

DRAFT VALUE/IMPACT STATEMENT

1. PROPOSED ACTION

1.1 Description

The proposed action consists of the revision of Regulatory Guide 1.23 (Safety Guide 23) to update the recommendations for establishing and operating the meteorological programs at nuclear power plant sites. The 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, "Onsite Meteorological Programs," was originally issued as Safety Guide 23 in February 1972. This guide has never been revised. Consequently, much of the information provided in the guide is obsolete, having been made so by changes in the state of the art in meteorological measurement technology and by changes discussed in the guide in the meteorological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. In addition, recent staff experience during the accident at Three Mile Island has shown that a capability to access the meteorological data remotely should be an integral part of the operational meteorological measurement program. The present version of the guide does not include such a recommendation. A revision of this guide is deemed necessary, therefore, to strengthen the guidance in an area shown to be weak as a result of the Three Mile Island experience and to update other areas that are obsolete and of little or no value to users.

1.3 Value/Impact of Proposed Action

1.3.1 NRC

Completion of the proposed action is estimated to require from 0.5 to 1.0 man-year of effort. Associated costs include printing and copying costs

and costs for normal office supplies. No additional research or technical assistance contract costs in support of this effort are anticipated. However, the possibility exists that unanticipated future developments may indicate the advisability of efforts that would incur additional manpower, contract, and travel costs. The primary benefit to the NRC would be a reduction in the number of inquiries that arise because of the obsolete information in the unrevised guide, which does not adequately describe the present recommendations for meteorological programs. Finally, if the recommendation in the proposed revision concerning the remote-access capability for meteorological data is implemented the NRC will have the potential to acquire real-time meteorological data if needed in the event of an emergency.

1.3.2 Other Government Agencies

Applicant agencies (e.g., TVA) would be affected as discussed in Section 1.3.3. Additional workload would accrue at other agencies (e.g., NOAA, EPA) that may participate in terms of review and comment services. Upon completion of the proposed action, other agencies will have a current reference document describing the NRC's recommendations concerning meteorological measurement programs at nuclear power plant sites. Should the remote-access capability recommendation be implemented, agencies (Federal, State, and local) that may be involved in an emergency situation because of an accident at a nuclear power plant will be assured of access to meteorological data representative of the site in the event that data-recording instruments become inaccessible by conventional means.

1.3.3 Industry

Industry will benefit by having available a current source of information concerning NRC recommendations for establishing and operating an onsite meteorological program at nuclear power plant sites. Costs to industry will result from having to become familiar with the product document and in review and comment efforts. It is anticipated that studies will cost approximately \$100,000 to \$200,000 at those coastal sites where it is necessary to experimentally confirm the heights of the internal boundary layer. The total estimated cost of purchasing and installing the necessary equipment for a

remote-access capability to archive meteorological data for emergency response purposes, should this recommendation be implemented, is \$10,000 to \$20,000 per site. This equipment is expected to be part of a larger system for making atmospheric dispersion calculations and dose assessments. Annual operating costs are estimated to be less than \$2,000. In some cases, the cost may be offset because this equipment can also be used as part of the meteorological data reduction system. The benefit to industry resulting from the installation of such a capability will be the ability to provide emergency response groups involved in an accident situation with meteorological data representative of the site, even if the onsite recorders are inaccessible.

1.3.4 Public

The public will bear the monetary costs of completing and implementing the proposed action. In addition, the costs incurred by the utilities from the installation and operation of the remote-access capability, if implemented, 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 to emergency response groups. The public will also benefit from the availability of a current reference document that presents the NRC's 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 revise the guide is 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 exists within the NRC, the completion of the task in-house is the most beneficial technical alternative.

3. PROCEDURAL APPROACH

Since the proposed action is an update of information contained in an existing regulatory guide, the only appropriate procedural approach is a revision to the existing guide.

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. 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 Part 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 guidance in the proposed revision 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 1.21, "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 1.111, "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 Potential Accident Consequence Assessments at Nuclear Power Plants."

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 programs described in proposed Revision 1 to Regulatory Guide 1.23 may not be appropriate for most uranium mills, a further revision of Regulatory Guide 3.8 may be needed. Additional expenditure of manpower to make changes is expected to be small because Regulatory Guide 3.8 is currently in the final process of comment resolution.

Backfitting requirements will result from the implementation of the remote-access capability at those installations where the data reduction systems do not presently have such a capability. Potential backfitting costs are discussed above.

6. SUMMARY AND CONCLUSIONS

A revision to Regulatory Guide 1.23, "Onsite Meteorological Programs," should be prepared. This revision should be done in-house.

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