



**BUNDESGESELLSCHAFT
FÜR ENDLAGERUNG**

Sub-areas Interim Report pursuant to Section 13 StandAG

As per 28/09/2020

Table of Contents

Table of Contents	2
List of figures	6
List of tables	11
List of annexes	18
List of abbreviations	19
Glossary	20
1 Summary	21
2 Introduction	28
2.1 Occasion	28
2.2 Purpose and objective	28
2.3 Delimitation	29
3 The site selection procedure	31
3.1 Principles of the iterative site selection procedure	33
3.1.1 Participative procedure and transparency	34
3.1.2 Science based procedure	34
3.1.3 Positive error culture and lessons learned	35
3.1.4 Principle of reversibility	36
3.2 Geo data and information	36
3.3 Section 36 StandAG: How the BGE will deal with the Gorleben site	37
4 Identification of sub-areas pursuant to Section 13 StandAG	37
4.1 Definitions of terms and explanations	38
4.1.1 Effective containment zone (ECZ)	38
4.1.2 Claystone host rock	39
4.1.3 Rock Salt host rock	40
4.1.4 Crystalline host rock	41
4.1.5 Maximum search depth	42
4.2 Exclusion criteria according to Section 22 StandAG	43
4.2.1 Principle of applying the exclusion criteria	43
4.2.1.1 Development of the application methods	43
4.2.2 Exclusion criterion “large-scale vertical movements”	44
4.2.3 Exclusion criterion “active fault zones”	46
4.2.3.1 Exclusion criterion “active fault zones” – tectonic fault zones	47
4.2.3.2 Exclusion criterion “active fault zones” – atectonic fault zones	53
4.2.4 Exclusion criterion “influences from current or past mining activities”	57
4.2.4.1 Influences from current or past mining activities – boreholes	57
4.2.4.2 Influences from current or past mining activities – mines	61

4.2.5	Exclusion criterion “seismic activity”	68
4.2.6	Exclusion criterion “volcanic activity”	72
4.2.7	Exclusion criterion “groundwater age”	76
4.2.8	Identification of excluded areas within the framework of Section 13 StandAG	79
4.3	Minimum requirements according to Section 23 StandAG	81
4.3.1	Data basis	81
4.3.2	Application method for the minimum requirements	84
4.3.3	Concept for application of the minimum requirements on the basis of the available data	88
4.3.4	Application of the minimum requirements – claystone host rock	92
4.3.5	Application of the minimum requirements – rock salt host rock	93
4.3.5.1	Rock salt in a steep deposit	93
4.3.5.2	Rock salt in a stratiform deposit	95
4.3.6	Application of the minimum requirements – crystalline host rock	97
4.3.7	Identified areas within the framework of Section 13 StandAG	100
4.4	Geoscientific weighing criteria pursuant to Section 24 StandAG	106
4.4.1	Data basis	107
4.4.2	Application method	108
4.4.3	Evaluation of the indicators and criteria	111
4.4.3.1	Annex 1 (to Section 24 para. 3) StandAG	114
4.4.3.2	Annex 2 (to Section 24 para. 3) StandAG	114
4.4.3.3	Annex 3 (to Section 24 para. 3) StandAG	115
4.4.3.4	Annex 4 (to Section 24 para. 3) StandAG	117
4.4.3.5	Annex 5 (to Section 24 para. 4) StandAG	117
4.4.3.6	Annex 6 (to Section 24 para. 4) StandAG	117
4.4.3.7	Annex 7 (to Section 24 para. 5) StandAG	118
4.4.3.8	Annex 8 (to Section 24 para. 5) StandAG	118
4.4.3.9	Annex 9 (to Section 24 para. 5) StandAG	118
4.4.3.10	Annex 10 (to Section 24 para. 5) StandAG	118
4.4.3.11	Annex 11 (to Section 24 para. 5) StandAG	118
4.4.4	Summarised evaluation	120
4.4.5	Results of the geoscientific weighing criteria	120
5	Identified sub-areas pursuant to Section 13 StandAG	122
5.1	Sub-areas in claystone host rock	128
5.1.1	Sub-area 001_00TG_032_01IG_T_f_jmOPT	128
5.1.2	Sub-area 002_00TG_044_00IG_T_f_tUMa	131
5.1.3	Sub-area 003_00TG_046_00IG_T_f_tUMj	134
5.1.4	Sub-area 004_00TG_053_00IG_T_f_tpg	137
5.1.5	Sub-area 005_00TG_055_00IG_T_f_jm	140
5.1.6	Sub-area 006_00TG_188_00IG_T_f_ju	143
5.1.7	Sub-area 007_00TG_202_02IG_T_f_kru	146

5.1.8	Sub-area 008_01TG_204_01IG_T_f_kro	149
5.1.9	Sub-area 008_02TG_204_02IG_T_f_kro	152
5.2	Sub-areas in crystalline host rock	155
5.2.1	Sub-area 009_00TG_194_00IG_K_g_SO	155
5.2.2	Sub-area 010_00TG_193_00IG_K_g_MKZ	158
5.2.3	Sub-area 011_00TG_200_00IG_K_g_SPZ	161
5.2.4	Sub-area 012_01TG_198_01IG_K_g_RHE	164
5.2.5	Sub-area 012_02TG_198_02IG_K_i_RHE	167
5.2.6	Sub-area 013_00TG_195_00IG_K_g_MO	170
5.2.7	Sub-area 014_00TG_199_00IG_K_g_NPZ	173
5.3	Sub-areas in rock salt host rock	176
5.3.1	Sub-area 015_00TG_001_00IG_S_s_z	176
5.3.2	Sub-area 016_00TG_002_00IG_S_s_z	179
5.3.3	Sub-area 017_00TG_003_00IG_S_s_z	182
5.3.4	Sub-area 018_00TG_006_00IG_S_s_z	185
5.3.5	Sub-area 019_00TG_010_00IG_S_s_z	188
5.3.6	Sub-area 020_00TG_012_00IG_S_s_z	191
5.3.7	Sub-area 021_00TG_017_00IG_S_s_z	194
5.3.8	Sub-area 022_00TG_019_00IG_S_s_z	197
5.3.9	Sub-area 023_00TG_028_00IG_S_s_z	200
5.3.10	Sub-area 024_00TG_029_00IG_S_s_z	203
5.3.11	Sub-area 025_00TG_030_00IG_S_s_z	206
5.3.12	Sub-area 026_00TG_035_00IG_S_s_z	209
5.3.13	Sub-area 027_00TG_037_00IG_S_s_z	212
5.3.14	Sub-area 028_00TG_040_00IG_S_s_z	215
5.3.15	Sub-area 029_00TG_043_00IG_S_s_z	218
5.3.16	Sub-area 030_00TG_048_00IG_S_s_z	221
5.3.17	Sub-area 031_00TG_050_00IG_S_s_z	224
5.3.18	Sub-area 032_00TG_051_00IG_S_s_z	227
5.3.19	Sub-area 033_00TG_052_00IG_S_s_z	230
5.3.20	Sub-area 034_00TG_054_00IG_S_s_z	233
5.3.21	Sub-area 035_00TG_057_00IG_S_s_z	236
5.3.22	Sub-area 036_00TG_058_00IG_S_s_z	239
5.3.23	Sub-area 037_00TG_061_00IG_S_s_z	242
5.3.24	Sub-area 038_00TG_063_00IG_S_s_z	245
5.3.25	Sub-area 039_00TG_064_00IG_S_s_z	248
5.3.26	Sub-area 040_00TG_067_00IG_S_s_z	251
5.3.27	Sub-area 041_00TG_068_00IG_S_s_z	254
5.3.28	Sub-area 042_00TG_071_00IG_S_s_z	257
5.3.29	Sub-area 043_00TG_075_00IG_S_s_z	260
5.3.30	Sub-area 044_00TG_082_00IG_S_s_z	263
5.3.31	Sub-area 045_00TG_086_00IG_S_s_z	266
5.3.32	Sub-area 046_00TG_090_00IG_S_s_z	269

5.3.33	Sub-area 047_00TG_096_00IG_S_s_z	272
5.3.34	Sub-area 048_00TG_097_00IG_S_s_z	275
5.3.35	Sub-area 049_00TG_106_00IG_S_s_z	278
5.3.36	Sub-area 050_00TG_107_00IG_S_s_z	281
5.3.37	Sub-area 051_00TG_109_00IG_S_s_z	284
5.3.38	Sub-area 052_00TG_119_00IG_S_s_z	287
5.3.39	Sub-area 053_00TG_122_00IG_S_s_z	290
5.3.40	Sub-area 054_00TG_124_00IG_S_s_z	293
5.3.41	Sub-area 055_00TG_130_00IG_S_s_z	296
5.3.42	Sub-area 056_00TG_132_00IG_S_s_z	299
5.3.43	Sub-area 057_00TG_133_00IG_S_s_z	302
5.3.44	Sub-area 058_00TG_136_00IG_S_s_z	305
5.3.45	Sub-area 059_00TG_137_00IG_S_s_z	308
5.3.46	Sub-area 060_00TG_144_00IG_S_s_z	311
5.3.47	Sub-area 061_00TG_145_00IG_S_s_z	314
5.3.48	Sub-area 062_00TG_146_00IG_S_s_z	317
5.3.49	Sub-area 063_00TG_149_00IG_S_s_z-ro	320
5.3.50	Sub-area 064_00TG_151_00IG_S_s_z-ro	323
5.3.51	Sub-area 065_00TG_153_00IG_S_s_z-ro	326
5.3.52	Sub-area 066_00TG_154_00IG_S_s_z-ro	329
5.3.53	Sub-area 067_00TG_159_00IG_S_s_z-ro	332
5.3.54	Sub-area 068_00TG_163_00IG_S_s_z-ro	335
5.3.55	Sub-area 069_00TG_168_00IG_S_s_z-ro	338
5.3.56	Sub-area 070_00TG_172_00IG_S_s_z-ro	341
5.3.57	Sub-area 071_00TG_179_00IG_S_s_z-ro	344
5.3.58	Sub-area 072_00TG_181_00IG_S_s_z-ro	347
5.3.59	Sub-area 073_00TG_183_00IG_S_s_z	350
5.3.60	Sub-area 074_00TG_185_00IG_S_s_z-ro	353
5.3.61	Sub-area 075_01TG_189_01IG_S_f_km	356
5.3.62	Sub-area 075_02TG_189_03IG_S_f_km	359
5.3.63	Sub-area 076_01TG_191_01IG_S_f_so	362
5.3.64	Sub-area 076_02TG_191_02IG_S_f_so	365
5.3.65	Sub-area 076_03TG_191_05IG_S_f_so	368
5.3.66	Sub-area 077_00TG_192_00IG_S_f_jo	371
5.3.67	Sub-area 078_01TG_197_01IG_S_f_z	374
5.3.68	Sub-area 078_02TG_197_02IG_S_f_z	377
5.3.69	Sub-area 078_03TG_197_03IG_S_f_z	380
5.3.70	Sub-area 078_04TG_197_04IG_S_f_z	383
5.3.71	Sub-area 078_05TG_197_05IG_S_f_z	386
5.3.72	Sub-area 078_06TG_197_06IG_S_f_z	389
5.3.73	Sub-area 078_07TG_197_07IG_S_f_z	392
5.3.74	Sub-area 078_08TG_197_08IG_S_f_z	395
6	Bibliography	430