# **framatome**

## **Boron Monitoring**

Framatome uses Inductively Coupled Plasma Mass Spectrometry (ICPMS) technology to monitor boron balance and increase fuel performance

### **Challenge**

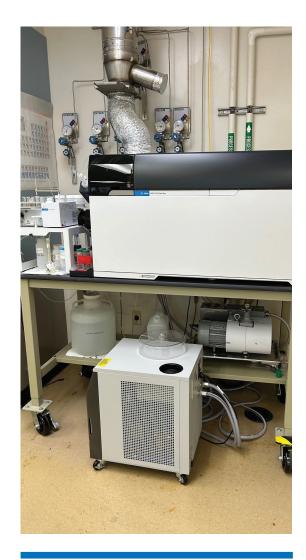
Neutron reactivity is controlled through the B-10 isotope in boric acid. However, due to burn-up, the B-10 content of the mixture is depleted during the operating cycle. As a result, plants need to periodically verify the B-10 fraction of new and recycled boric acid sources to ensure adequate reactivity control.

### **Solution**

Framatome's chemistry experts utilize Inductively Coupled Plasma Mass Spectrometry (ICPMS) technology to verify the exact percentage of isotopic B-10 in reactor coolant samples as it relates to other boron isotopes. Highly specialized analysis techniques backed by multiple quality checks deliver results you can count on.

#### **Customer benefits**

- Ensures precise balance of boron
- Enhance fuel performance
- Removes uncertainties regarding the addition of boric acid to your reactor coolant
- · Safeguards against excess reactivity in reactor core



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is our everyday commitment

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