Forsmark 2.0

in PTH 1.4404
(9x9 = 81) in
:ontainer fields

/ithin 20 m
Distances

140 °C max.
rom year 6
/hen 81 full

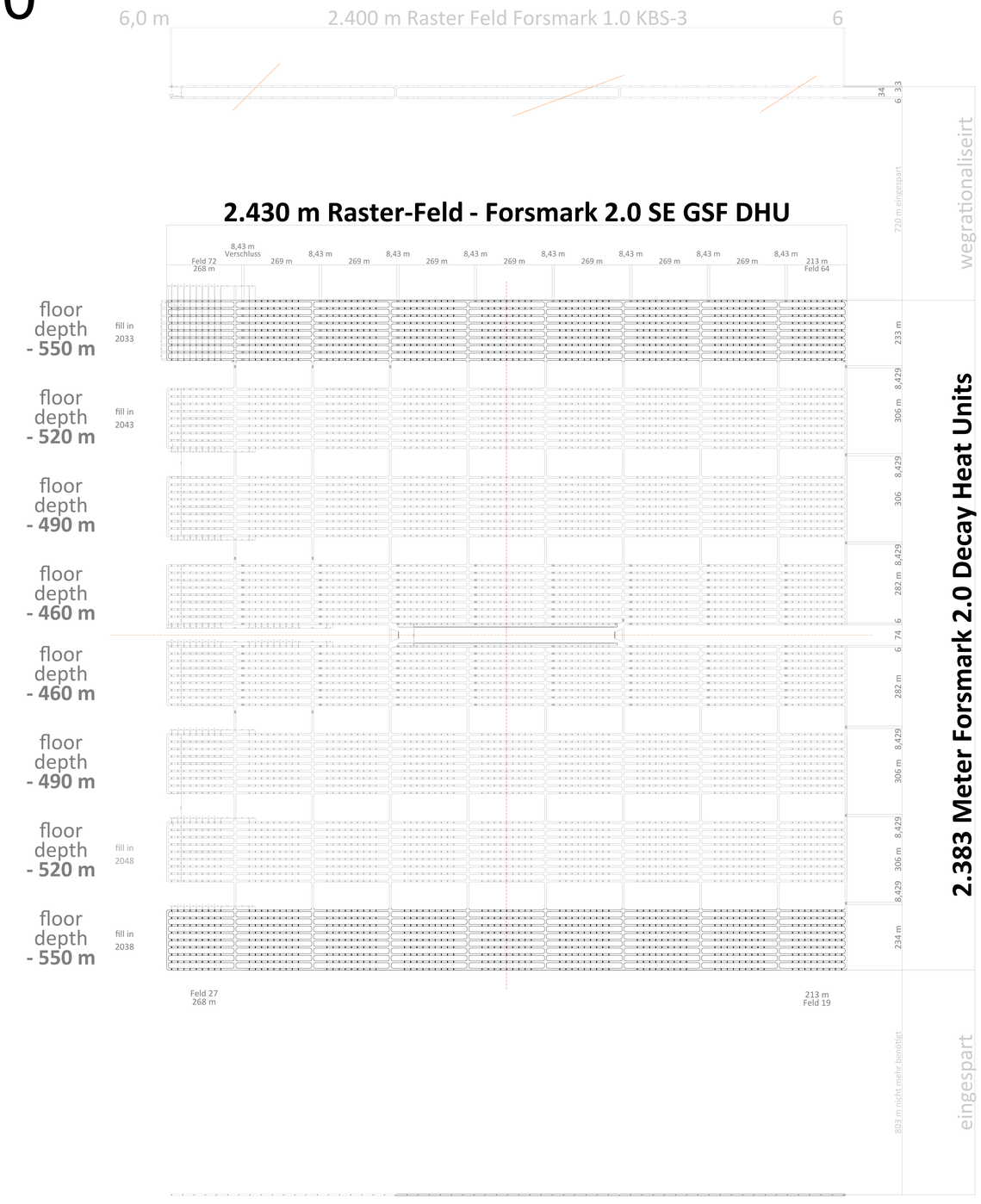
5,8 km2

depth -550
- 460 m

ay Heat Units
nce Heat 2 km
smark village

oast border
; **UK, FI,** SE, SK

? Monitoring
Level ? - OK ?



Forsmark 2.0



always

2 weldings

away from

Water - Decay

Heat Units

0 x critical

masses in

ELB in PTH

_B in PTH 1.4404
2x (9x9 = 81) in
F container fields

within 20 m
Distances

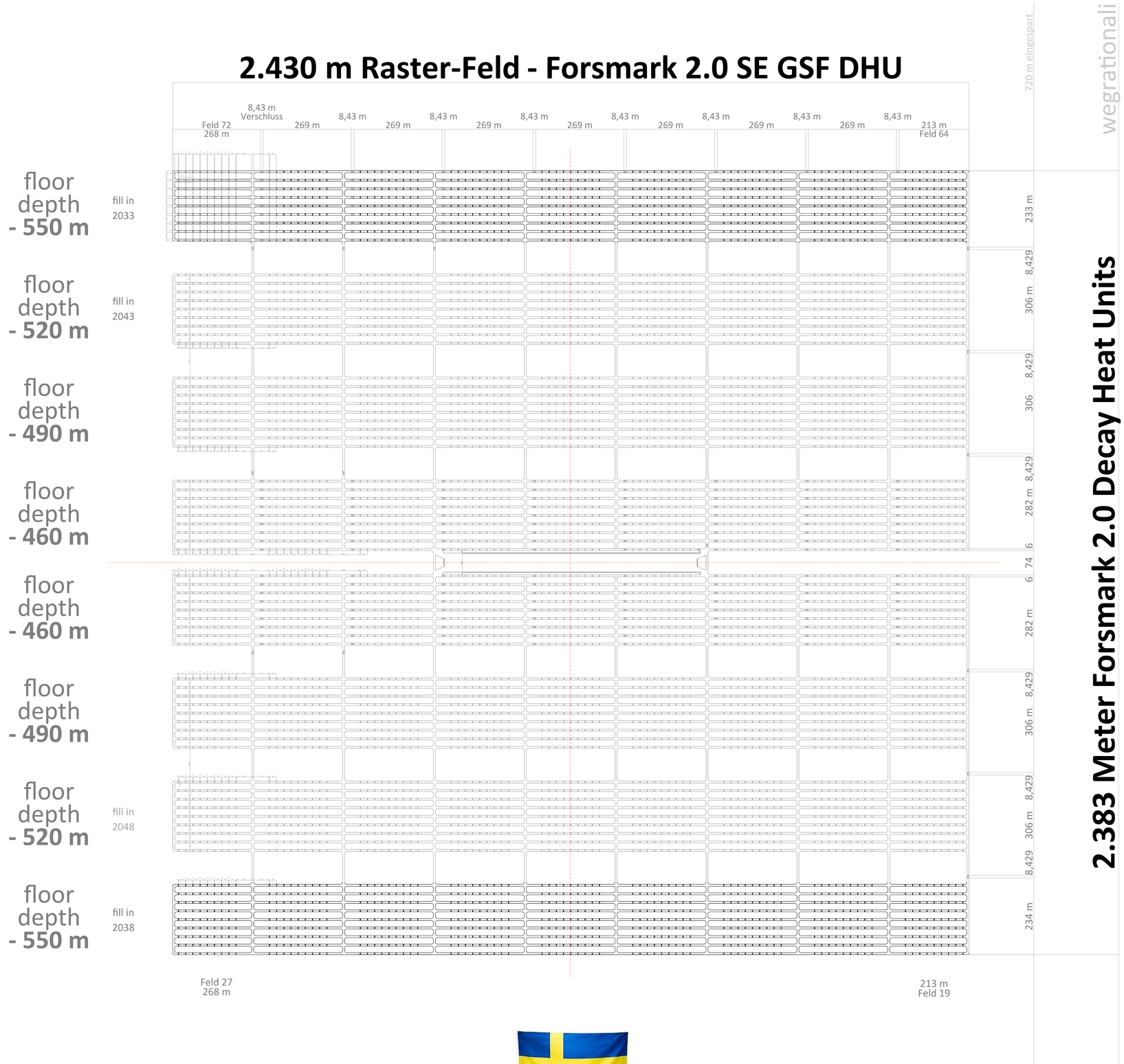
= 140 °C max.
from year 6
when 81 full

5,8 km2

depth -550
- 460 m

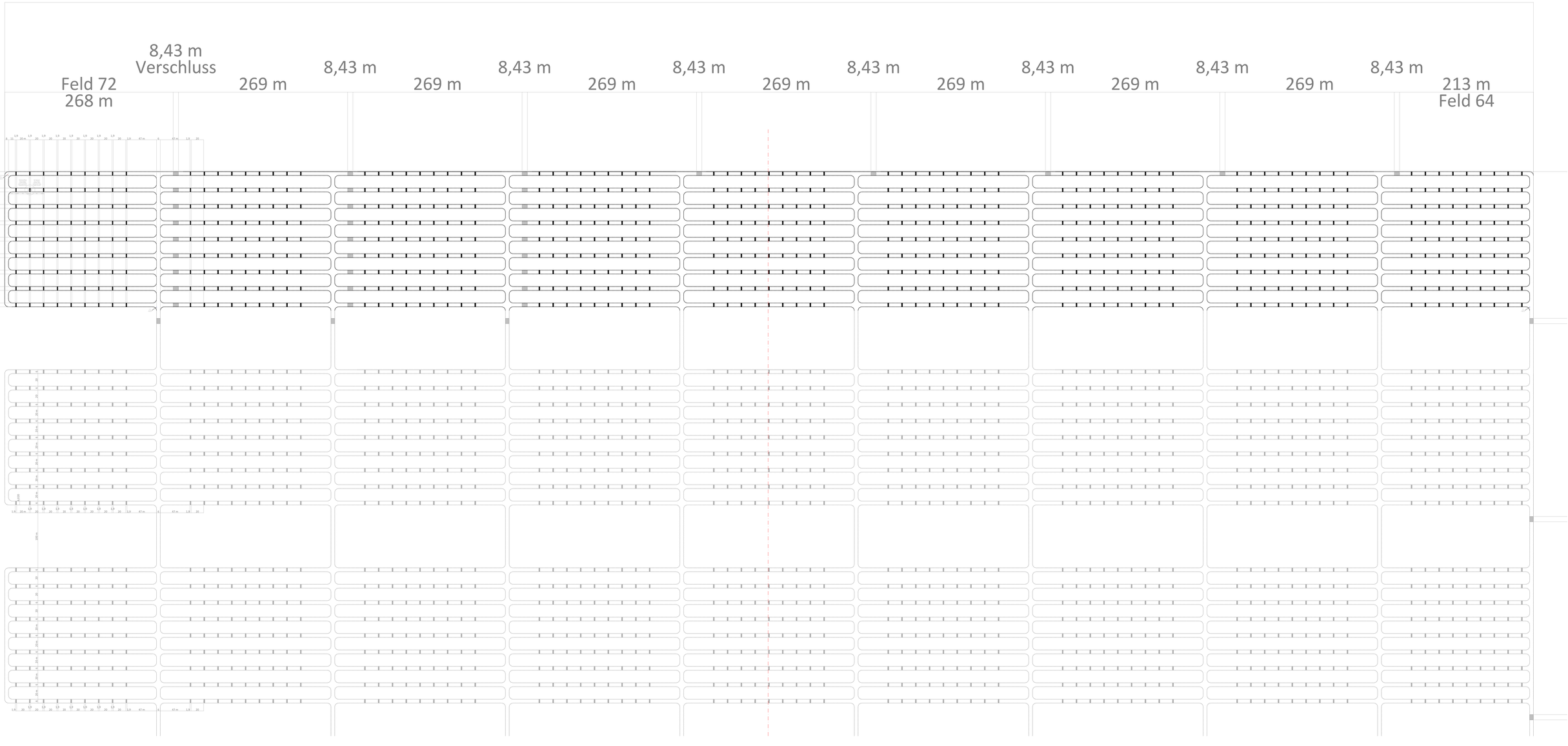
)ecay Heat Units
stance Heat 2 km
orsmark village

coast border
tes **UK, FI,** SE, SK



you see the upper part, with shelves, that contain ELB in PTH - Floorplan
These Decay heat units in -500 m depth heat up to 140 °C without vapour.

2.430 m Raster-Feld - Forsmark 2.0 SE GSF DHU



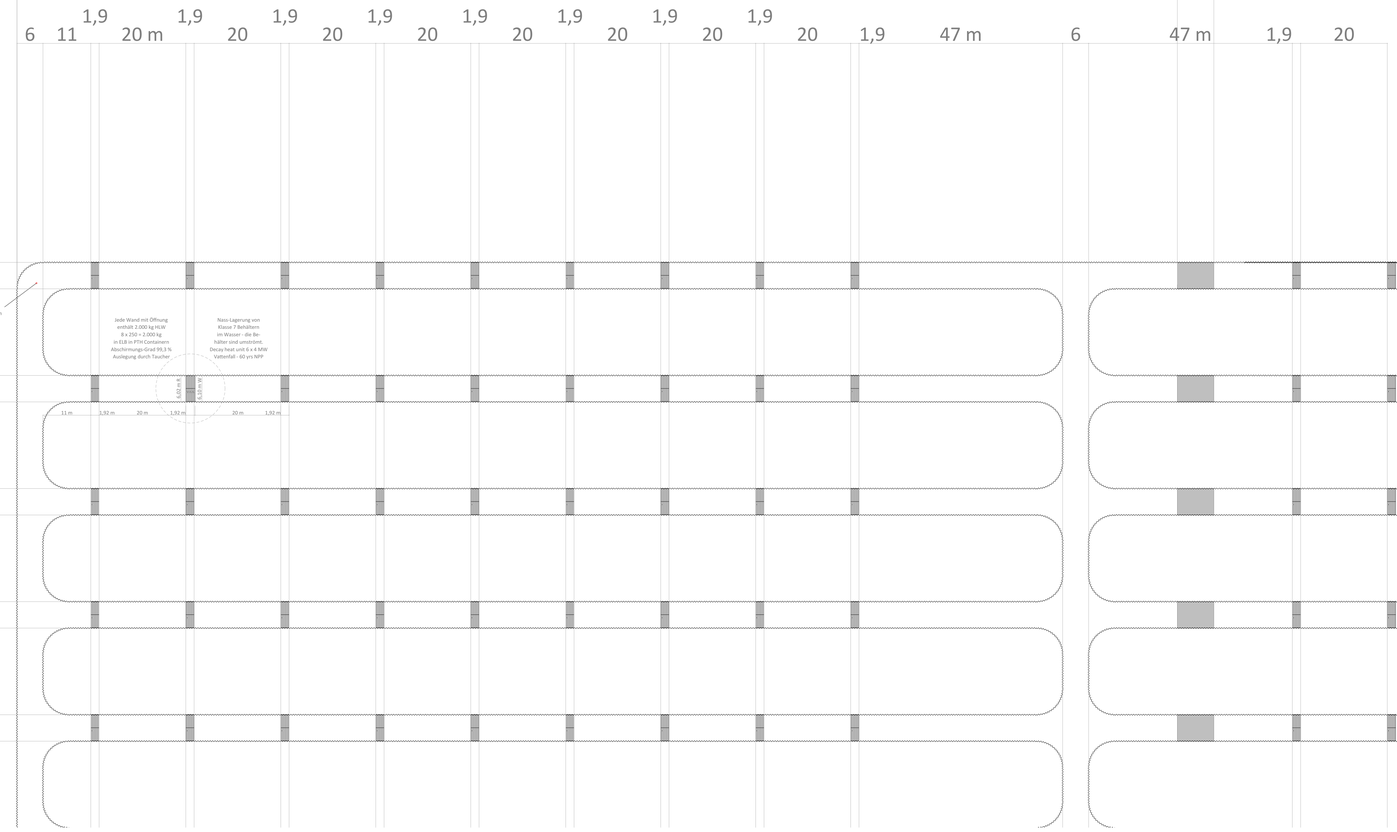
Forsmark 2.0 - 6.000x KBS-3 Inventory in 20 m distances

8,43 m
Verschluss

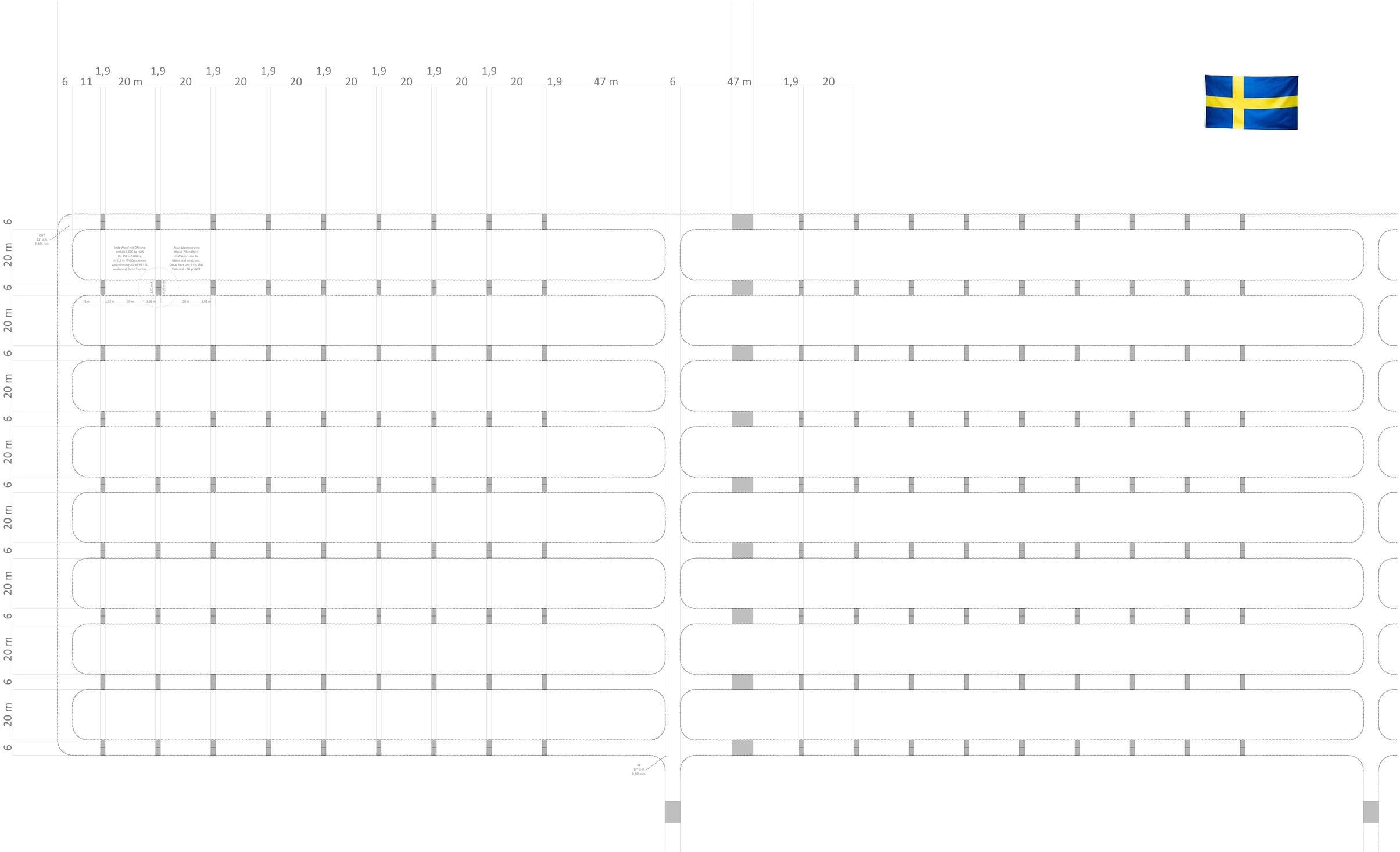
8

Feld 72
268 m

269 m



Forsmark 2.0 - Decay Heat Units - nuclear waste heat



Forsmark 2.0 - 2x Decay heat field - 20 m distances

OUT
12" drill
D 305 mm

Jede Wand mit Öffnung
enthält 2.000 kg HLW
8 x 250 = 2.000 kg
in ELB in PTH Containern
Abschirmungs-Grad 99,3 %
Auslegung durch Taucher

Nass-Lagerung von
Klasse 7 Behältern
im Wasser - die Be-
hälter sind umströmt.
Decay heat unit 6 x 4 MW
Vattenfall - 60 yrs NPP

6,02 m R

6,10 m W

6 m

20 m

6 m

20 m

11 m

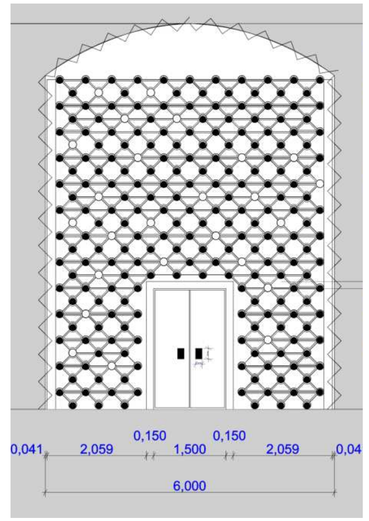
1,92 m

20 m

1,92 m

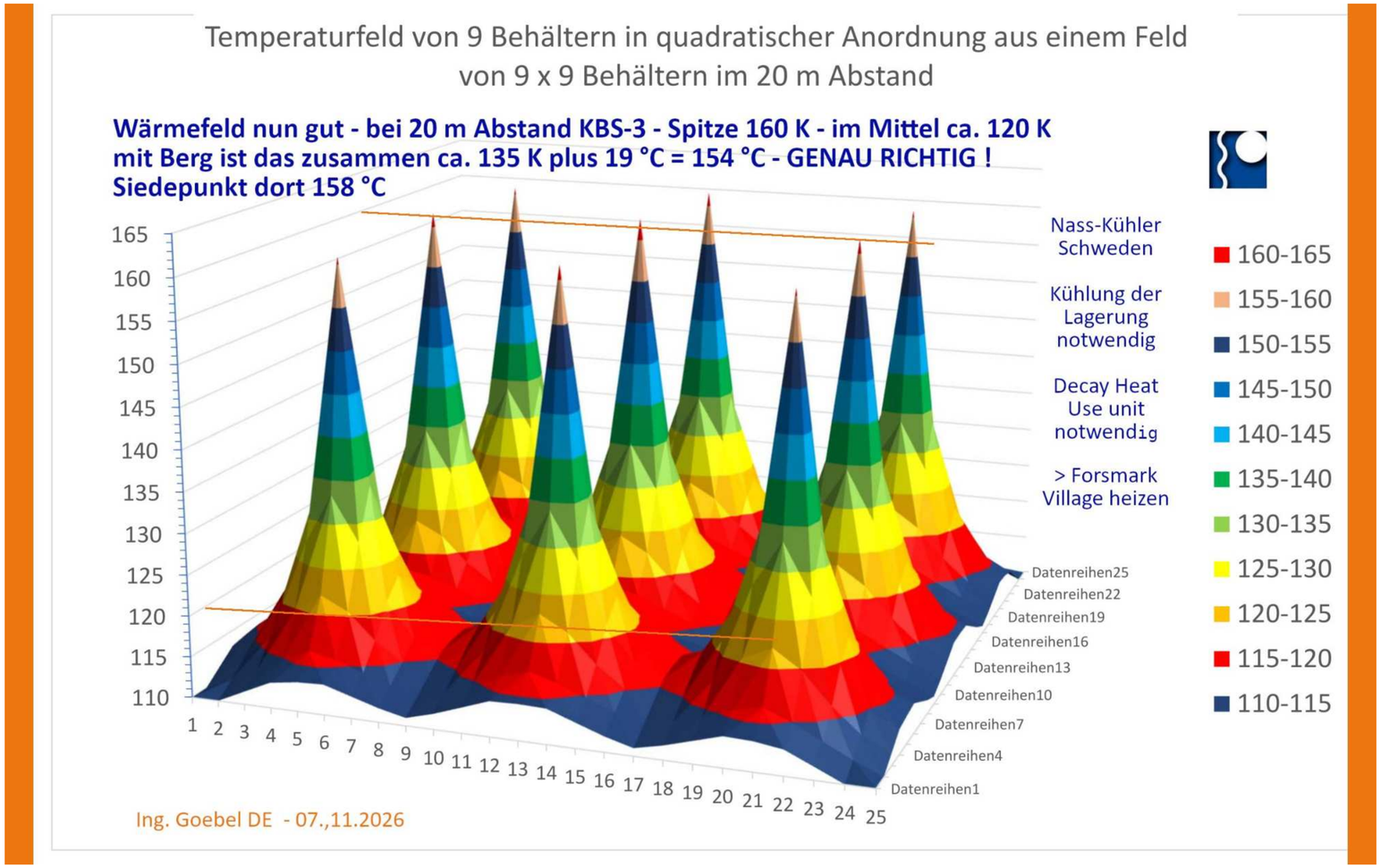
20 m

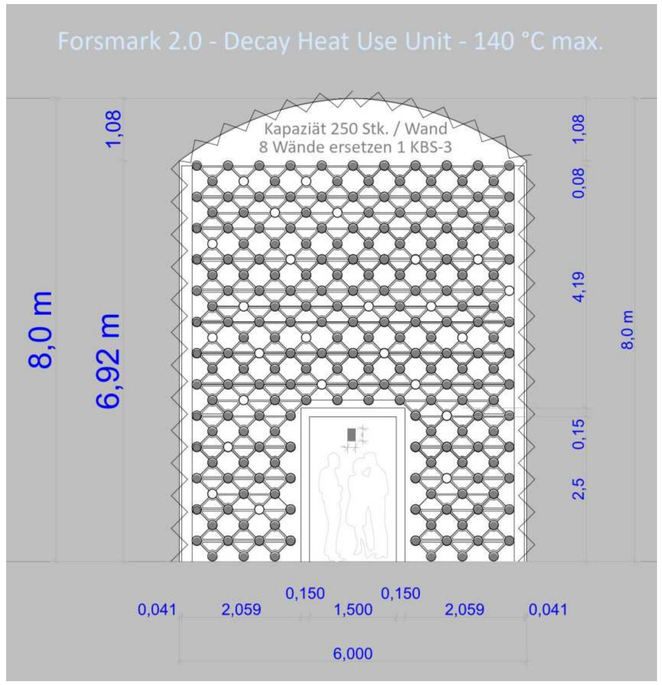
1,92 m



Forsmark 2.0 - Decay heat field detail - 20 m distances

Forsmark 2.0 - Decay heat field - 20 m distances - Arch. and Physicist in ping pong



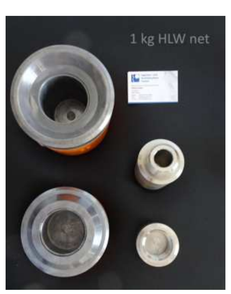


Forsmark 2.0
GSF GDF SE
12.000 ELB 05
in PTH 06 SE in
20 m distances

that pic from Dr. Herres was a first direction





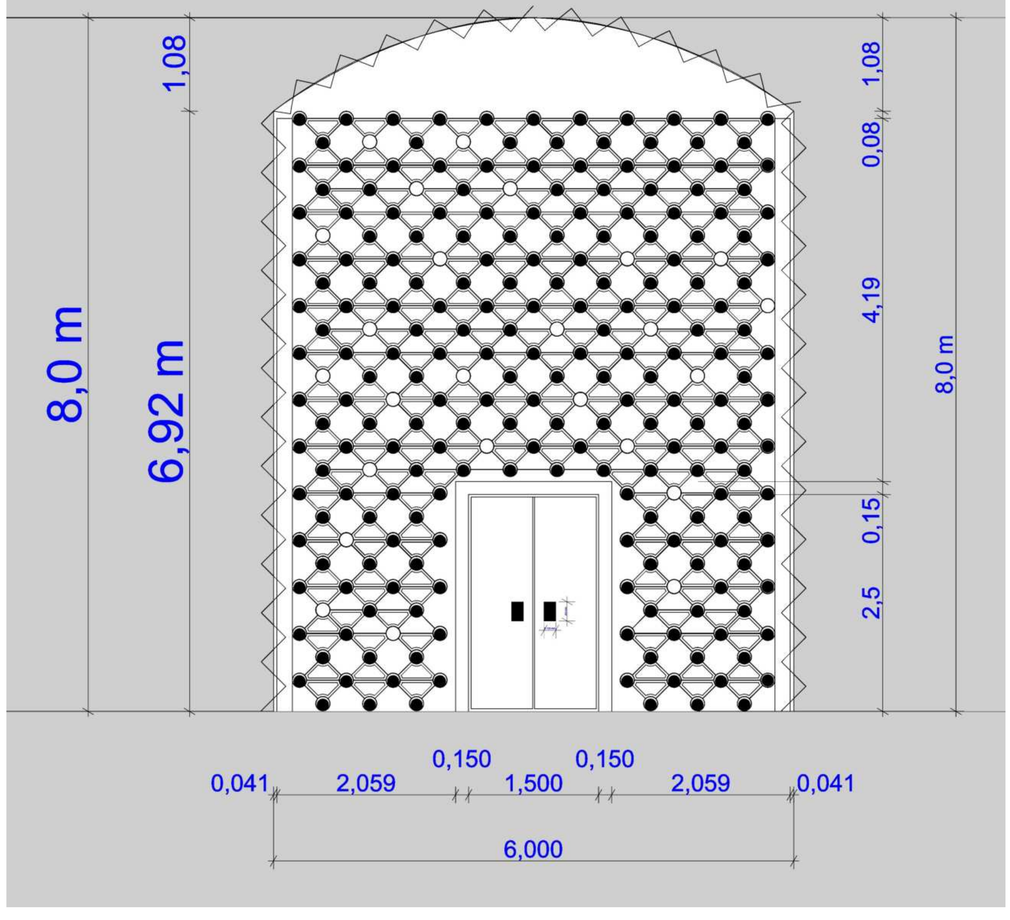


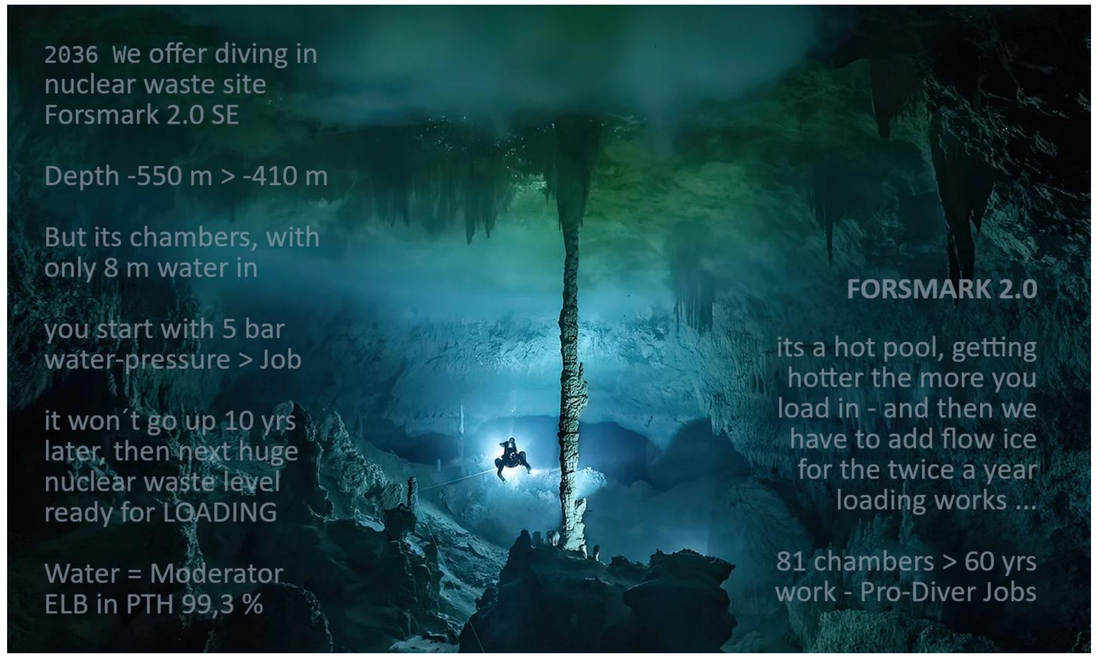


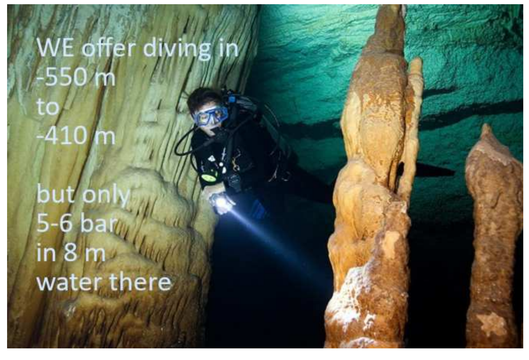


ELB 05 SE in PTH 06 SE
99,3 % gamma ray shielded
still harmfull to pedestrians
but not al all for DIVERS ...

ELB PTH
WALL VG



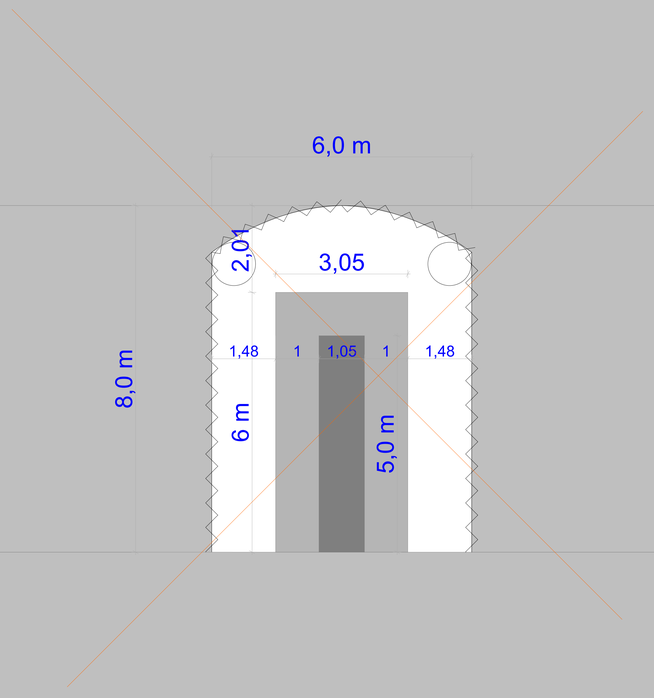


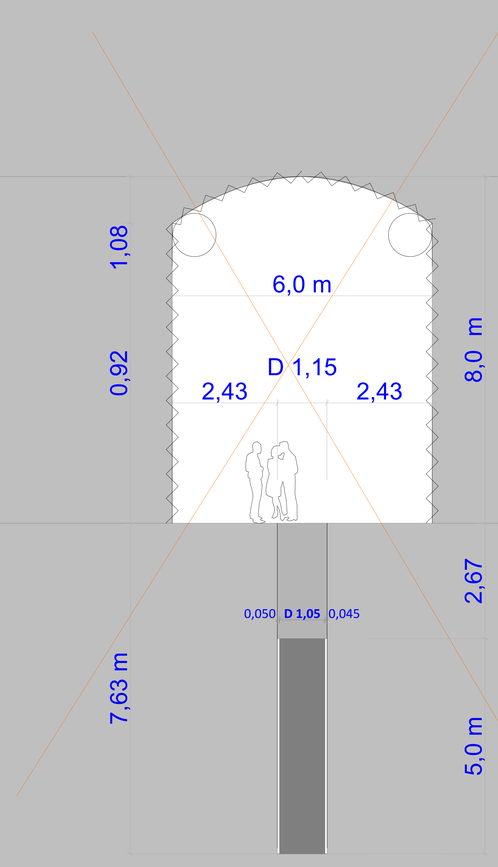


PADI®

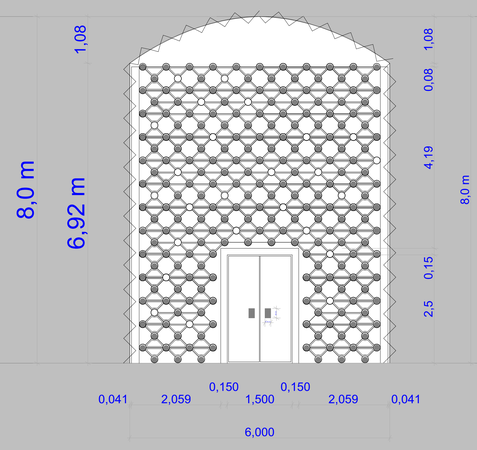
>>> Überraschung - in einigen Jahren könnt Ihr als Taucher in einem Bergwerk Nuklear-Behälter auslegen - Wasser ist ein guter Moderator - Lösung : Erst wenn Ihr das macht ist es aus Sicht des Strahlenschutzes ungefährlich - Forsmark 2.0 SE - 1,64 Mio Stk. - über 4 x 10 Jahre bis ...

Plan for a GSF in hardrock - from Sweden and Germany





ELB 05 SE in PTH 06 SE
99,3 % gamma ray shielded
still harmfull to pedestrians
but not al all for DIVERS ...

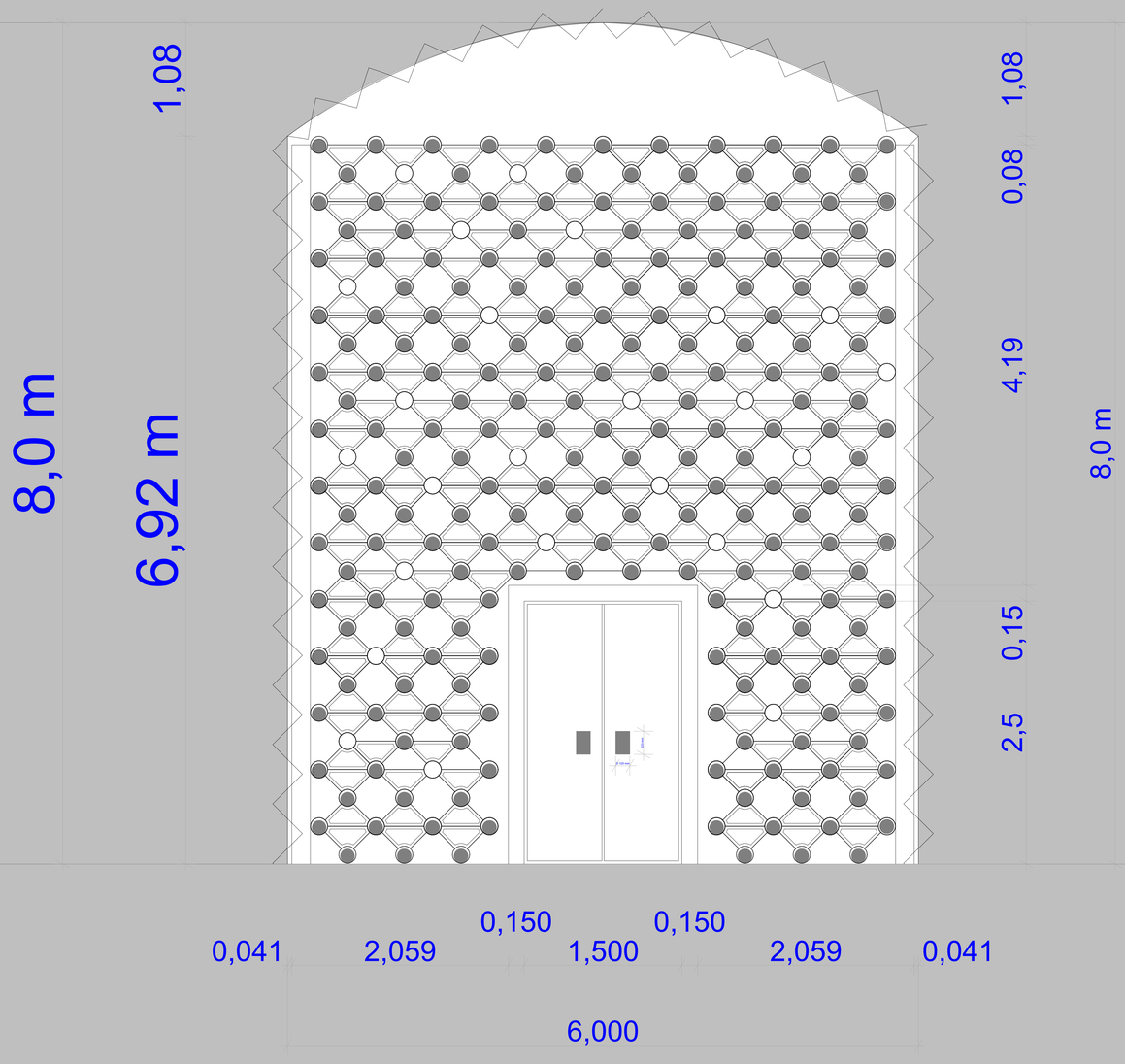


Forsmark 2.0

Build it - flood it - use 4 x 6 MW

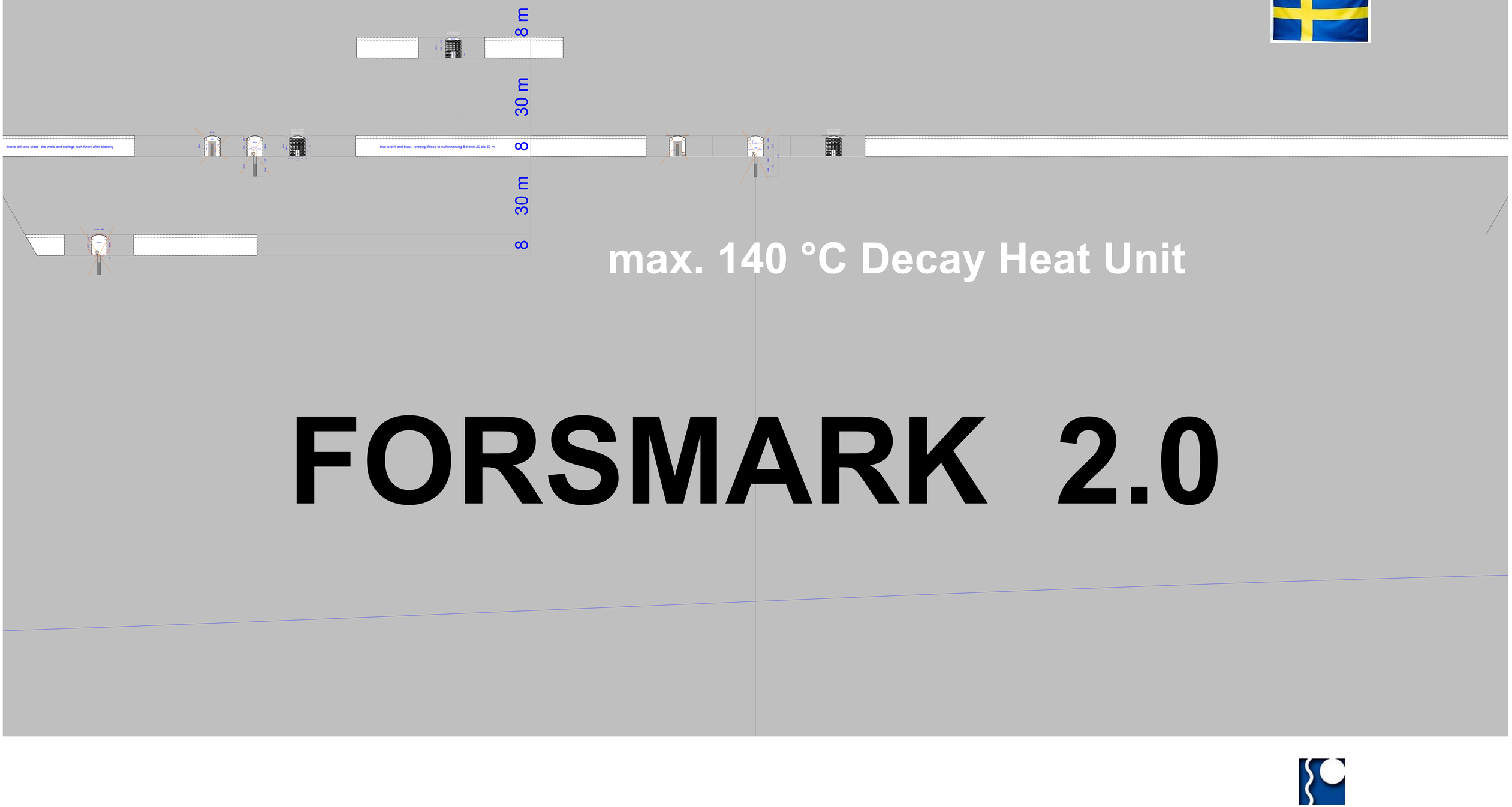
ELB 05 SE in PTH 06 SE
99,3 % gamma ray shielded
still harmfull to pedestrians
but not al all for DIVERS ...

heating
Forsmark
Village



Forsmark 2.0

Tiefenlage Nass-Lager GSF - bzw. Wärmetauscher



max. 140 °C Decay Heat Unit

FORSMARK 2.0

Forsmark 2.0 - HLW Endlager-Planung für Festgestein / Granit / Gneis - Endlager-Behälter ELB 05 SE

Forsmark 2.0 - GDF for geological storage of nuclear high level waste in rockstone / Granite - ELB 05 SE

Biosphere + 10 °C
Wintercold - 20 °C

2,43 km x 2,38 km = 5,8 km²
its 81 x 20 x 20 m ELB fields



Baltic Sea

Wärme-Abzugs-Stumpfkegel = Auflast-Deckel

Rockstone

Klüftig / Nass

Epoxidharz
Teuer - Viel

Festgestein
Granit

Kristallin
Plutonite
Granite
Gneise

Tiefenlage 500 Meter

Nachweis Berechnung Thermodynamik

Temp. Max + 140 K (°C) Forsmark HLW Endlager im Jahr 6

Endlager-Gebinde im horizontalen Stollen ~~XXL KBS-3 in Löchern~~

oder

1 kg Endlager-Gebinde ELB 05 SE in PTH 06 SE in Blei im Gang, umspült, mit 6 Förder-Rohren

Nachweis Berechnung Unterkritikalität

Auflast-Druck unter Erdbeben-Druck auf Behälter

Wärme-Abgabe-Bereich Kegel-Stumpf - oder 24 MW - Decay Heat Use Unit Geothermal Doublette Pump

Tiefenlage Nass-Lager GSF - bzw. Wärmetauscher



-500 m / +19 °C

12,59 Mpa Bergdruck

FORSMARK 2.0





Ing. Gorunenko
Ing. Goebel
Dr. Herres

-1.150 m / +35 °C

Forsmark SE