



THE IAEA INCIDENT REPORTING SYSTEM FOR RESEARCH REACTORS

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Incident Reporting System for Research Reactors (IRSRR)

- What is it?
- What does it contain?
- Who is it for?
- How is it accessed?



IRSRR – What is it?

The Incident Reporting System for Research Reactors (IRSRR) is a database maintained by the International Atomic Energy Agency (IAEA) for international exchange of the operating experience feedback for research reactors.

IRSRR – What does it contain?

The IRSRR database contains information on research reactor events of safety significance, root causes and lessons learned with the intent of reducing the occurrence of similar events in other research reactors.*

* In order to improve the effectiveness of the system it is essential that Member States make timely reports of events important to safety to share the information in the IRSRR database.

Not a reportable event - Licensee informed regulator as courtesy

GUIDE WORDS:

| | |
|-----------------------------------|---|
| 1.2.4 Reporting Categories | Degradation of reactivity control system required to shutdown -- failure of the process variable providing safety setting |
| 1.3.1 Reporting Categories | Deficiencies in design |
| 1.3.4 Reporting Categories | Deficiencies in quality assurance (b) a was not constructed as intended in design |
| 1.4 Generic problem of safety | (a) recurring event; (b) event with interest implication for similar reactor design |
| 2.1.6 Plant Status Prior to Event | Pulse Operation |
| 3.4.0 Failed / Affected Systems | Other monitoring and control system |
| 3.4.1 Failed / Affected Systems | Reactor shutdown system |
| 3.4.4 Failed / Affected Systems | Process monitoring (Temperature) |
| 4.1.2 Failed/affected component | Temperature |
| 5.1.0 Cause of the event | Unknown or other |
| 5.1.5 Cause of the event | Instrumentation and control failure |
| 6.10 Effects on Operation | Exceeding technical specification limit |
| 8.2.1 Nature of Failure or error | Independent multiple failures or errors |



IRSRR – Who is it for?

The intended audience is research reactor operating organizations, regulators and designers and any other organizations or individuals involved in the safety of research reactors.

However, the IRSRR database is only accessible to National and Deputy National Coordinators and select IAEA staff.

IRSRR – How is it accessed?

The operating experience from the events are collected, collated, and disseminated via an IAEA publication (TECHDOC).

The publication on research reactor operating experience highlights the root causes, safety significance, lessons learned, corrective actions and the causal factors for the events that are reported to the IRSRR.

IAEA-TECDOC-1762

The 1st edition of this publication provides the operating experience feedback from the events reported to the IAEA's IRSRR from 1997 to September 2014.

ISBN 978-92-0-100615-8:

[https://www.iaea.org/publications/10847/operating-experience-from-events-reported-to-the-iaea-incident-reporting-system-for-research-reactors.](https://www.iaea.org/publications/10847/operating-experience-from-events-reported-to-the-iaea-incident-reporting-system-for-research-reactors)

IAEA-TECDOC-XXXX

The 2nd edition of this publication will add the operating experience feedback from the events reported to the IAEA's incident reporting system for research reactors from October 2014 to May 2022.

- National coordinators meet every two years
- Volunteers met in May 2022 to assemble document
- New TECHDOC is in process to be published in 2023

**OPERATING EXPERIENCE
FROM EVENTS REPORTED TO
THE IAEA INCIDENT
REPORTING SYSTEM FOR
RESEARCH REACTORS**

2014 - 2022

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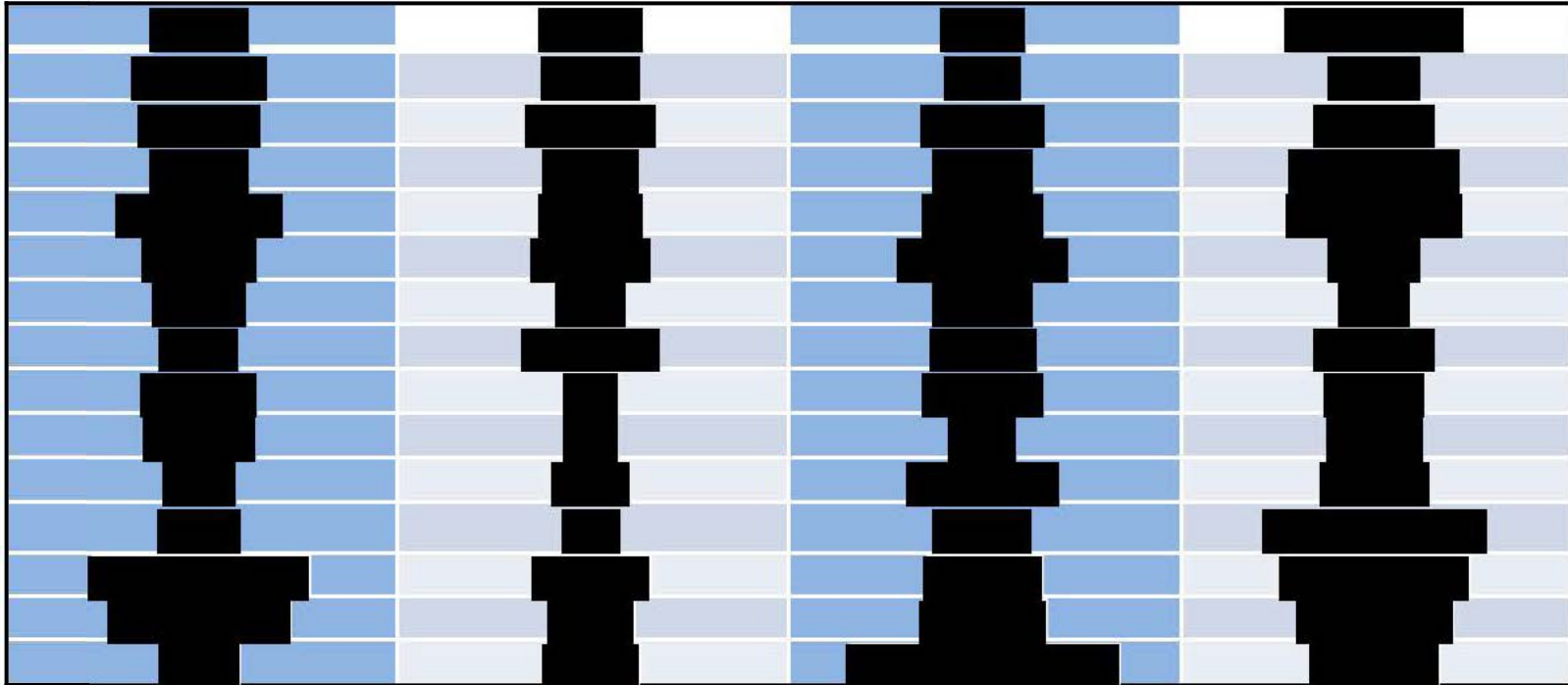
Member State obligations -

-

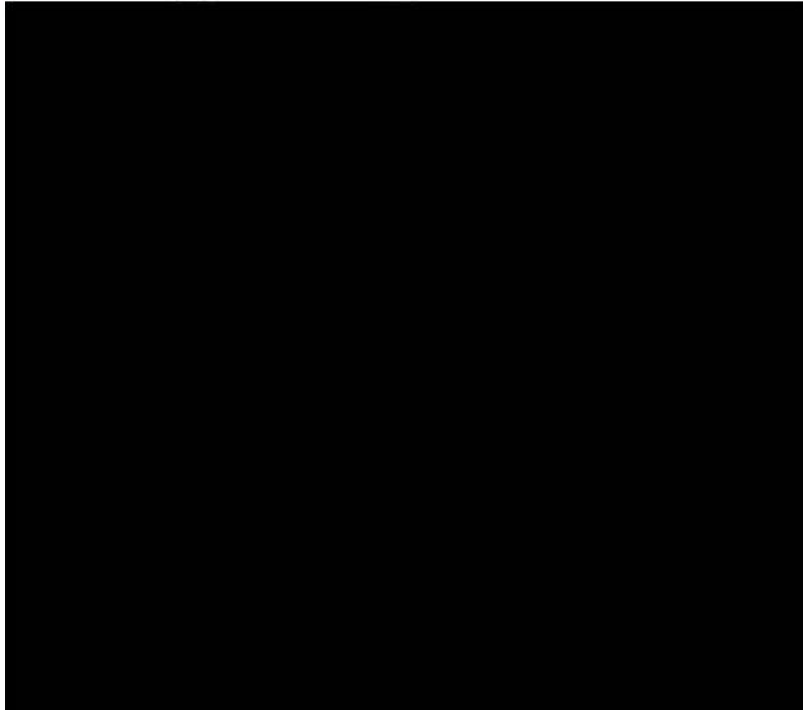
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Participants



Reporting categories

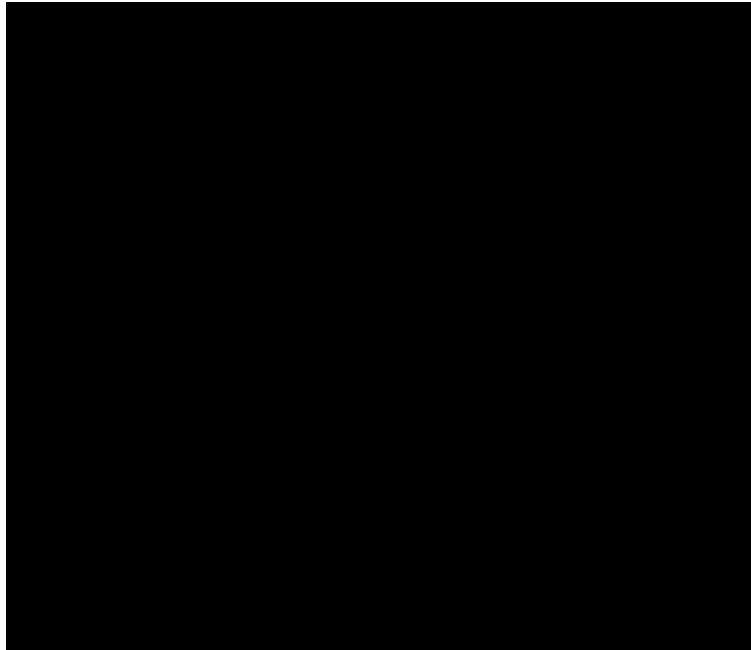


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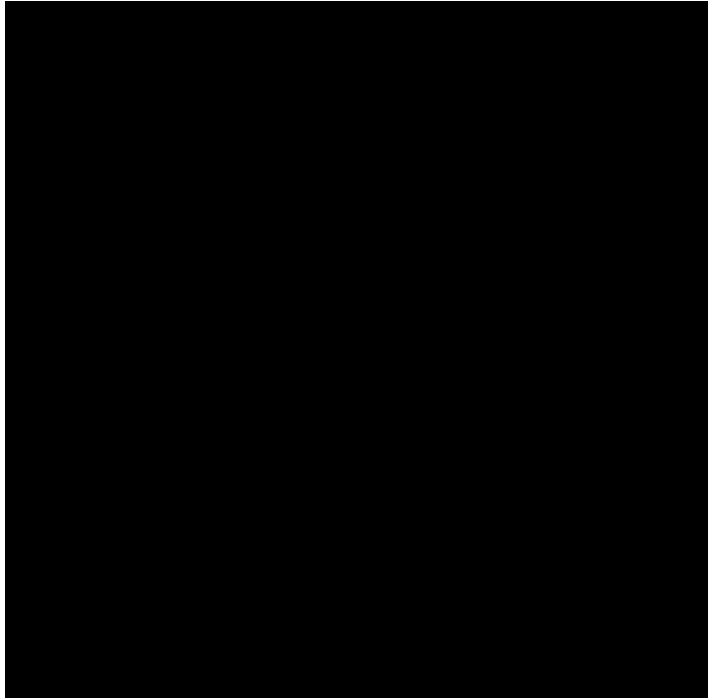
Event Characteristics



Failed or affected components



Event causes



- [Redacted]
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Lessons Learned from Key Events

[Redacted content]

Lessons Learned from Key Events

[REDACTED]

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Lessons Learned from Key Events

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Conclusion

- [Redacted]



Thank you for your attention

Questions?