

# 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- **Outdated/unsupported software**

## *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**

## *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**



## *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**

## 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**