

Safety Analysis Reports

Supporting Applications for Construction Permits and Licenses

Framatome’s safety analysis reports (SARs) support the safety case for new-build construction and backfitting of operating plants.

Challenge

Regulatory authorities place increasingly stringent demands on licensing documentation and particularly on SARs, whether for new-build construction or for backfitting of operating plants.

New safety and regulatory requirements, plant upgrades, long-term operation and lifetime extension measures present challenges to operators as they trigger the need for various safety analyses and assessments.

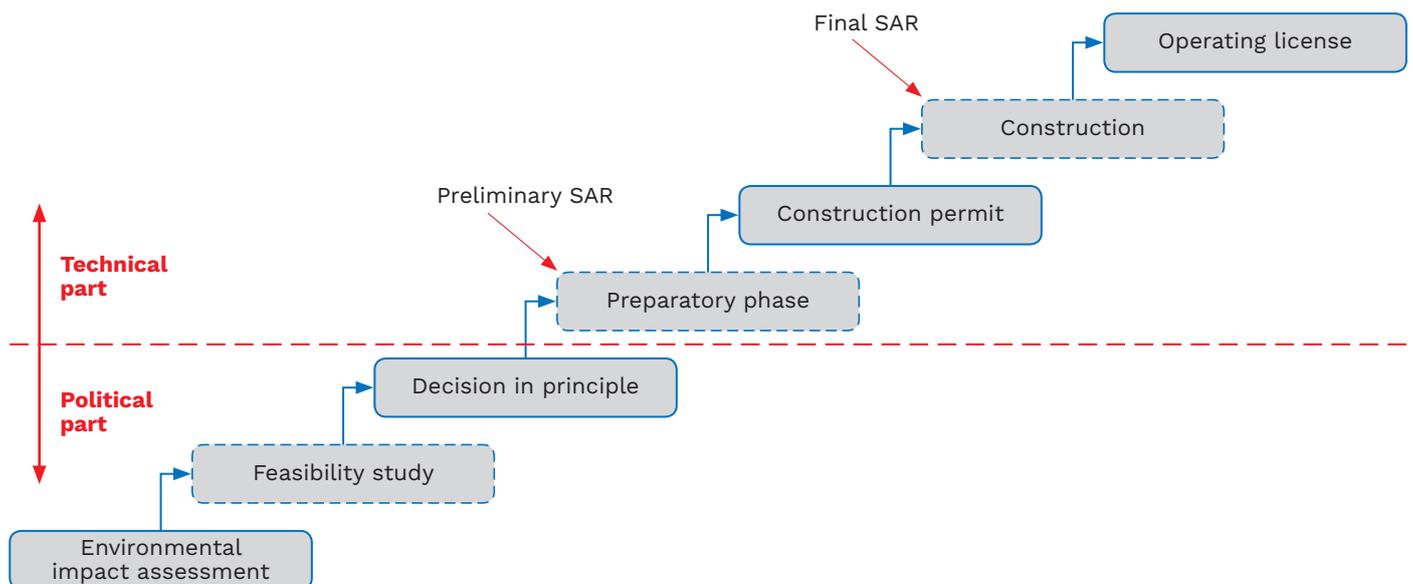
Solution

Framatome’s SARs present the safety case, documenting fulfillment of regulatory requirements in support of applications for construction permits, operating licenses and license amendments.

As an original equipment manufacturer, we possess a wealth of experience in generating SARs to provide all the information required by the authorities about plant safety and the effects of plant modifications.

Customer benefits

- Provide a comprehensive description of the plant, its safety features and practices
- Present the full spectrum of design basis and beyond design basis events
- Verify fulfillment of regulatory requirements
- Underline the safety case
- Pave the way to licensing authority approval
- Provide support for new-build construction permits, operating licenses and license amendments



SARs in the course of a two-step licensing procedure

Your performance
is **our** everyday **commitment**

Technical information

We offer a wide range of SARs:

- Preliminary SAR (PSAR) in support of applications for construction permits

A PSAR needs to show a plant can be designed to operate in a safe manner.

- Final SAR (FSAR) for operating licenses

An FSAR needs to show that a plant has been designed and constructed to operate in a safe manner.

and

- Updated Final SAR (UFSAR) for license amendments

The results of the safety evaluation of a licensee amendment per U.S. "Guidelines for 10 CFR 50.59 Safety Evaluations" NSAC 125, for example, are documented in the UFSAR.

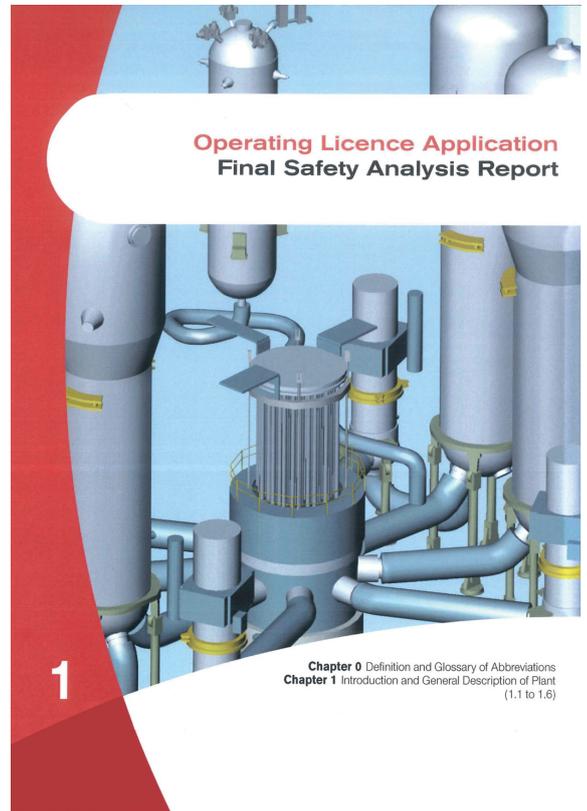
We cater for internationally accepted formats:

- NUREG 1.206 for one-step licensing procedures
- NUREG 1.70 for two-step licensing procedures updated to cover the latest in safety and regulatory requirements,
- Taking into account IAEA GS-G-4.1

Thus providing licensing authorities with a format that is generally well understood worldwide and can be evaluated with internationally established criteria (Standard Review Plan – NUREG-0800).

We use integrated tools in the form of

- MS Word and
- XML format, thus ensuring that the files transferred to you will be usable on any platform, even after 60 years of operation.



SAR cover page

Accident analyses		
Non-LOCA transients	LOCA	Radiological consequences
<ul style="list-style-type: none">• Load rejection to auxiliary power• Loss of one reactor coolant pump• Loss of one main feed water pump with failure of standby pump to start• Inadvertent opening of all main steam bypass valves• Reactivity anomaly at startup• Others	<ul style="list-style-type: none">• Large breaks• Medium breaks• Small breaks• Heat removal by one residual heat removal train• Others	<ul style="list-style-type: none">• Fuel assembly drop in annulus• Break in let down line in reactor auxiliary building• Break in coolant carrying instrument line in the reactor building annulus• Large-break LOCA• Others

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References

Worldwide: Argentina, Belgium, Brazil, Bulgaria, China, Finland, France, Germany, India, Japan, Lithuania, Netherlands, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, United States

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