

The Role of Meteorology in the Nuclear Power Industry



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What role does meteorology play in our industry?

- Site acceptability studies
- Doses to the public from routine effluent releases
- Emergency response
- Control Room habitability (radiological and chemical)
- Design engineering (statistics)



What regulatory guidance is available?

- NRC Safety Guide 23/Regulatory Guide 1.23
- Regulatory Guide 1.21
- Regulatory Guide 1.78
- Regulatory Guide 1.111
- Regulatory Guide 1.145
- Regulatory Guide 1.183
- Regulatory Guide 1.194
- ANSI/ANS-3.11-2000
- EPA QA Handbook



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What issues have been seen recently?

- No ownership of the program
- Conflicting procedural requirements
- Loss of experienced personnel
- Data manipulation errors
- Outdated/unsupported software

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Solutions

- Insure that someone owns the meteorological monitoring system
- If in doubt about your program, have an outside expert perform an audit
- Capture the experience of personnel that are leaving the organization
- Vigorously check meteorological data manipulations, unit conversions, and format changes
- Insure that your people have the right tools

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Introducing MetData

- FANP's response to the issues we've seen recently
- PC/Windows based software
- Intended to help both meteorologists and non-meteorologists in maintaining high quality meteorological data
- Data storage, checking, editing, JFD tables, atmospheric dispersion factors, data reformatting all in one application

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MetData

- Data checking module produces a report with an explanation of why the data were considered suspect and suggestions of how to check data validity
- Data may be flagged by the user as "BAD" with the click of the mouse
- Data editing report shows changes on a line-by-line basis

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MetData

- Helps you meet regulatory requirements by producing annual meteorological data summaries in the form of joint frequency distribution tables of wind speed and direction as a function of atmospheric stability
- Produces atmospheric dispersion factors for routine effluent releases
- These factors can be used to rank locations in the annual Land Use Census
- Reformats your meteorological data for use with the NRC computer code ARCON96

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