

This table details the values of the grade targets for the plants according to each scenario. In this table, columns “Scenario”, “Excavator”, and “ $\epsilon$ ” show the scenario, the number of excavators, and the value of the tolerance  $\epsilon$ , respectively. In turn, columns  $GT_{111}$ ,  $GT_{121}$ , and  $GT_{131}$  show the tolerable iron grade range for particle size ranges 1, 2, and 3, respectively, for plant 1. Finally, the last three columns refer to plant 2.

Scenarios and tolerable iron grade target ranges concerning plants

Scenario	Excavator (#)	$\epsilon$ (%)	$GT_{111}$ (%)	$GT_{121}$ (%)	$GT_{131}$ (%)	$GT_{211}$ (%)	$GT_{221}$ (%)	$GT_{231}$ (%)
1	2	0	59	62	46	60	62	62
2	2	1	[58.4, 59.6]	[61.5, 62.2]	[45.5, 46.6]	[59.4, 60.6]	[61.4, 62.6]	[61.4, 62.6]
3	2	2	[57.8, 60.2]	[60.8, 63.2]	[45.1, 46.9]	[58.8, 61.2]	[60.8, 63.2]	[60.8, 63.2]
4	2	3	[57.2, 60.8]	[60.1, 63.9]	[44.6, 47.4]	[58.2, 61.8]	[60.1, 63.9]	[60.1, 63.9]
5	2	4	[56.6, 61.4]	[59.5, 64.5]	[44.2, 47.8]	[57.6, 62.4]	[59.5, 64.4]	[59.5, 64.4]
6	2	5	[56.1, 62.0]	[58.9, 65.1]	[43.7, 48.3]	[57.0, 63.0]	[58.9, 65.1]	[58.9, 65.1]
7	3	0	59	62	46	60	62	62
8	3	1	[58.4, 59.6]	[61.5, 62.2]	[45.5, 46.6]	[59.4, 60.6]	[61.4, 62.6]	[61.4, 62.6]
9	3	2	[57.8, 60.2]	[60.8, 63.2]	[45.1, 46.9]	[58.8, 61.2]	[60.8, 63.2]	[60.8, 63.2]
10	3	3	[57.2, 60.8]	[60.1, 63.9]	[44.6, 47.4]	[58.2, 61.8]	[60.1, 63.9]	[60.1, 63.9]
11	3	4	[56.6, 61.4]	[59.5, 64.5]	[44.2, 47.8]	[57.6, 62.4]	[59.5, 64.4]	[59.5, 64.4]
12	3	5	[56.1, 62.0]	[58.9, 65.1]	[43.7, 48.3]	[57.0, 63.0]	[58.9, 65.1]	[58.9, 65.1]
13	4	0	59	62	46	60	62	62
14	4	1	[58.4, 59.6]	[61.5, 62.2]	[45.5, 46.6]	[59.4, 60.6]	[61.4, 62.6]	[61.4, 62.6]
15	4	2	[57.8, 60.2]	[60.8, 63.2]	[45.1, 46.9]	[58.8, 61.2]	[60.8, 63.2]	[60.8, 63.2]
16	4	3	[57.2, 60.8]	[60.1, 63.9]	[44.6, 47.4]	[58.2, 61.8]	[60.1, 63.9]	[60.1, 63.9]
17	4	4	[56.6, 61.4]	[59.5, 64.5]	[44.2, 47.8]	[57.6, 62.4]	[59.5, 64.4]	[59.5, 64.4]
18	4	5	[56.1, 62.0]	[58.9, 65.1]	[43.7, 48.3]	[57.0, 63.0]	[58.9, 65.1]	[58.9, 65.1]
19	5	0	59	62	46	60	62	62
20	5	1	[58.4, 59.6]	[61.5, 62.2]	[45.5, 46.6]	[59.4, 60.6]	[61.4, 62.6]	[61.4, 62.6]
21	5	2	[57.8, 60.2]	[60.8, 63.2]	[45.1, 46.9]	[58.8, 61.2]	[60.8, 63.2]	[60.8, 63.2]
22	5	3	[57.2, 60.8]	[60.1, 63.9]	[44.6, 47.4]	[58.2, 61.8]	[60.1, 63.9]	[60.1, 63.9]
23	5	4	[56.6, 61.4]	[59.5, 64.5]	[44.2, 47.8]	[57.6, 62.4]	[59.5, 64.4]	[59.5, 64.4]
24	5	5	[56.1, 62.0]	[58.9, 65.1]	[43.7, 48.3]	[57.0, 63.0]	[58.9, 65.1]	[58.9, 65.1]