

DRAFT VALUE/IMPACT STATEMENT

1. PROPOSED ACTION

1.1 Description

The proposed action consists of issuing a regulatory guide which will not set forth new staff positions. Rather, the new regulatory guide will:

- (1) clarify the recommendations of Regulatory Guide 1.23 (Safety Guide 23), "Onsite Meteorological Programs," which provides guidance for establishing and operating meteorological measurement programs at nuclear power plant sites; and,
- (2) consolidate guidance on meteorological measurements for emergency response purposes contained in Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident," Regulatory Guide 1.101, "Emergency Planning and Preparedness for Nuclear Power Reactors," and Supplement 1 to NUREG-0737, "Requirements for Emergency Response Capability."

Meteorological programs are necessary to measure and collect meteorological information that is used in estimating potential radiation doses to the public resulting from actual routine releases of radioactive materials into the atmosphere and to estimate either potential doses to the public as a result of a hypothetical reactor accident or actual doses in the case of a real accident.

1.2 Need for Proposed Action

Regulatory Guide 1.23 was originally issued as Safety Guide 23 in February 1972. Consequently, much of the information provided in the guide is obsolete, having been made so by changes in the state of the art in meteorological measurement technology and by changes discussed in the guide in the meteorological evaluation procedures in which the meteorological data are to be used. A revision of this guide is deemed necessary to strengthen the guidance in an

area shown to be weak as a result of the Three Mile Island experience, to update other areas that are obsolete and to eliminate areas which are of little or no value to users.

1.3 Value/Impact of Proposed Action

1.3.1 NRC

The meteorological capabilities required to implement current emergency plans for operating reactors and OL applications include a measurement program to represent the plant vicinity and area described as the plume exposure Emergency Planning Zone. The integration of this function with the various planning standards of Appendix E to 10 CFR 50 has been outlined in Regulatory Guide 1.97 and 1.101, NUREG-0696 and Supplement 1 to NUREG-0737. The replacement guide will provide detailed guidance on these measurement programs and will be used as a basis for the staff evaluation of the adequacy of emergency plans. This replacement guide will continue to be used as a basis for other licensing actions.

Additional benefits to the NRC are gained with the publication of the proposed replacement guide, as inquiries related to current practice would be minimized. The use of the unrevised guide with obsolete or insufficient guidance increases the burden on the staff with repetitious discussions that could be minimized.

1.3.2 Other Government Agencies

Applicant agencies (e.g., TVA) would be affected as discussed in Section 1.3.3. Upon completion of the proposed action, other agencies will have a current, complete reference document describing the NRC's recommendations concerning meteorological measurement programs at nuclear power plant sites.

1.3.3 Industry

Industry will benefit by having available a current, complete source of information concerning NRC recommendations for establishing and operating the meteorological measurement programs at nuclear power plant sites. Since the product document endorses an ANS standard the nuclear industry has considered the recommendations and any related costs to be reasonable. Guidance concerning the part of the standard which is not endorsed by the draft guide is

provided by reference to other active regulatory guidance. Hence, there is no additional impact on industry.

1.3.4 Public

The public will bear the monetary costs of completing and implementing the proposed action. In addition, any costs incurred by the utilities resulting from the implementation of the product document would be expected to be passed on to the consumers of electric power in the form of higher rates. In return, the public will benefit by an increased assurance that meteorological information representative of the site, which might prove crucial in an emergency situation, will be available. The public will also benefit from the availability of a current reference document that presents the complete NRC recommendations concerning meteorological measurement programs at nuclear power plant sites.

1.4 Decision on Proposed Action

The proposed action should be accomplished on a priority basis.

2. TECHNICAL APPROACH

The alternative methods of accomplishing the proposed action are to perform the work in-house or initiate a technical assistance contract with an independent contractor.

2.1 Discussion and Comparison of Technical Alternatives

The information and expertise needed to prepare a replacement guide are currently available within the NRC. The amount of work necessary to accomplish the proposed action is of limited extent and can be performed in-house within the anticipated time frame without adversely impacting on other task requirements. Considerable time would be expended on the initiation and completion of a technical assistance contract with an independent contractor. Although staff time expended on direct work on the proposed action would be eliminated by contracting the task, additional staff time would be required to prepare and issue a contract and monitor contractor performance.

2.2 Decision on Technical Alternatives

Since the information and expertise to accomplish the proposed action exist within the NRC, the completion of the task in-house is the most beneficial technical alternative.

3. PROCEDURAL APPROACH

3.1 Procedural Alternatives

The alternative procedural methods of accomplishing the proposed action are:

- ANSI standard, endorsed by a regulatory guide
- NUREG
- Branch technical position
- Regulatory guide

3.2 Discussion of Procedural Alternatives

3.2.1 Endorsed ANSI Standard

ANSI/ANS-2.5-1984, "Standard for Determining Meteorological Information at Nuclear Power Sites," was issued in August 1984. The document provides criteria for collecting information for defining meteorological conditions at nuclear power plant sites. Meteorological data collected through implementation of this standard with the modification noted in Section C, "Regulatory Position," should be acceptable to the NRC staff for utilization in the evaluation of the environmental impact and the routine and accident radioactivity release impacts for nuclear power plants.

3.2.2 NUREG

By definition, a NUREG could only provide technical information, which would be useful, but would not provide the guidance specified by the proposed action.

3.2.3 Branch Technical Position

A branch technical position does not provide for as wide of distribution as some of the other procedural alternatives. It also does not provide for an established review that would include a public comment review period.

3.2.4 Regulatory Guide

A regulatory guide would provide wide distribution of the needed guidance. It would also provide an established review that would include a public comment review period.

3.3 Decision on Procedural Alternatives

The development and issuance of a draft regulatory guide for public comment which endorses ANSI/ANS-2.5-1984, "Standard for Determining Meteorological Information at Nuclear Power Sites," would best fulfill the need for the proposed action.

4. STATUTORY CONSIDERATIONS

4.1 NRC Authority

Authority for this guide would be derived from the safety requirements of the Atomic Energy Act through the Commission's regulations. In particular, paragraph 100.10(c)(2) of 10 CFR Part 100 states that, in determining the acceptability of a site for a power or test reactor, the Commission will take into consideration meteorological conditions at the site and in the surrounding area. Appendix E, "Emergency Plans for Production and Utilization Facilities," to 10 CFR Part 50 requires that applicants for an operating license develop plans for coping with radiological emergencies. The plans must include criteria for determining when protective measures should be considered within and outside the site boundary to protect health, safety, and property. In this regard, it is necessary for the applicant to establish and maintain a meteorological program capable of rapidly assessing critical meteorological parameters. Paragraph 50.47 of 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," requires nuclear power plant licensees to provide reasonable assurance that adequate protective measures can and will be taken in the event of a

radiological emergency. In developing the onsite and offsite emergency response plans, licensees should provide that "Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use." Further, paragraph 50.36a(a)(2) of 10 CFR Part 50 requires nuclear power plant licensees to submit semiannual reports specifying the quantity of each of the principal radionuclides released to unrestricted areas in gaseous effluents and such other information as may be required by the Commission to estimate maximum potential doses to the public resulting from these releases to ensure compliance with the requirements of 10 CFR Part 20. A knowledge of meteorological conditions in the vicinity of the plant is necessary to make these estimates. Finally, in order for the Commission to fulfill its responsibilities under NEPA and in accordance with the requirements of Appendix I to 10 CFR Part 50 and of 10 CFR 51, meteorological information must be available for use in assessing potentially adverse environmental effects resulting from the construction or operation of a nuclear power plant.

4.2 Need for NEPA Assessment

The proposed action is not a major action as defined by paragraph 51.5(a)(10) of 10 CFR Part 51 and does not require an environmental impact statement.

5. RELATIONSHIP TO OTHER EXISTING OR PROPOSED REGULATIONS OR POLICIES

No potential conflicts with other agencies have been identified. The product document will be used in the implementation of 10 CFR Part 20, 10 CFR Part 50, 10 CFR Part 51, and 10 CFR Part 100 as described above. The product document will supersede Regulatory Guide 1.23, "Onsite Meteorological Programs." The guidance in the proposed replacement guide will be consistent with that in Regulatory Guide 1.70, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants - LWR Edition," Regulatory Guide 4.2, "Preparation of Environmental Reports for Nuclear Power Stations," Regulatory Guide 1.3, "Assumptions Used for Evaluating the Potential Radiological Consequences of a Loss of Coolant Accident for Boiling Water Reactors," Regulatory Guide 1.4, "Assumptions Used for Evaluating the Potential Radiological Consequences of a Loss of Coolant Accident for Pressurized Water Reactors," Regulatory Guide 1.21, "Measuring,

Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants," Regulatory Guide 1.28, "Quality Assurance Program Requirements (Design and Construction)," Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operation)," Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident," Regulatory Guide 1.101, "Emergency Planning and Preparedness for Nuclear Power Reactors," Regulatory Guide 1.111, "Methods for Estimating Atmospheric Transport and Dispersion of Gaseous Effluents in Routine Releases from Light-Water-Cooled Reactors," and Regulatory Guide 1.145, "Atmospheric Dispersion Models for Accident Consequence Assessments at Nuclear Power Plants." The guidance in the proposed replacement guide will also be consistent with Revision 1 of NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," NUREG-0696, "Functional Criteria for Emergency Response Facilities," and Supplement 1 to NUREG-0737, "Clarification of the TMI Action Plan Requirements."

Regulatory Guide 3.8, "Preparation of Environmental Reports for Uranium Mills," references the meteorological measurement program and data format presented in Regulatory Guide 1.23. Since the revised meteorological measurement program described in the proposed replacement to Regulatory Guide 1.23 may not be appropriate for most uranium mills, a recommendation to make changes in Regulatory Guide 3.8 was made during the comment resolution process. Guidance concerning meteorological measurement programs is being developed for uranium recovery facilities.


6. SUMMARY AND CONCLUSIONS

A guide which endorses ANSI/ANS-2.5-1984, "Standard for Determining Meteorological Information at Nuclear Power Sites," should be prepared to replace Regulatory Guide 1.23, "Onsite Meteorological Programs." This guide should be prepared in-house.

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For further information, contact Leta Brown, Task Leader, Earth Sciences Branch.

Original signed by
Karl R. Goller

 Karl R. Goller, Director
Division of Radiation Programs &
Earth Sciences
Office of Nuclear Regulatory Research

Enclosures:

1. Draft 3 of Revision 1 of Regulatory Guide 1.23 and Draft Value/Impact Statement
2. ANSI/ANS-2.5-1984
3. August 22, 1985, DEDROGR Memo

cc w/encl:
ACRS (16)

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MEMORANDUM FOR: Raymond F. Fraley, Executive Director
Advisory Committee on Reactor Safeguards

FROM: Karl R. Goller, Director
Division of Radiation Programs
and Earth Sciences
Office of Nuclear Regulatory Research

SUBJECT: PROPOSED REVISION 1 OF REGULATORY GUIDE 1.23, "METEOROLOGICAL
MEASUREMENT PROGRAM FOR NUCLEAR POWER PLANTS," RES TASK
NO. ES 926-4

Enclosed for review by the Regulatory Activities Subcommittee prior to its being issued for public comment is Draft 3 of proposed Revision 1 of Regulatory Guide 1.23, "Meteorological Measurement Program for Nuclear Power Plants," RES Task Number ES 926-4. This draft replaces an earlier version which was previously presented to the ACRS. Draft 3 endorses, with a modification in the quality assurance section, an industry standard, ANSI/ANS-2.5-1984 (ANS 2.5), "Standard for Determining Meteorological Information at Nuclear Power Sites," (Enclosure 2) issued in August 1984. This standard provides guidance on the meteorological parameters which should be measured, siting of meteorological instruments, data presentation, system performance and data reduction, compilation and storage. Draft 3 does not impose new requirements, or set forth new regulatory positions, but rather consolidates and clarifies existing guidance and reflects existing staff practice regarding implementation of existing staff positions relating to meteorological measurements in a number of different contexts (i.e., emergency response, normal operation, accident analysis). Based on these considerations, the Deputy Executive Director for Regional Operations and Generic Requirements (DEDROGR) concluded that formal review by the Committee to Review Generic Requirements was not required (see Enclosure 3, DEDROGR memorandum to K. Goller).