System of make-up and boric regulation KBA

System of make-up and boric regulation is delivered for:

- control reactor reactivity;
- the primary circuit WCR coolant regulation;
- coolant output on purification to the KBE filters;
- the primary circuit system integrity and durability test run;
- the primary circuit coolant degasation in the deaerator for hydrogen, oxygen and noble gases removing;
- boric acid solution level and quality control in the ECCS accumulators;
- pipeline and reactor plant equipment filling by coolant at reactor cold position;
- cooling water injection in MCP (main circulation pump) at operational disorder;
- compensation of coolant uncontrolled leakage and return coolant controlled leakage to the circuit;
- boric acid solution injection in pressurizer for pressure reduction in the first circuit at turned off MCP;
- boric acid injection in the first circuit at the emergency system activation;
- the primary circuit coolant tapping on automatic chemical control;
- coolant supply on blowdown and filling of the primary circuit monitoring device lines.

The diagnostic quality parameters of make-up water is showed in table 1.

Table 1 – The diagnostic quality parameters of KBA system make-up water

Diagnostic parameters	Control level
pH value	5,9-10,3
Chloride-ion concentration, mg/dm^3, no more	0,1
Ammonia concentration, mg/dm^3, no more	3,0
Dissolved oxygen concentration, mg/dm^3, no more	0,02
Iron concentration, mg/dm^3, no more	0,05
Specific electrical conductivity, mcSm/sm	20-200
Boric acid concentration, g/dm^3	no less current
Common organic carbon concentration, mg/dm^3, no more	0,5