



U.S. NUCLEAR REGULATORY COMMISSION

STANDARD REVIEW PLAN

OFFICE OF NUCLEAR REACTOR REGULATION

2.3.3 ONSITE METEOROLOGICAL MEASUREMENTS PROGRAMS

RESPONSIBILITIES

Primary - ~~Accident Evaluation Branch (AEB)~~ Emergency Preparedness and Radiation Protection Branch (PERB)¹

Secondary - None

I. AREAS OF REVIEW

Information for a construction permit (CP), operating license (OL), combined license (COL), or early site permit² is presented by the applicant and reviewed by the staff concerning the onsite meteorological measurements programs, including instrumentation and measured data. The review covers the following specific areas:

1. Meteorological instrumentation, including siting of sensors, sensor performance specifications, methods and equipment for recording sensor output, the quality assurance program for sensors and recorders, and data acquisition and reduction procedures.
2. Meteorological data, including consideration of the period of record and amenability of the data for use in characterizing atmospheric dispersion conditions.
3. Additional meteorological measurement and information availability requirements for emergency preparedness ~~planning~~ pursuant to 10 CFR ~~Part 50, §~~³ 50.47 and Appendix E to 10 CFR Part 50 are reviewed by ~~AEB~~ as a secondary review responsibility for SRP under Standard Review Plan (SRP) Sections 7.5 and 13.3 as described in the Review Interfaces below.⁴

DRAFT Rev. 3 - April 1996

USNRC STANDARD REVIEW PLAN

Standard review plans are prepared for the guidance of the Office of Nuclear Reactor Regulation staff responsible for the review of applications to construct and operate nuclear power plants. These documents are made available to the public as part of the Commission's policy to inform the nuclear industry and the general public of regulatory procedures and policies. Standard review plans are not substitutes for regulatory guides or the Commission's regulations and compliance with them is not required. The standard review plan sections are keyed to the Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants. Not all sections of the Standard Format have a corresponding review plan.

Published standard review plans will be revised periodically, as appropriate, to accommodate comments and to reflect new information and experience.

Comments and suggestions for improvement will be considered and should be sent to the U.S. Nuclear Regulatory Commission, Office of Nuclear Reactor Regulation, Washington, D.C. 20555.

Review Interfaces⁵

PERB also performs the following related reviews under the SRP sections indicated:

Evaluates the adequacy of emergency planning and the provisions for emergency preparedness, including the capability for dose projections during radiological emergencies using real-time meteorological information, as part of its primary review responsibility for SRP Section 13.3.⁶

In addition, the PERB will coordinate other branches' evaluations that interface with the overall review of the onsite meteorological program as follows:

The Instrumentation and Controls Branch (HICB) assists the PERB by providing review of the adequacy of instrumentation to assess plant and environs conditions during and following an accident and associated information systems using the criteria and review methods described in SRP Section 7.5.⁷

For those areas of review identified above as part of reviews under other SRP sections, the acceptance criteria necessary for the review and their methods of application are contained in the referenced SRP section.⁸

II. ACCEPTANCE CRITERIA

~~AEB~~PERB⁹ acceptance criteria for the onsite meteorological measurement program are based on the relevant requirements of the following regulations:

- A. 10 CFR ~~Part 100, §~~100.10(c)(2) as related to meteorological data collected for use in characterizing meteorological conditions of the site and surrounding area.
- B. 10 CFR ~~Part 100, §~~100.11(a) as related to meteorological data used in the evaluation to determine an exclusion area and a low population zone.
- C. 10 CFR Part 50, Appendix I, as related to meteorological data used in determining the compliance with the numerical guides for doses to meet the criterion of "as low as is reasonably achievable" (ALARA).¹⁰
- D. 10 CFR 50.47 and Appendix E to 10 CFR Part 50 as related to additional requirements for meteorological measurements and instrument reliability to facilitate emergency preparedness planning.¹¹

Specific criteria necessary to meet ~~Part 100, Appendix I,~~ 10 CFR 50.47, Appendices E and I to 10 CFR Part 50, and 10 CFR Part 100¹² are as follows:

1. The onsite meteorological measurements programs should produce data which can be summarized to provide a description of the meteorological characteristics of the site and its vicinity for the purpose of making atmospheric dispersion estimates for both postulated accidental and expected routine airborne releases of effluents and for

comparison with offsite sources to determine the appropriateness of climatological data used for design considerations. The criteria for an acceptable onsite meteorological measurements program are documented in the Regulatory Position, Section C, of Regulatory Guide 1.23.

2. The following additional criteria are used to judge the acceptability of meteorological data summaries for atmospheric dispersion estimates: ~~(Reference 7)~~¹³
 - a. For the preliminary safety analysis report (PSAR) or early site permit application,¹⁴ at least one annual cycle of onsite meteorological data should be provided at docketing.
 - b. For the final safety analysis report (FSAR) or COL application,¹⁵ at least two consecutive annual cycles, including the most recent 1-year period, should be provided at docketing.
3. To meet the requirements specified in 10 CFR 50.47 and Appendix E to 10 CFR Part 50, equipment shall be installed to determine the magnitude, and to assess the impact, of a release of airborne radioactive material to the environment on a continuous basis. Accordingly, onsite meteorological monitoring equipment must be able to function throughout the course of an accident. Additional criteria and guidance necessary to verify adequate dose projection capability during radiological emergencies using real-time meteorological information, as required by 10 CFR 50, Appendix E are applied under the reviews described in the Review Interfaces in subsection I.¹⁶

Meteorological data should be presented in the form of joint frequency distributions of wind speed and wind direction by atmospheric stability class in the format described in Regulatory Guide 1.23. A listing of each hour of the hourly-averaged parameters should be provided on magnetic tape¹⁷ in the format described in Appendix A to this ~~Standard Review Plan~~ SRP¹⁸ section.

Evidence of how well these data represent long-term conditions at the site should be presented.

Technical Rationale¹⁹

The technical rationale for application of these acceptance criteria is discussed in the following paragraphs:²⁰

1. 10 CFR 100.10(c)(2) specifies that meteorological conditions at or near the site should be considered when evaluating the acceptability of proposed sites for nuclear power plants.

The requirement to consider meteorological conditions at or near the site of a proposed nuclear power plant is imposed (a) to ensure that these conditions will not compromise the plant's safety, (b) to provide descriptions of meteorological characteristics at or near the site to facilitate making atmospheric dispersion estimates for both postulated accidental and expected routine airborne releases of effluents, and (c) to compare offsite

data sources for determining the appropriateness of climatological data considered during the plant phase.

Meeting these requirements provides assurance that severe weather conditions will not compromise the safety of the proposed nuclear power plant and that sufficient meteorological data are available to make representative estimates of atmospheric dispersion.²¹

2. 10 CFR 100.11(a) specifies the manner in which the exclusion area, low population zone, and population center distance are determined given a fission product release from the reactor core, an expected leak rate from containment, and pertinent meteorological conditions.

Identification of an exclusion area, low population zone, and population center distance is an integral aspect of the siting criteria for a nuclear power plant. Specified radiation dose guidelines are associated with the exclusion area and the low population zone. Verification that the proposed nuclear plant meets these radiation dose guidelines is accomplished by calculating expected offsite radiation doses using an assumed inventory of fission products available for release from the containment building, the expected containment leak rate, and site atmospheric diffusion characteristics. Diffusion characteristics are determined from meteorological measurements taken at the proposed plant site.

Meeting these siting criteria provides assurance that offsite radiation doses from postulated accidents will not exceed the guideline doses specified in 10 CFR Part 100.²²

3. 10 CFR Part 50, Appendix I, provides numerical guidelines for the ALARA criterion concerning radioactive material in light-water-cooled nuclear power reactor effluents.

Sections 50.34a and 50.36a contain provisions designed to ensure that releases of radioactive material from nuclear power reactors to unrestricted areas during normal operation, including anticipated operational occurrences, are kept as low as practicable. Appendix I provides numerical guidance for this requirement.

Meeting the requirements of the ALARA criterion provides assurance that radiation doses from normal operation and from anticipated operational occurrences will not result in exposures that could cause measurable damage.²³

4. 10 CFR 50.47 and Appendix E to 10 CFR Part 50 specify requirements for emergency preparedness planning.

Some emergency preparedness planning requirements focus on determining the magnitude, and assessing the impact, of radioactive releases to the environment. Hence, methods, systems, and equipment are required for assessing and monitoring offsite consequences. Meteorological parameters provide an integral part of the data needed to establish atmospheric dispersions for assessing offsite doses from airborne releases of radioactive material.

Meeting the requirements for measurement of meteorological parameters during an accident or anticipated operational occurrence provides assurance that those personnel responsible for managing the event will be fully informed about the potential consequences of airborne radiological releases.²⁴

III. REVIEW PROCEDURES

1. Meteorological Instrumentation

The basic meteorological parameters measured by instrumentation are reviewed and should include wind direction and wind speed at two levels, ambient air temperature difference between two levels, temperature, and atmospheric moisture (at sites where water vapor is emitted, as from cooling towers or spray ponds).

a. Instrument Siting

Instrument types, heights, and locations are compared generally to the position stated in Regulatory Guide 1.23, Positions C.1 and C.2. Detailed review procedures follow.

(1) Local Exposure of Instruments

The local exposure of the wind and temperature sensors is reviewed to ~~assure~~ ensure²⁵ that the measurements will represent the general site area. A determination is made whether the tower which supports the sensors will influence the wind or temperature measurements. Professional experience and studies have shown that wind sensors should be mounted on booms such that the sensors are at least two tower widths away from an open-latticed tower. For temperature sensors, mounting booms need not be as long as those for wind sensors but must be unaffected by thermal radiation from the tower itself. No temperature sensors may be mounted directly on stacks or closed towers. Mounting booms for all sensors should be oriented normal to the prevailing wind at the site.

A determination is made whether the terrain at or near the base of the tower will unnaturally affect the wind or temperature measurements. Heat reflection characteristics of the surface underlying the meteorological tower (grass, soil, gravel, paving, etc.) are estimated to ~~assure~~ ensure that localized influences on measurements are minimal. The position, size, and materials used in the construction of the recorder shack and nearby trees are also examined for potential localized influence on the measurements.

(2) General Exposure of Instruments

Since the objective of the instrumentation is to provide measurements which represent the overall site meteorology without plant structure

interference, the tower position(s) must have been selected with this general objective in mind. Examination of topographical maps, which have been modified to show finished plant grade, and a site visit along with professional judgment on airflow patterns are used to determine and evaluate the representativeness of the location(s).

The plant structure layout, including structure heights, ~~are~~ is²⁶ examined for potential influence on meteorological measurements. Sensors should be located at least 10 obstruction heights away from the obstruction to minimize this influence.

b. Meteorological Sensors

The type and performance specifications of the sensors are evaluated. Manufacturers' specifications and analysis, and operating experience for these sensors are considered in evaluation of adequacy with respect to accuracy and the potential for acceptable data recovery. Standardized evaluations such as Reference 9 and operational experience reports contained in research papers are utilized.

The suitability of the specific type of sensor for use in the environmental conditions at the site is evaluated. To this end, the range of wind conditions and the ability of the sensors to withstand corrosion, blowing sand, salt, air pollutants, birds, and insects are considered.

If the sensors are new and unique, a meteorological instrumentation expert may need to be consulted.

c. Recording of Meteorological Sensor Output

The methods of recording (e.g., digital or analog, instantaneous or average, engineering units or raw voltages) and the recording equipment, including performance specifications and location of this equipment, are evaluated. Manufacturers' specifications and operating experience for the recorders are considered in evaluation of adequacy with respect to accuracy and the potential for acceptable data recovery.

The controlled environmental conditions in which the recorders are kept (instrument shack or control room) are reviewed for adequacy in accordance with the manufacturers' specifications. The ability to obtain a direct readout from the recorders in situ during routine inspection of systems is checked to ensure that the inspector will be able to relate the recorder output directly to the sensor measurement. Some specific criteria are contained in Regulatory Guide 1.23, Position C.3.

The reviewer determines that there are provisions for proper display of measurements of wind direction, wind speed, and vertical temperature difference in the control room during plant operation.

d. Instrumentation Surveillance

The inspection, maintenance, and calibration procedures and their frequency are evaluated. These surveillance procedures and the frequency of attention that the instrumentation systems receive are compared to operating experience at this site and other sites with similar instrumentation with the objective of determining that acceptable data recovery with acceptable accuracy will be obtained throughout the duration of the meteorological program. The ability of instrumentation systems to function throughout the course of accidents is evaluated.²⁷ Criteria for acceptable accuracy and acceptable data recovery are specified in Regulatory Guide 1.23, Positions C.4 and C.5.

e. Data Acquisition and Reduction

The procedures, including both hardware and software for data acquisition and reduction, are evaluated. Since there are many methods of acquiring data from meteorological measurement systems which are acceptable to the staff, the review procedure varies. The basic components of the program which are reviewed to ascertain the acceptability of data acquisition and reduction are:

- (1) Accuracy of direct measurements and their precision,
- (2) Accuracy in conversion of direct measurement units to meteorological units,
- (3) Adequacy of frequency and mode (instantaneous or average) of sampling, and
- (4) Averaging time of system outputs for final disposition and accuracy of these data.

Since the instrument accuracy criteria in Regulatory Guide 1.23 refer to overall system accuracy for time-averaged values, the overall system accuracy is evaluated in addition to the component (sensor, recorder, and reduction) accuracies. The evaluation consists primarily of using statistical procedures for compound errors, based on sensor accuracy, recorder accuracy, conversion of units accuracy, and frequency and mode of sampling (Reference 10).

2. Meteorological Data Summaries

Annual (i.e., representing the annual cycle) joint frequency distributions of wind direction and wind speed by atmospheric stability class are evaluated for sufficient detail to permit the staff to make an independent determination of the atmospheric dispersion conditions.

The format of the data (joint frequency distribution and hourly average) is reviewed to ensure that it will be usable by the staff. ~~The formats in Regulatory Guide 1.23 and in Appendix A to this Standard Review Plan section are used for comparison.~~²⁸

"Calm" wind conditions (which should be defined as wind speeds less than the starting speed of the anemometer or vane, whichever is higher) are checked for reasonableness. They should be in the distributions as a separate wind speed class, without directional assignment for each atmospheric stability class.

Annual joint frequency distributions for each expected mode of release (i.e., ground level and elevated) are checked for appropriateness of heights of measurements of wind direction, wind speed, and atmospheric stability. Winds at the 10-meter level and the temperature difference (kT) between the vent height and the 10-meter level are used for vent and penetration releases. Winds from near release height and kT between release height and the 10-meter level are used for stack releases.

The climatic representativeness of the joint frequency distribution is checked by comparison with nearby stations which have collected reliable meteorological data over a long period of time (10-20 years). The distributions are compared with sites in similar geographical and topographical locations to ~~assure~~ ensure that the data are reasonable.

References 8 through 11 are information sources that are used during the review.

For standard design certification reviews under 10 CFR Part 52, the procedures above should be followed, as modified by the procedures in SRP Section 14.3 (proposed), to verify that the design set forth in the standard safety analysis report, including inspections, tests, analysis, and acceptance criteria (ITAAC), site interface requirements and combined license action items, meet the acceptance criteria given in subsection II. SRP Section 14.3 (proposed) contains procedures for the review of certified design material (CDM) for the standard design, including the site parameters, interface criteria, and ITAAC.²⁹

IV. EVALUATION FINDINGS

The reviewer verifies that sufficient information has been provided in accordance with the requirements of this SRP section and that the evaluation supports the following type of concluding statement, to be included in the staff's safety evaluation report:

The staff has reviewed the available information relative to the onsite meteorological measurements program and the data collected by the program. The staff concludes that the system provides adequate data to represent onsite meteorological conditions as required by 10 CFR ~~Part 100, §100.10~~. The onsite data also provide an acceptable basis for making estimates of atmospheric dispersion for design basis accident and routine releases from the plant to meet the requirements of 10 CFR ~~Part 100, §100.11~~ and Appendix I to 10 CFR Part 50. Finally, the equipment provided for measurement of meteorological parameters during the course of accidents is sufficient to provide

reasonable prediction of atmospheric dispersion of airborne radioactive materials.³⁰ These conclusions are based on the following:

1. The applicant has provided and substantiated information on the meteorological measurements program.
2. The applicant has met the Regulatory Position in Regulatory Guide 1.23 with respect to meteorological data collection and equipment.

For the CP, early site permit, and COL³¹ reviews, if adequate meteorological data have not been acquired by the applicant and presented to the staff, a statement requiring the applicant to obtain adequate data in a timely manner will be added.

These statements should be preceded by a brief summary description of the onsite meteorological measurements program covering the following items:

1. Height and location of meteorological sensors by type,
2. Period of data record,
3. Data recovery, and
4. Meteorological parameters used for atmospheric diffusion estimates.

For design certification reviews, the findings will also summarize, to the extent that the review is not discussed in other safety evaluation report sections, the staff's evaluation of inspections, tests, analyses, and acceptance criteria (ITAAC), including design acceptance criteria (DAC), site interface requirements, and combined license action items that are relevant to this SRP section.³²

V. IMPLEMENTATION

The following provides guidance to applicants and licensees regarding the staff's plans for using the SRP section.

This SRP section will be used by the staff when performing safety evaluations of license applications submitted by applicants pursuant to 10 CFR 50 or 10 CFR 52.³³ Except in those cases in which the applicant proposes an acceptable alternative method for complying with specified portions of the Commission's regulations, the method described herein will be used by the staff in its evaluation of conformance with Commission regulations.

The provisions of this SRP section apply to reviews of applications docketed six months or more after the date of issuance of this SRP section.³⁴

Implementation schedules for conformance to parts of the method discussed herein are contained in the referenced regulatory guides.

VI. REFERENCES

1. 10 CFR ~~Part 50~~, 50.47, "Emergency Plans."
2. 10 CFR Part 50, Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities."
- ~~53~~³⁵. 10 CFR Part 50, Appendix I, "Numerical Guides for Design Objectives and Limiting Conditions for Operation to Meet the Condition."
- ~~34~~. 10 CFR ~~Part 100~~, 100.10, "Reactor Site Criteria, Site Evaluation Factors."
- ~~45~~. 10 CFR ~~Part 100~~, 100.11, "Reactor Site Criteria, Determination of Exclusion Area, Low Population Zone, and Population Center Distance."
6. Regulatory Guide 1.23, "Onsite Meteorological Programs."
7. Regulatory Guide 4.2, "Preparation of Environmental Reports for Nuclear Power Plants."
8. R. C. Hilfiker, "Exposure of Instruments," Chapter in Air Pollution Meteorology Manual, Training Course 411 conducted by USEPA Air Pollution Training Institute, Research Triangle Park, North Carolina, August 1973.
9. D. H. Slade (ed.), "Meteorology and Atomic Energy - 1968," TID-24190, Division of Technical Information, USAEC (1968).
10. C. E. P. Brooks and N. Caruthers, "Handbook of Statistical Methods in Meteorology," M.O. 538, Her Majesty's Stationary Office, London (1953).
11. D. A. Mazzeella, "An Inventory of Specifications for Wind Measuring Instruments," Bull. Amer. Meteor. Soc. 53, 860 (1972).

APPENDIX A

Standard Review Plan Section 2.3.3

RECOMMENDED FORMAT FOR HOURLY METEOROLOGICAL DATA TO BE PLACED ON MAGNETIC TAPE ^{1 36 2 37}

USE: 9-track tape (7 will be acceptable)
 Standard Label which would include:
 Record Length = 160
 Block Size (3200 - fixed block size)
 Density (1600 BPI - 800 will be accepted)

DO NOT USE: Magnetic tapes with unformatted or spanned records

At the beginning of each tape, use the first five (5) records (which ~~is~~ ^{are}³⁸ the equivalent of ten cards) to give a tape description. Include plant name; location (latitude, longitude); dates of data; information explaining data containing in the "other" fields if they are used; height of measurements; and any additional information pertinent to identification of the tape. Make sure all five records are included, even if some are blank. Format for the first five records will be 160A1. Meteorological data format is (I6, I2, I3, I4, 25F5.1, F5.2, 3F5.1).

All data should be given to the tenth of a unit, except solar radiation, which should be given to a hundredth of a unit. This does not necessarily indicate the accuracy of the data (e.g., wind direction is usually given to the nearest degree). All nines in any field indicate a lost record (99999). All sevens in a wind direction field indicate calm (77777). If there are only two levels of data, use the upper and lower levels. If there is only one level of data, use the upper level.

¹Data on magnetic tape are acceptable in any reasonable format if the format is completely described (see NUREG-0158, Part 1) and if a sample tape dump is provided.

²Although Appendix A refers to magnetic tape, data provided on other electronic media will also be acceptable.

MAGNETIC TAPE METEOROLOGICAL DATA (Continued)

MAGNETIC TAPE METEOROLOGICAL DATA

LOCATION:

DATE OF DATA RECORD:

I6 Identifier (can be anything)

I2 Year

I3 Julian Day

I4 Hour (on 24-hour clock)

ACCURACY

F5.1 Upper Measurements: Level = _____ meters _____

F5.1 Wind Direction (degrees) _____

F5.1 Wind Speed (meter/sec) _____

F5.1 Sigma Theta (degrees) _____

F5.1 Ambient Temperature (°C) _____

F5.1 Moisture: _____

F5.1 Other: _____

F5.1 Intermediate Measurements: Level = _____ meters

F5.1 Wind Direction (degrees) _____

F5.1 Wind Speed (meters/sec) _____

F5.1 Sigma Theta (degrees) _____

F5.1 Ambient Temperature (°C) _____

F5.1 Moisture: _____

F5.1 Other: _____

F5.1 Lower Measurements: Level = _____ meters _____

F5.1 Wind Direction (degrees) _____

F5.1 Wind Speed (meters/sec) _____

| | | | |
|-------------|--|-------|-------|
| <u>F5.1</u> | Sigma Theta (degrees) | _____ | |
| <u>F5.1</u> | Ambient Temperature (°C) | | _____ |
| <u>F5.1</u> | Moisture: | _____ | _____ |
| <u>F5.1</u> | Other: | _____ | _____ |
| | | | |
| <u>F5.1</u> | Temp. Diff. (Upper-Lower) (°C/100 meters) | | _____ |
| <u>F5.1</u> | Temp. Diff. (Upper-Intermediate) (°C/100 meters) | _____ | |
| <u>F5.1</u> | Temp. Diff. (Intermediate-Lower) (°C/100 meters) | _____ | |
| <u>F5.1</u> | Precipitation (mm) | _____ | |
| <u>F5.1</u> | Solar Radiation (cal/cm ² /min) | | _____ |
| <u>F5.1</u> | Visibility (km) | | _____ |
| <u>F5.1</u> | Other: | _____ | _____ |
| <u>F5.1</u> | Other: | _____ | _____ |

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SRP Draft Section 2.3.3
Attachment A - Proposed Changes in Order of Occurrence

Item numbers in the following table correspond to superscript numbers in the redline/strikeout copy of the draft SRP section.

| Item | Source | Description |
|------|-----------------------------------|--|
| 1. | Current PRB name and abbreviation | Changed PRB to Emergency Preparedness and Radiation Protection Branch (PERB). |
| 2. | SRP-UDP format item | Specified the different types of review per 10 CFR Part 52. |
| 3. | Editorial | Provided correct citation format for the Code of Federal Regulations (global change for this section). |
| 4. | Editorial | Revised to reflect addition of review interfaces describing review of meteorological instrumentation and data capabilities for radiological emergencies. |
| 5. | SRP-UDP format item | Added Review Interface subsection of Areas of Review using numbered paragraphs to be consistent with SRP-UDP required format so that reviews performed in other SRP Sections which are relevant to the overall review of the onsite meteorological program are detailed in their own subsection. |
| 6. | Integrated Impact 229 | Added review interface describing the principal SRP reviews of compliance with the requirements of 10 CFR 50.47 and 10 CFR 50, Appendix E. |
| 7. | Integrated Impact 229 | Added review interface describing the principal SRP reviews of accident monitoring instrumentation using Regulatory Guide 1.97 (referenced in Part A of this Integrated Impact) as guidance and reviews of I&C aspects of associated information systems important to safety. |
| 8. | Editorial | Revised to reflect standard SRP-UDP discussion of the criteria and reviews detailed in other SRP Sections in Areas of Review, Review Interfaces. |
| 9. | Current PRB abbreviation | Changed PRB to PERB. |
| 10. | Editorial | Provided acronym for "as low as is reasonably achievable." |

SRP Draft Section 2.3.3
Attachment A - Proposed Changes in Order of Occurrence

| Item | Source | Description |
|------|--|---|
| 11. | Integrated Impact No. 229 | Added 10 CFR 50.47 and Appendix E to 10 CFR Part 50 to acceptance criteria. |
| 12. | Integrated Impact No. 229 | Added reference to 10 CFR 50.47, Appendices E and I to 10 CFR Part 50, and 10 CFR Part 100. |
| 13. | Editorial | Deleted "(Reference 7)" because it refers to environmental report requirements, not SAR requirements. |
| 14. | SRP-UDP format item | Added reference to early site permit report per 10 CFR Part 52. |
| 15. | SRP-UDP format item | Added reference to COL per 10 CFR Part 52. |
| 16. | Integrated Impact 229 | Added meteorological monitoring requirements specified in 10 CFR 50.47 and Appendix E to 10 CFR Part 50. Added review interface describing the principal SRP reviews of compliance with the requirements of 10 CFR 50.47 and 10 CFR 50, Appendix E. |
| 17. | Editorial | Deleted magnetic tape as the specified electronic medium format. |
| 18. | Editorial | Used SRP abbreviation. |
| 19. | SRP-UDP format item, develop technical rationale | Added "Technical Rationale" to ACCEPTANCE CRITERIA and used numbered paragraphs to describe bases for referencing the regulations. |
| 20. | SRP-UDP format item, develop technical rationale | Added lead-in sentence for "Technical Rationale." |
| 21. | SRP-UDP format item, develop technical rationale | Added technical rationale for 10 CFR 100.10(c)(2). |
| 22. | SRP-UDP format item, develop technical rationale | Added technical rationale for 10 CFR 100.11(a). |
| 23. | SRP-UDP format item, develop technical rationale | Added technical rationale for 10 CFR Part 50, Appendix I. |
| 24. | SRP-UDP format item, develop technical rationale | Added technical rationale for 10 CFR 50.47 and Appendix E to 10 CFR Part 50. |

SRP Draft Section 2.3.3
Attachment A - Proposed Changes in Order of Occurrence

| Item | Source | Description |
|------|--|---|
| 25. | Editorial | Changed "assure" to "ensure" (global change for this section). |
| 26. | Editorial | Changed "are" to "is" to provide noun/verb agreement. |
| 27. | Integrated Impact No. 229 | Added evaluation of ability of meteorological monitoring instruments to function throughout the course of accidents to REVIEW PROCEDURES. |
| 28. | SRP-UDP format item | Deleted specific format identification since other formats may also be acceptable. |
| 29. | SRP-UDP Guidance, Implementation of 10 CFR 52 | Added standard paragraph to address application of Review Procedures in design certification reviews. |
| 30. | Integrated Impact No. 229 | Added ability of meteorological monitoring instruments to function through the course of accidents to EVALUATION FINDINGS. |
| 31. | SRP-UDP format item | Added reference to early site permit and COL reviews per 10 CFR Part 52. |
| 32. | SRP-UDP Format Item, Implement 10 CFR 52 Related Changes | To address design certification reviews a new paragraph was added to the end of the Evaluation Findings. This paragraph addresses design certification specific items including ITAAC, DAC, site interface requirements, and combined license action items. |
| 33. | SRP-UDP Guidance, Implementation of 10 CFR 52 | Added standard sentence to address application of the SRP section to reviews of applications filed under 10 CFR Part 52, as well as Part 50. |
| 34. | SRP-UDP Guidance | Added standard paragraph to indicate applicability of this section to reviews of future applications. |
| 35. | Editorial | Reordered and renumbered references. |
| 36. | Editorial | Revised footnote designation to accommodate added Footnote 2. |
| 37. | SRP-UDP format item | Added footnote on acceptability of providing data on electronic media other than magnetic tape. |
| 38. | Editorial | Changed "is" to "are" to provide noun/verb agreement. |

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SRP Draft Section 2.3.3
Attachment B - Cross Reference of Integrated Impacts

| Integrated Impact No. | Issue | SRP Subsections Affected |
|--------------------------|--|---|
| 229 | Revise ACCEPTANCE CRITERIA and REVIEW PROCEDURES for SRP Section 2.3.3 to include requirements specified in 10 CFR 50.47 and Appendix E of 10 CFR Part 50, thereby ensuring that meteorological measurement programs at nuclear power plants are able to provide the meteorological information required for emergency response. | <p>Section I, AREAS OF REVIEW, REVIEW INTERFACES</p> <p>Section II, ACCEPTANCE CRITERIA, first paragraph, fourth subparagraph.</p> <p>Section II, ACCEPTANCE CRITERIA, second paragraph.</p> <p>Section II, ACCEPTANCE CRITERIA, second paragraph, subparagraph 3.</p> <p>Section III, REVIEW PROCEDURES, paragraph 1.d.</p> <p>Section IV, EVALUATION FINDINGS, first paragraph, first subparagraph.</p> |
| 1367 | Modify REVIEW PROCEDURES for SRP Section 2.3.3 to require inclusion of site parameter envelopes in applications for design certification and manufacturing licenses per 10 CFR Part 52. | No changes made to the section. |