

*Nuclear Sector Challenges:
Informing External Stakeholders
about Events*



**Union of
Concerned
Scientists**

Citizens and Scientists for Environmental Solutions

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NRC has four processes for informing external stakeholders about significant plant events:

- 1. Abnormal occurrences – now reported annually to the US Congress**
- 2. Site Area Emergencies – reported as-needed under the emergency classification regulations to local, state, and federal authorities**
- 3. International Nuclear Event Scale reports – reported periodically to the International Atomic Energy Agency**
- 4. Accident Sequent Precursor reports – reported annually to the Commission**

Events Reported by NRC Since Chernobyl (April 1986)

Congress	Site Area Emergency	IAEA INES	ASP
48	3	18	49 ($\geq 1E-4$)

Examples of NRC's Reports

Event	Congress	Site Area Emergency	IAEA INES	ASP
06/86 Catawba letdown weld 130 gpm leak			n/a	✓
05/89 Surry reactor cavity seal \$500,000 fine	✓		n/a	
03/90 Vogtle station blackout	✓	✓	n/a	✓
08/91 NMP-2 lost annunciators		✓	n/a	
08/92 Turkey Point hurricane Andrew LOOP				✓
02/93 Three Mile Island intruder		✓		
04/94 Salem marsh grass				
07/95 Waterford ammonia gas			✓	
03/96 Millstone design bases \$2.1 million fine				
01/97 Maine Yankee pressure locked valves				✓
06/98 Davis-Besse tornado LOOP			✓	✓
09/99 Robinson tornado onsite (w/o badge)			✓	
03/02 Davis-Besse head \$5.45 million fine	✓		✓	✓

NRC's Reports Sorted by Risk

Event	Congress	Site Area Emergency	IAEA INES	ASP
03/02 Davis-Besse head \$5.45 million fine	✓		✓	6.0E-3
06/86 Catawba letdown weld 130 gpm leak			n/a	3.0E-3
03/90 Vogtle station blackout	✓	✓	n/a	1.0E-3
01/97 Maine Yankee pressure locked valves			n/a	8.2E-4
06/98 Davis-Besse tornado LOOP			✓	5.6E-4
08/92 Turkey Point hurricane Andrew LOOP				1.6E-4
05/89 Surry reactor cavity seal \$500,000 fine	✓		n/a	
08/91 NMP-2 lost annunciators		✓	n/a	
02/93 Three Mile Island intruder		✓		
04/94 Salem marsh grass				
07/95 Waterford ammonia gas			✓	
03/96 Millstone design bases \$2.1 million fine				
09/99 Robinson tornado onsite (w/o badge)			✓	

The four reporting processes reach different external stakeholders and have different thresholds, so there's no expectation that all should have the same outcomes. BUT...

With few exceptions, everything reported to Congress should be reported to IAEA.

Everything reported to IAEA as INES 1 or higher should be reported to Congress.

With no exceptions, all Site Area Emergencies should be reported to Congress.

Emergency declarations for actual events (as opposed to degraded condition discoveries) should correlate better with final ASP risk values.

Six-figure fines imposed by NRC should appear at least as ASP values $\geq 1E-5$ (i.e., no more “secret” million dollar fines).