Here you talk about a single capability while in 3.1.16 you say "not the first". In credential you may want to say also a capability or several capabilities.
the use of term object is somewhat confusing here (as we talk about storage objects). You may want to consider "modules" or something else
LBAs are not defined here. You may want to remove the statement that refers to LBAs (it contains no information).

This is hard to parse (can be parsed ambiguously).
has to clarify uniqueness within a partition. The "assigned by OSD LU" is a bit confusing (perhaps explain)
I think that this formulation is problematic. I would like to see a clause that says that at least the effected changes are reflected in results (sense?)
that statement is not completely correct. I would state it that as a result of the communications between SM and client
the client should be able to build a capability and should have the cap-key. The rest of the text calls a combination of
those two a credential and uses for it a data-structure similar to those used in communications with the data server for
ease of illustration
missing "is"
should mention that only cap-keys have to be confidential
A flow diagram of the checks might help a lot the reader and perhaps replace the text.
should not say something about "no space" as opposed to quota exhaustion.
are all references consistently to SPC3 or SPC4