We describe a method of bi-coordinate variations for limit non-smooth optimization problems, which involve a single linear equality and box constraints. Here only approximation sequences are known instead of exact values of the cost function and parameters of the feasible set. It consists in making descent steps with respect to only two selected coordinates satisfying some special threshold rule. The method is simpler essentially than the usual gradient or dual type ones and differs from the previous known bi-coordinate ones suggested for the usual stationary and smooth problems. We establish its convergence under rather mild assumptions. Computational tests illustrate stable convergence properties of the proposed method.