

Features	Acceptance criteria	See
A. Description	This element consists of cement placed in the annulus between the casing/liner and the bore hole wall while also forming a cement plug inside the wellbore by using the Perf, Wash & Cement technique (PWC).	
B. Function	The purpose of the element is to provide a continuous, permanent and impermeable hydraulic seal across a perforated interval in the casing annulus and inside a wellbore, to prevent flow of formation fluids between formation zones and/or to surface/seabed	
C. Design, construction and selection	<ol style="list-style-type: none"> 1. A program shall be issued for each PWC operation, covering the following as a minimum: <ol style="list-style-type: none"> a) Foundation requirements in casing and annulus b) Perforation hole size and density, relative to casing size and hole size c) Parameters for washing perforations, and placement of spacer and cement. d) Properties of mud and spacer, relative to formation and cement slurry design 2. The cement plug shall <ol style="list-style-type: none"> a) Be designed as per EAC Table 24 paragraph C, section 1-7 b) Cover the perforations and the logged/verified interval in the annulus c) For the primary barrier, extend into the casing above the top perforation. For the secondary barrier, extend at least 50m MD above the top perforation 3. Planned perforation interval length: <ol style="list-style-type: none"> d) Shall be sufficient to obtain minimum 30m MD of cement bonding verified by logging for the element to act as a single barrier e) Shall be sufficient to obtain minimum 2 x 30m MD of cement bonding verified by logging for the element to act as a combined primary and secondary barrier 	
D. Initial verification	<ol style="list-style-type: none"> 1. The annulus cement length shall be verified by one of the following: <ol style="list-style-type: none"> a) Bonding logs: Logging methods/tools shall be selected based on ability to provide data for verification of bonding. The measurements shall provide azimuthal/segmented data. The logs shall be verified by qualified personnel and documented. <ol style="list-style-type: none"> a. Actual cement length verified by bond logs shall be minimum 30m MD for one barrier and minimum 2 x 30m MD for a combined barrier. b) If the element has previously been qualified for the same casing/borehole geometry, lithology and fluid system, by drilling out cement and running cement bond logs, and a successful track record has been established, using a qualification matrix with a documented parameter set is considered sufficient for subsequent wells. <ol style="list-style-type: none"> a. In the event of losses, or the inability to perform the PWC operation according to the parameter set defined in the qualification matrix, the cement plug shall be drilled out and bond logging shall be performed. 2. The internal cement plug shall be verified as per EAC Table 24, paragraph D <ol style="list-style-type: none"> a) If the element has previously been qualified for the same casing/borehole geometry, lithology and fluid system, by tagging the internal cement plug, and a successful track record has been established, tagging may be omitted for subsequent wells. <ol style="list-style-type: none"> a. The cement plug shall be verified by pressure testing 	
E. Use	None	

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F. Monitoring	1. The annuli pressure above the casing cement shall be monitored at a defined frequency when access to this annulus exists.	
G. Common well barrier	If one continuous cement plug (same cement operation) is defined as part of the primary and secondary well barriers, it shall be verified according to EAC Table 24, paragraph G	