed with the current TS under the previous Part 20." However, the proposed STS limitation on concentrations of dissolved or entrained noble gases in liquid effluents retains the current STS value of 2 E-4 uCi/ml and has not been changed consistent with the intent stated in the draft GL. Considering the basis for

the current STS value as described in NUREG 0133 and applying the same approach as was used for the liquid effluent concentration values, the limitation on concentrations of dissolved or entrained noble gases in liquid effluents could be increased by a factor of 3. We recommend that NRC evaluate the basis of the current STS value, considering the intent as stated in the GL, and adjust by an appropriate factor (e.g., by a factor of 3) the proposed STS limitation on concentrations of dissolved or entrained noble gases in liquid effluents. We also recommend that the wording for the limitation on concentrations of dissolved or entrained noble gases in liquid effluents be changed to improve clarity as follows: "For dissolved or entrained noble gases, the total activity concentration shall be limited to ..."

3/4.11.1.1 Liquid Effluents Concentration - Bases

The third sentence reads as follows: "This limitation provides reasonable assurance that the levels of radioactive materials in bodies of water in Unrestricted Areas will result in exposures within (1) the Section II.A design objectives of Appendix I, 10 CFR Part 50, to a Member of the Public and (2) restrictions authorized by 10 CFR 20.1301(e)." We believe that "this limitation" (i.e., reference to 10 times the concentration values given in Appendix B, Table 2, Column 2 to 10 CFR 20.1001-20.2402) is a reference to controls based on instantaneous release rates only, and we recommend wording similar to the following to improve clarity: "This specification, in conjunction with the more restrictive limitation of appendix I to 10 CFR Part 50 provides reasonable assurance that annual dose limitation requirements of 10 CFR 20.1301(a) will not be exceeded."

3/4.11.2.1 Gaseous Effluents Dose Rate - Bases

The proposed STS Bases refers to the "... corresponding thyroid dose rate above background to a child via the inhalation pathway ... " This differs from the current STS Bases that refers to the "... corresponding thyroid dose rate above background to an infant via the cow-milk-infant pathway ...", but no explanation for this change is provided. We recommend that either an explanation be provided or that the current STS Bases be retained.

3/4.11.1.4 Liquid Holdup Tanks - LCO

The provision to list specific tanks in the proposed STS may be interpreted to mean that all relevant tanks are to be listed, and that additional tanks could not be used in the future without a corresponding TS change. The draft GL should clarify that a specific listing in the TS of liquid holdup tanks is at the licensee's discretion.

3/4.11.2.6 Gas Storage Tanks - Bases

The current STS include a reference to the applicable section of the Standard Review Plan (NUREG-0800) as part of the bases, which has been dropped from the proposed STS. We recommend that the reference be added back to the bases to clarify the appropriate design bases for the gas storage tanks that are covered by this TS.

The footnote (indicated by *) applicable to liquid holdup tanks has, in error, been repeated for gas storage tanks. It should be deleted.

3/4.11.4 Total Dose - LCO

This TS provides for calculation of dose to a "member of the public" to determine compliance with the dose limits of 40 CFR 190. We recommend that the phrase "at or beyond the site boundary" be added after "member of the public" to clarify that in this case the "member of the public" refers to the definition for 40 CFR 190 and not for 10 CFR 20 or 50, as might otherwise be inferred. This is consistent with the discussion in NUREG-0133 which states, "[t]he maximum exposed member of the public for this evaluation [40 CFR 190] may or may not correspond to the individual considered in Technical Specifications." We acknowledge that the wording in the proposed STS is consistent with GL 89-01 implementation guidance, but we believe our suggested change will minimize confusion potentially arising from the differing definitions of "Member of the Public" in 10 CFR 20, 10 CFR 50, and 40 CFR 190.

3/4.11.4 Total Dose - Bases

The proposed STS bases refer to the limitations established by STS 3.11.1.1 3.11.2.1 as "dose limitations", when they are actually limitations on liquid effluent concentrations and gaseous effluent dose rates, respectively. We recommend that the proposed STS bases be revised accordingly to improve clarity.

5.1.3 Site Map

This section refers to the "Exclusion (fenced) Area boundary, as defined in 10 CFR 100.3(a)..." We acknowledge that this wording is consistent with the current STS (NUREGs 0472 and 0473), but we believe this opportunity should be taken to correct the wording and delete the word "fenced." 10 CFR 100.3(a) does not use the word "fenced."

The phrase "[f]or calculations performed..." in the proposed STS (Enclosure 1 of the draft GL) is an addition to the wording in the current STS (NUREGs 0472 and 0473) and is unclear in intent. We recommend that it be deleted.

6.11 High Radiation Areas

General Comment: The proposed high radiation area (HRA) TS are much too specific and detailed for the type of information that should be included in TS. Although the intent to include new technology is good, the existing TS already provide the flexibility to adopt this intent with appropriate clarifications from the staff (e.g., as Health Physics Positions). In addition, the existing TS adequately address radiation instrumentation and radiation protection technician coverage at a level of detail sufficient to provide positive control. We recommend that NRC retain the current STS and develop appropriate clarifications to achieve the intent of the proposed STS.

We have provided the following comments aimed at enhancing the proposed STS and Improved STS, should they be retained in the final GL.

Proposed STS 6.11.2 repeats most of the criteria in 6.11.1. We recommend that this section be truncated with a phrase such as: "The controls described in 6.11.1 apply, except as modified below." The modified controls for 6.11.2 could then be listed. The same comment applies to proposed Improved STS 5.11.2.

Proposed STS 6.11.1.A and 6.11.2.A should be expanded to also include the provision for continuous direct or electronic surveillance capable of preventing unauthorized access, to be consistent with 10 CFR 20.1601(b). The same comment applies to proposed Improved STS 5.11.1.A and 5.11.1.B.

Proposed STS 6.11.2.A(i) should be revised to improve clarity and consistency with Reg. Guide 8.38. The wording in Regulatory Position C.2.6 is suggested to clarify that either Operations or Radiation Protection may administer control of HRA keys. The same comment applies to proposed Improved STS 5.11.2.A(i).

The wording in proposed STS 6.11.1.B and 6.11.2.B is overly prescriptive regarding the means for specifying dose rates (i.e., included in the radiation work permit (RWP) or equivalent), and, along with the criteria for "other appropriate radiation protection equipment and measures, is redundant to proposed STS 6.11.1.D and E. We recommend that the wording after "...Radiation Work Permit (RWP) or equivalent..." be deleted. The same comment applies to proposed Improved STS 5.11.1.B and 5.11.2.B.

Proposed STS 6.11.1.D and 6.11.2.D refer to "each individual (whether alone or in a group)", which is more restrictive than the applicable Regulatory Position in NRC Regulatory Guide 8.38, which states, "Any individual or group of individuals..." The wording in the proposed STS should be changed to reflect the wording in the regulatory guide. The same comment applies to proposed Improved STS 5.11.1.D and 5.11.2.D.

Proposed STS 6.11.2.D should allow for the use of dose rate meter as in specification 6.11.1.D(i). For example, this would be appropriate in high noise areas where the use of alarming dosimeter is not practical; also, the use of telemetric devices is also not practical in some locations and direct surveillance by personnel is contrary to the ALARA principle. The same comment applies to proposed STS 5.11.2.D.

Proposed STS 6.11.1.D(iv)(a) refers to surveillance "at the work site" by an individual qualified in radiation protection procedures. The phrase "at the work site" is not included in proposed STS 6.11.1.D(iii)(a), presumably based on ALARA considerations. We recommend that the phrase "at the work site" be deleted from proposed STS 6.11.1.D(iv)(a) also due to ALARA considerations. The same comment applies to proposed Improved STS 5.11.1.D(iv)(a).

Proposed STS 6.11.1.E and 6.11.2.E might be inferred to mean that personnel could not enter areas where dose rates are not known because there would be no means to determine dose rates in the area without entry. We recommend that the criteria be moved to proposed STS 6.11.1.D(ii) and (iii), which appears to be consistent with the guidance in Reg. Guide 8.38. The same comment applies to proposed Improved STS 5.11.1.E and 5.11.2.E.

We recommend that proposed STS 6.11.2.F be reworded similar to the following to improve clarity: "Within areas controlled as a high radiation area under 6.11.1, where no enclosure exists for the purpose of locking and no enclosure can be reasonably constructed, such areas need not be controlled by a locked door or gate, but shall be barricaded and conspicuously posted as a high radiation area, and a conspicuous, clearly visible flashing light shall be activated at the barricade as a warning device."

We recommend that the footnotes (indicated by * and **) be expanded to include English unit equivalents in parentheses as follows: "30 centimeters (12 inches)" and "1 meter (3 feet)." The same comment apples to Improved STS 5.11.

6.9.1.2 Annual Dose Reports

The proposed STS describes the annual dose report as outlined in NRC Regulatory Guide 1.16, dated January 1975. The revised Part 20 includes a new requirement for licensees to submit individual dose reports (i.e., NRC Form 5 or equivalent) annually for all individuals required to be monitored. Considering the new requirement, and also in light of the substantial improvements by industry in collective dose minimization (i.e., ALARA) since the time when the guide was developed, we recommend that NRC review the past and present use of the Regulatory Guide 1.16 annual dose report and determine if the report is still needed to conduct current regulatory activities. If not, the corresponding STS should be deleted. If the report is retained, then we recommend that the submittal date be changed from "March 31 of each year" to "April 30 of each year" to be consistent with the corresponding new reporting requirement in revised Part 20.

The proposed TS specifies providing a tabulation of personnel "...for whom monitoring was performed." We recommend that this be revised to "...for whom monitoring was required..." to be consistent with 10 CFR 20 and in acknowledgment that licensees need not report the results of voluntary monitoring (i.e., monitoring performed but not required by regulation). This will also be consistent with the wording in the Improved STS (Enclosure 2, 5.9.1.2a)

The proposed TS refers to estimating doses based on "pocket dosimeter, thermoluminescence dosimeter (TLD), or film badge measurements." We recommend that "electronic dosimeter" be added as an acceptable means to estimate doses. This same comment applies to Improved STS 5.9.1.2a.

6.9.1.4 Radioactive Effluent Release Report

The proposed STS reporting requirement to perform and include the results of a 40 CFR 190 total dose assessment in each Radioactive Effluent Release Report is inconsistent with the LCO action required by Specification 3.11.4a., which requires that a 40 CFR 190 total dose assessment be performed and reported only if the "calculated doses from the release of radioactive materials in liquid or gaseous effluents [exceed] twice the limits of Specification 3.11.1.2a., 3.11.1.2b., 3.11.2.2a., 3.11.2.2b., 3.11.2.3a., or 3.11.2.3b." We recommend that NRC delete the reporting requirement related to the 40 CFR 190 assessment, considering the 3.11.4a. LCO action requirement, and also in light of the long-established level of performance by the industry in the area of radioactive control that has resulted in calculated doses to members of the public that are well below the dose guidelines of appendix I to 10 CFR 50.

The proposed STS specifies the use of magnetic tape for meteorological data. A more generic term such as "electronic media" is more appropriate and would not require future changes to this section as communication media technology evolves.

The proposed STS specifies the use of "meteorological conditions concurrent with the time of release..." This should be revised to provide for the use of annual average meteorological data, consistent with NUREG-0133.

The reporting requirements do not reflect the Regulatory Guide 1.21 allowance for reporting solid radwaste data on a six-month basis. Instead quantities of liquid effluents, gaseous effluents, gaseous effluents, and solid wastes are all required to be reported on a quarterly basis. Therefore, the second paragraph of the Administrative Controls should be revised to read as follows: "...June 1974, with liquid and gaseous effluent data summarized on a quarterly basis following the format of Appendix B thereof. For solid wastes, data shall be summarized on a six-month basis following the format of Table 3 and Appendix B and shall be..."

Enclosure 2 - Model Technical Specifications (With GL 89-01 Implementation)

For clarity, Enclosure 2 of the draft generic letter should include a complete copy of the Model (STS) that reflects Generic Letter 89-01 implementation. Trying to supplement the Enclosure 1 Model STS, which do not reflect Generic Letter 89-01 implementation, with the Enclosure 2 Model STS for those plants that have implemented Generic Letter 89-01 can be confusing. As an example, the Model STS contained in Enclosure 1 include a notation change to Table 4.3-8, "Radioactive Liquid Effluent Monitoring Instrumentation Surveillance Requirements." For plants that implemented Generic Letter 89-01, this table should have been relocated to the ODCM and, therefore, is no longer applicable. However, a statement to that effect is not included in Enclosure 2.

6.14.c Offsite Dose Calculation Manual (ODCM)

The proposed STS requires that a complete copy of the entire ODCM be submitted with the Radioactive Effluent Release Report for each report period during which changes to the ODCM were made (e.g., annually). This places an unneeded burden on licensees, especially if only minor changes were made to the ODCM. Consideration should be given to requiring that only copies of the pages changed during the period need be submitted.

Enclosure 4. Appendix B to 10 CFR 20.1-20.602, "Concentrations in Air and Water Above Natural Background"

We are in support of the proposed enclosure of appendix B to 10 CFR 20.1-20.602 in the draft GL to facilitate its availability for licensees who do not request amendments to TS (i.e., who continue to use appendix B to 10 CFR 20.1-20.602). Even though Part 20.1-20.602 was removed from 10 CFR, as noticed in the Federal Register on December 22, 1993 (58 Fed. Reg. 67657), its removal does not affect the continued use of appendix B to 10 CFR 20.1-20.602 by Part 50 licensees as a valid reference for gaseous and liquid effluent TS. However, we believe it would be helpful for the NRC to carry over its continued availability as an enclosure to the GL.

Reporting requirements in 10 CFR 50.72 and 10 CFR 50.73 related to effluent releases are in terms of appendix B to 10 CFR 20.1001 - 20.2402. It is our understanding from NRC staff that licensees who opt to continue to use appendix B to 10 CFR 20.1 - 20.602 are required to determine such reportability using the 10 CFR 20.1001 - 20.2402 criteria. This should be clarified in the introduction of the GL in its final form.

NUMARC Comments on the Commission's Policy for Continued Use of Appendix B to 10 CFR 20.1-20.601 As a Valid Reference for Liquid and Gaseous Effluent Technical Specifications

10 CFR Part 20, "Standards for Protection Against Radiation," was updated and issued in May 1991 to incorporate more recent radiation protection concepts recommended by the International Commission on Radiological Protection (ICRP), National Council on Radiation Protection and Measurements (NCRP), and in EPA Guidance to Federal Agencies. The revised Part 20 was required to be implemented by January 1, 1994.

Other NRC regulations and guidance containing radiation protection standards and criteria primarily applicable to nuclear power plants, e.g., Appendix I to 10 CFR 50 and related regulatory guidance, were not revised to reflect the more recent dose concepts and, therefore, are inconsistent with the revised Part 20.

In our letter to Chairman Selin, dated December 21, 1992, we highlighted this inconsistency between NRC radiation protection standards, discussed potential negative impacts arising therefrom, and made several recommendations to alleviate this situation. Our perspective, as stated in that letter, remains valid regarding practice and performance of radiological effluents control by the nuclear power industry:

> "Doses to members of the public from nuclear plant effluents, which are currently well below both the existing and revised regulatory limits, will not be affected by the conforming changes to technical specifications, because dose limits (Part 50, Appendix I) and the methods for calculating doses to members of the public (Regulatory Guide 1.109) are not being changed by NRC at this time. Further, the NRC's stated basis for being able to postpone revisions to existing Part 50 radioactive effluent regulations and guidance is that compliance with Part 50, Appendix I, and with the EPA's 40 CFR 190 limits (i.e., 25 mrem/year whole body or organ dose and 75 mrem/year thyroid dose), is *"...generally more restrictive..."* than the revised Part 20 public dose limit (i.e., 100 mrem/year total effective dose equivalent). Thus, the overall perspective of the NRC staff appears to be that, for nuclear power plant radioactive effluents, adequate protection of public health and safety is provided as currently regulated and in actual operating practice and experience."

Recommendations made in our December 21, 1992 letter also remain valid:

"Establish a publicly available plan as soon as possible that details NRC's schedule to comprehensively review and update the remaining NRC radiation protection standards and related regulatory guidance with the objective of achieving a coordinated, controlled and cost-effective transition by NRC and industry to current radiation protection concepts and methods, consistent with the revised Part 20. For those standards that will apply to Part 50 licensees, the industry should be afforded opportunities for early input and timely review of proposed plans, schedules and technical scopes.

Update the regulations and related guidance to achieve consistency throughout NRC radiation protection standards, with mutually agreeable schedules that provide for correct, effective, and efficient implementation by industry and the NRC."

We also recommended NRC evaluate short-term alternatives to minimize the impacts on industry and the NRC from the time-critical and resource-intensive effort to prepare, submit, review, issue and implement changes to plant technical specifications by Part 50 licensees on an individual basis. At that time we proposed these possible options:

"Pursue expedited rulemaking to allow licensees to defer the changes to technical specifications until 10 CFR Part 50 and related regulatory guidance are updated. This could be done because nuclear power plant radioactive effluents would continue to be regulated under 10 CFR Part 50, Appendix I and assure compliance with the revised Part 20 dose limit of 100 mrem/year for members of the public.

Assign a high priority and confirm NRC's resources to issue the proposed generic letter in a timely manner and to review and issue requested technical specification changes in time to support required Part 20 implementation."

In follow-up to our December 21, 1992 letter, NUMARC met with NRC staff at public meetings on February 11 and April 22, 1993 to discuss options for nuclear power plant effluent technical specifications conformance with the revised Part 20. One option discussed was to consider the continued use by Part 50 licensees of Appendix B to 10 CFR Part 20.1 - 20.601 as a valid reference for gaseous and liquid effluent technical specifications. From these discussions, we concluded that expedited rulemaking, as proposed in our December 21, 1992 letter, would not be necessary to permit the continued use of appendix B to 10 CFR 20.1-20.602 as referenced in TS. Instead, NUMARC

developed a white paper outlining industry's approach to the continued use of appendix B to 10 CFR 20.1 - 20.602 and provided it to NRC with our letter, dated April 28, 1993 to Dr. Murley. We requested NRC review and affirmation of regulatory intent on this issue. Among the points in the white paper were:

> The general intent of the revised Part 20 is that radiation doses to members of the public not exceed 100 mrems per year; the revised Part 20 does not include a specific requirement on limiting radioactivity concentrations in effluents (i.e., it is provided in the rule as an optional method of demonstrating compliance using an annual average).
>
> The general intent of the radiological effluent technical specifications issued with Part 50 licenses is to assure that annual radiation doses to any member of the public due to effluents will not exceed 25 mrems to the whole body, 75 mrems to the thyroid, and 25 mrems to any other organ, as required by 40 CFR Part 190; and that radiological effluents, when averaged over one hour, will not exceed the maximum permissible concentrations in appendix B to 10CFR20.1-20.602 for liquid effluents and the dose rate associated with that table for gaseous effluents.

Based on these points and others, we concluded that the current radiological effluent technical specifications, utilizing appendix B to 10CFR20.1-20.602, are generally more restrictive than the comparable requirements of the revised 10 CFR Part 20. The implementation requirements of § 20.1008 require that where requirements in existing technical specifications are more restrictive than requirements in the revised Part 20, the existing technical specifications remain in force. (Technical specifications amendments can be applied for at licensees discretion.) Therefore, the radiological effluent technical specifications as referenced to 10 CFR Part 20 prior to its revision remain in force after the licensee implements the revised Part 20 until there is a change to the applicable technical specification through a license amendment. This will maintain the current adequate level of required protection of public health and safety and will be consistent with the requirements of the revised 10 CFR Part 20.

In NRC's response to NUMARC, dated June 30, 1993, the NRC stated, *"After careful review of your position and other relevant factors, we have determined that it is acceptable to the staff for licensees to retain their existing level of effluent control as implementing the ALARA requirement after January 1, 1994, without submitting individual requests for amending their technical specifications to comply with new 10 CFR 20.1101(b). Therefore, the instantaneous release rate limits, which are specified by reference to the values in Appendix B, will continue to be the values in Appendix B prior to the revision, until the technical specifications are changed."*

With regard to the long-term acceptability of the continued use of appendix B to 10 CFR 20.1-20.601, NRC stated, *"As you know, we are preparing a Generic Letter to provide model Technical Specification wording to ensure conformance with the revised Part 20 requirements. We will include a discussion on the acceptability of your position in the Generic Letter. The proposed Generic Letter will provide that Part 50 licensees will not have to submit a request for amendment of the Technical Specifications before January 1, 1994, in order to retain their existing level of control for effluents. Licensees may devote their attention and time to ensure adequate preparations for implementation of the revised Part 20 requirements on January 1, 1994. However, we consider this approach a temporary situation since many of the current Technical Specifications contain wording, particularly in the Bases section, that could cause confusion and some of the definitions are not entirely consistent with those in the revised Part 20. The model changes for Technical Specifications that will be in the Generic Letter are intended to eliminate possible confusion or improper implementation of revised Part 20 requirements. Therefore, we assume that licensees will want to adopt the model Technical Specification wording after the work of initially implementing the revised Part 20 is over."*

We acknowledge NRC's expressed concern regarding "possible confusion or improper implementation of revised Part 20 requirements" arising from inconsistencies between effluent technical specifications and the revised Part 20. However, as discussed in our December 21, 1992 letter to the Chairman, we do not agree that the model changes for technical specifications proposed in the draft generic letter will "eliminate" the potential for confusion or improper implementation of requirements because the generic letter does not address the root cause of the issue, which is the basic inconsistency between the dose concepts and methods underlying Part 20 and Part 50 radiation protection standards.

The continued use of appendix B to 10 CFR 20.1-20.601 (i.e., without submitting individual requests for amendments to technical specifications) and the adoption of the model technical specifications proposed in the draft generic letter (considering the comments provided in Enclosure 2 of this letter) are both acceptable alternatives with regard to providing for adequate protection of public health and safety and for compliance with NRC requirements. Also, either alternative may address the potential for confusion or improper implementation until consistency between NRC's regulations is achieved and the associated guidance made available. The licensees should retain the responsibility to determine which alternative would best address their specific circumstances.

In response to NRC's request for comments on this issue, our position is that the NRC should not establish a time limitation on the continued use of Appendix B to 10 CFR 20.1-20.601, and thereby require licensees to prepare and submit individual requests

for amendments to technical specifications, because such action would not provide a substantial increase in the overall protection of public health and safety. Such action may more appropriately be considered in conjunction with future rulemaking to revise Appendix I to 10 CFR 50 and related regulatory guidance to be consistent with 10 CFR 20.1001-20.2402.