

Title (en)

HIGH-DENSITY SUBTERRANEAN STORAGE SYSTEM FOR NUCLEAR FUEL AND RADIOACTIVE WASTE

Title (de)

UNTERIRDISCHES LAGERSYSTEM HOHER DICHT E FÜR KER NBRENNSTOFF UND RADIOAKTIVEN ABFALL

Title (fr)

SYSTÈME DE STOCKAGE SOUTERRAIN À HAUTE DENSITÉ POUR COMBUSTIBLE NUCLÉAIRE ET DÉCHETS RADIOACTIFS

Publication

EP 4352752 A1 20240417 (EN)

Application

EP 22805349 A 20220517

Priority

- US 202163189423 P 20210517
- US 2022029697 W 20220517

Abstract (en)

[origin: WO2022245871A1] A passively cooled stackable nuclear waste storage system includes an at least partially below grade cavity enclosure container (CEC) and above grade cask. Each vessel includes a cavity holding a nuclear waste canister containing spent nuclear fuel or other high-level radioactive wastes. The CEC is founded on a below grade concrete base pad and cask is mounted on an above-grade concrete top pad in a vertically stacked arrangement. The upper cask comprises a perforated baseplate which establishes fluid communication between cavities of both casks and is configured to prevent radiation shine. One or both vessels include air inlets which draw ambient cooling air into their respective cavities for cooling the nuclear waste. Air heated in the lower CEC rises into the upper cask through the baseplate where it mixes with air drawn into the cask and is returned to atmosphere. The system increases storage capacity of new or existing facilities.

IPC 8 full level

G21F 5/005 (2006.01)

CPC (source: EP KR)

G21F 5/005 (2013.01 - KR); **G21F 5/06** (2013.01 - EP KR); **G21F 5/10** (2013.01 - EP KR); **G21F 9/34** (2013.01 - EP KR); **G21F 5/005** (2013.01 - EP); **Y02E 30/30** (2013.01 - EP KR)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

WO 2022245871 A1 20221124; EP 4352752 A1 20240417; KR 20240008947 A 20240119

DOCDB simple family (application)

US 2022029697 W 20220517; EP 22805349 A 20220517; KR 20237043788 A 20220517