

Fukushima's fuel rod removal operation

Workers at Japan's crippled Fukushima nuclear plant are expected to take at least a year to remove thousands of fuel rods from the wrecked Reactor No. 4 building – a delicate process fraught with risk

Reactor No. 4

Steel frame constructed to support crane

Reactor building damaged by 2011 explosion – structure could collapse if hit by strong earthquake

Huge amounts of radioactive gases could be released if fuel rods break or become exposed to air

Reactor core

REMOVAL PLAN

1 Fuel handling machine:

Lifts fuel assemblies from storage racks and places them inside steel cask, keeping them under water to prevent overheating

2 Overhead crane: Lifts sealed cask out of spent fuel pool and lowers it through shaft to ground level

3 Trailer: Transports cask to more secure storage pool on plant premises about 100 metres away

Spent fuel pool: 1,533 fuel rod assemblies (60-80 rods in each assembly) stored on fifth floor

Height 53m

Cask
Holds 22 4.5m-long assemblies.
Cask weight: 91 tonnes

