

RADIOACTIVE WASTE MANAGEMENT OF TAIWAN POWER COMPANY

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1. BACKGROUND

Chinshan Nuclear Power Plant (1st)

GE BWR-4

636 MWe x 2

Commercial Operation Date :

1 Dec. 1978

2 July 1979

In 2014

Nuclear Installed Capacity

5,144 MWe

Chinshan **Kuosheng**

Kuosheng Nuclear Power Plant (2nd)

GE BWR-6

985 MWe x 2

Commercial Operation Date :

1 Dec. 1981

#2 Mar. 1983

Maanshan Nuclear Power Plant (3rd)

WH PWR

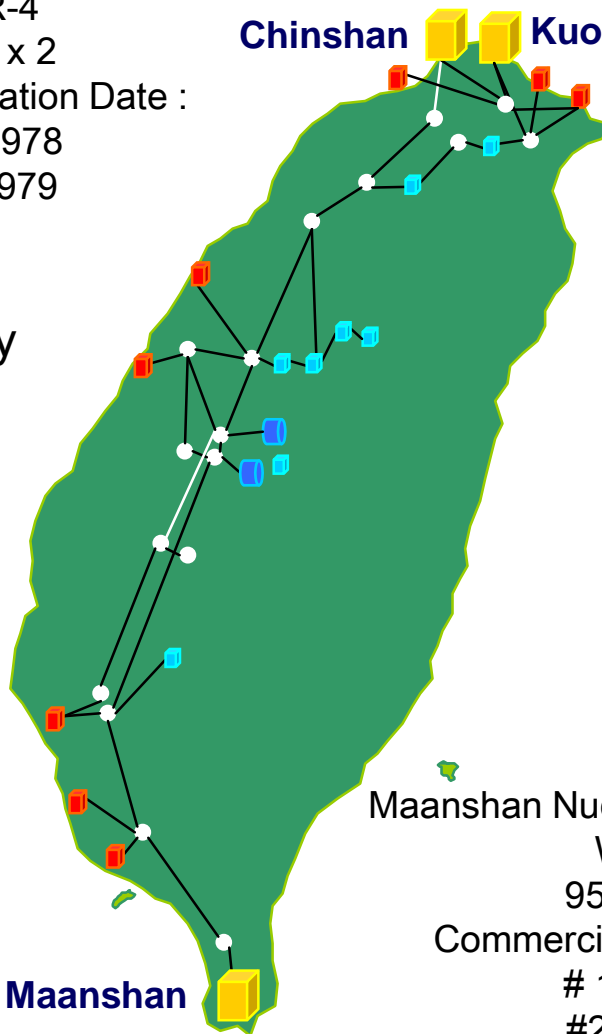
951 MWe x 2

Commercial Operation Date :

1 July 1984

#2 May 1985

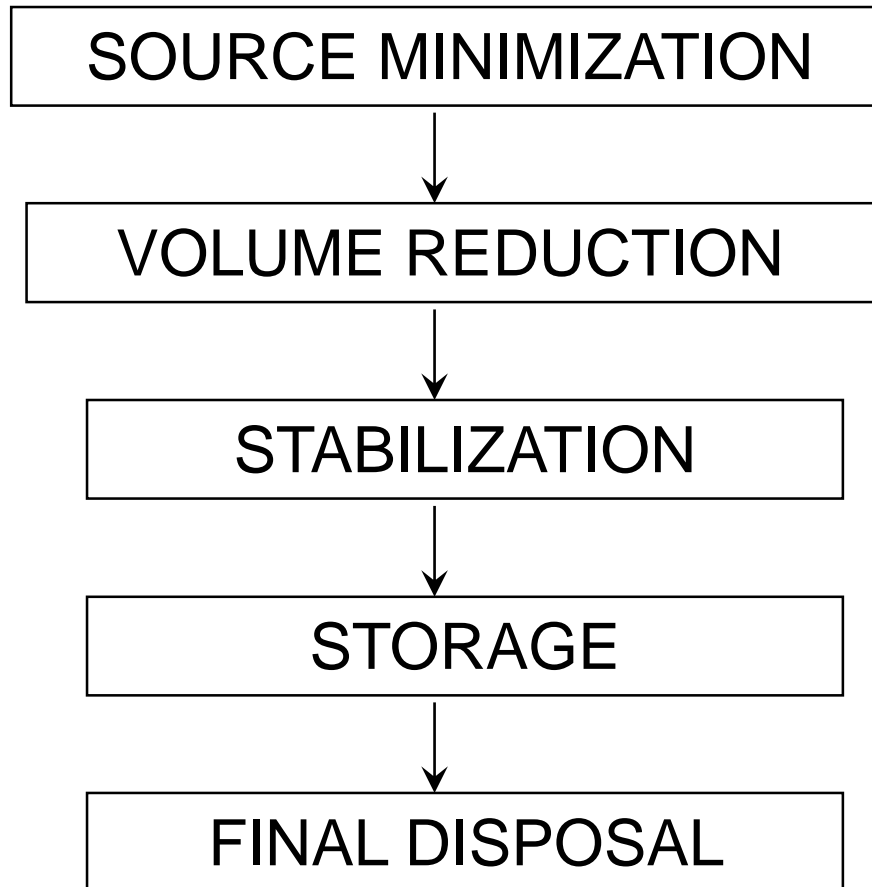
Maanshan

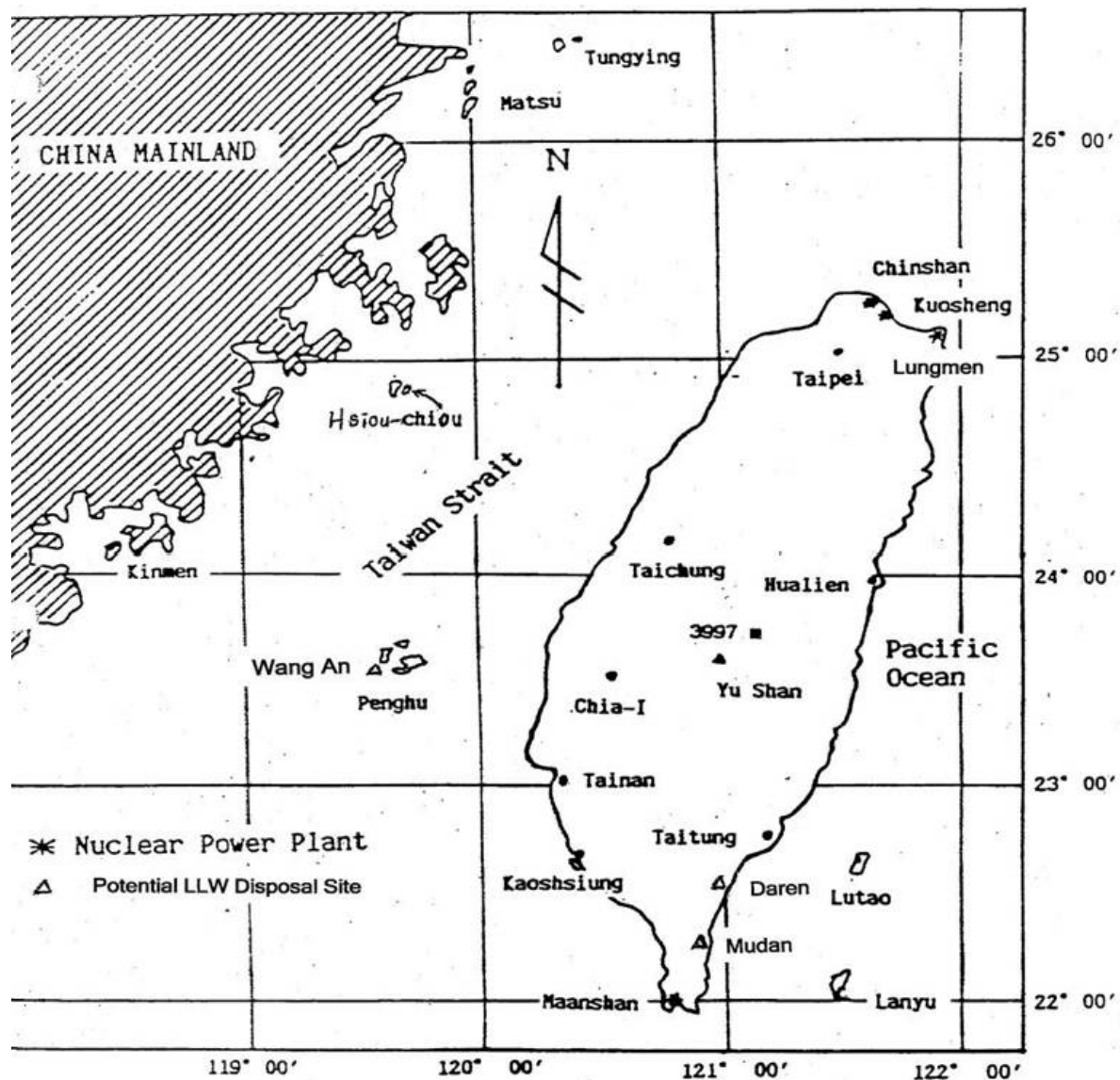


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2. LOW-LEVEL RADWASTE (LLW) MANAGEMENT

- STRATEGY:





MAP OF TAIWAN AND ITS OFFSHORE ISLANDS



BIRD VIEW OF LANYU STORAGE SITE

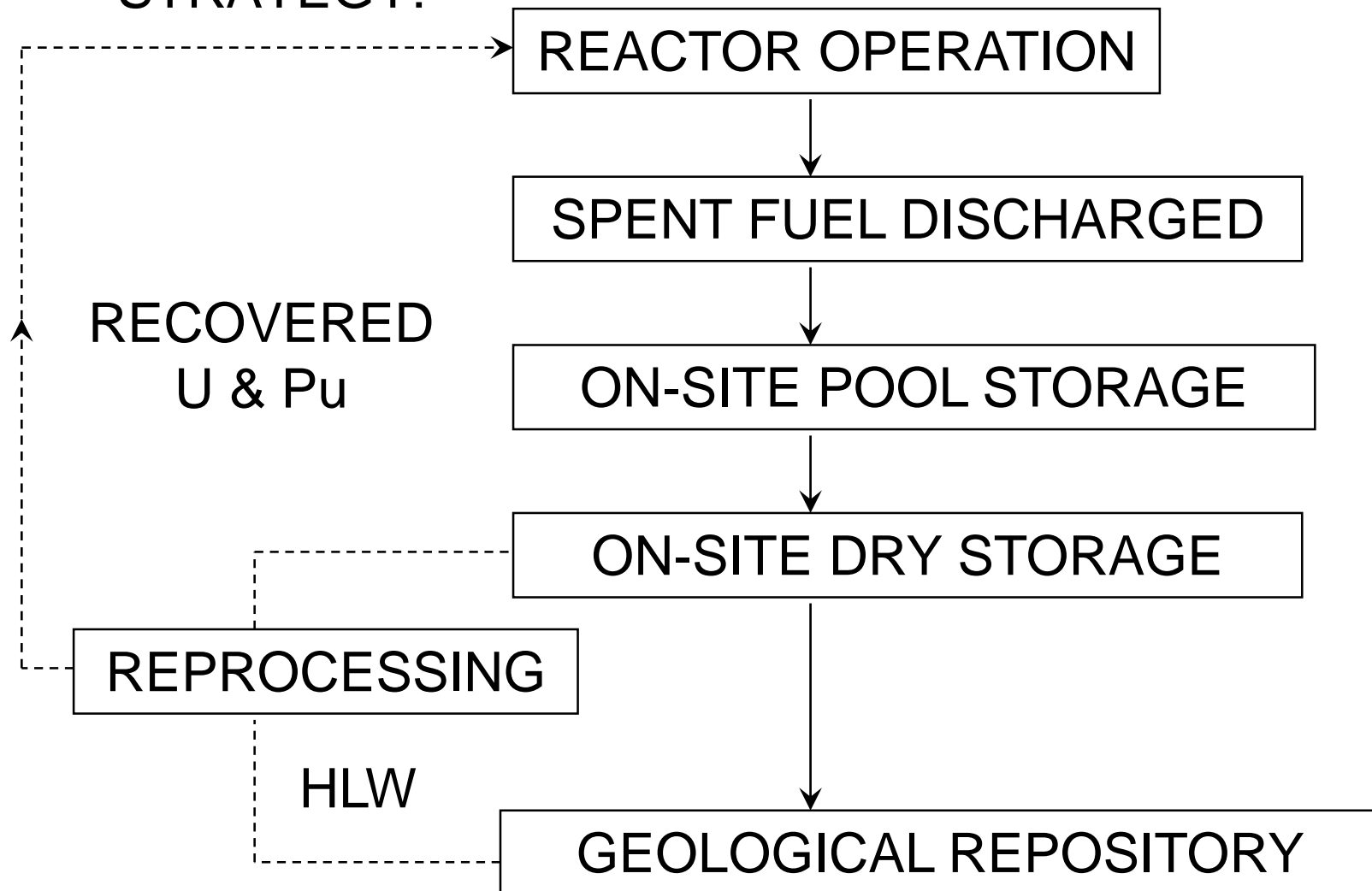


PHOTO OF LANYU TRENCH



3. SPENT FUEL MANAGEMENT

- STRATEGY:



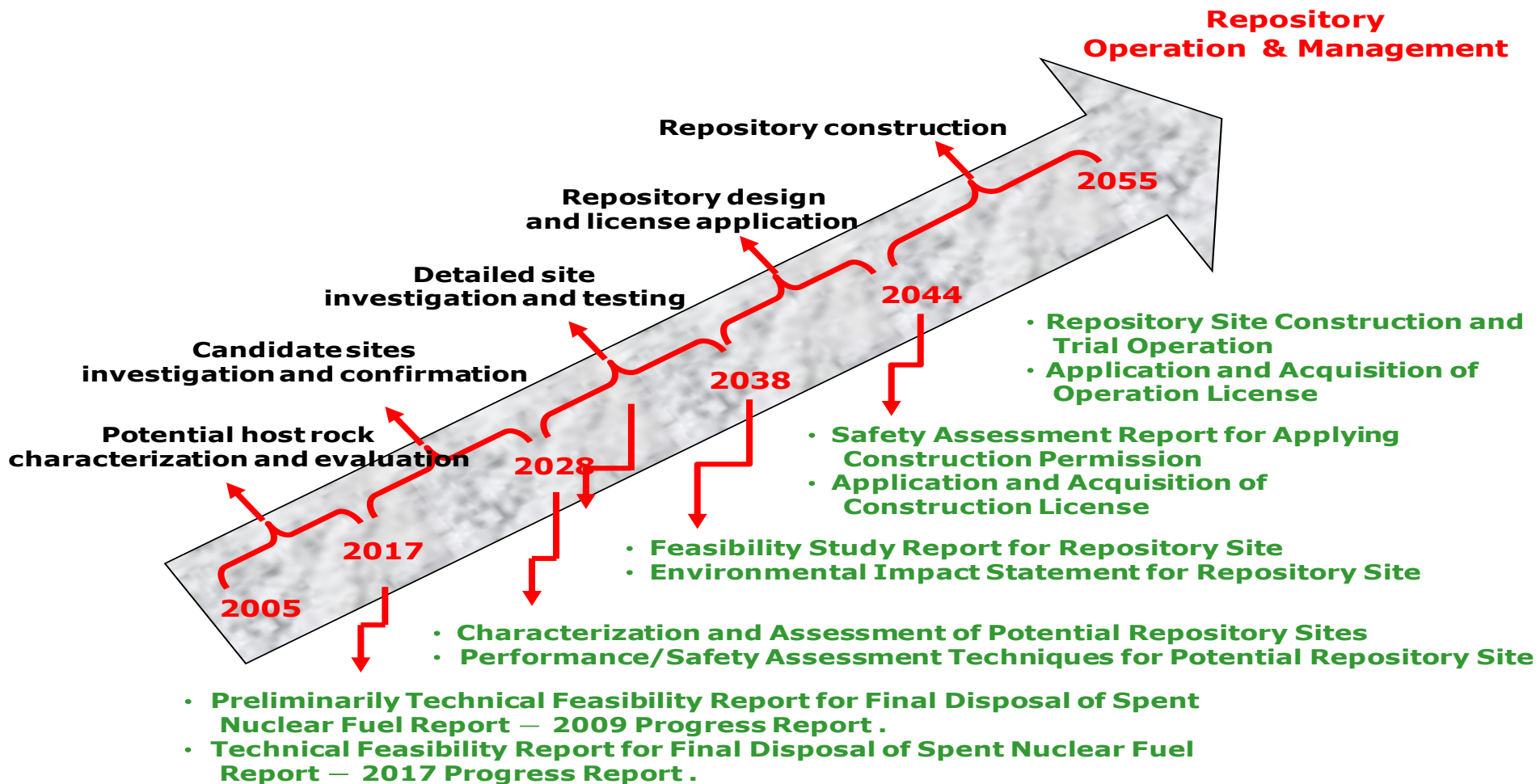
SIDE VIEW OF CHINSHAN DRY STORAGE SITE (MAY. 2014)



SIMULATED VIEW OF KUOSHENG DRY STORAGE



• FINAL DISPOSAL



4. DECOMMISSIONING

- CHINSHAN UNIT 1 WILL BE PERMANENTLY SHUTDOWN BY THE END OF 2018, FOR WHICH THE DP SHALL BE COMPLETED BEFORE THE END OF 2015.
- IN PARALLEL, THE EIA WILL BE PREPARED AND SUBMITTED TO THE EPA BEFORE THE END OF 2015.
- TAIPOWER JOINED “EPRI REMEDIATION AND DECOMMISSIONING TECHNOLOGY PROGRAM PARTICIPATION, 2012-14” AND WILL CONTINUE TO COOPERATE WITH EPRI IN THE PLANNING FOR THE DECOMMISSIONING PROGRAMS.

5. NUCLEAR BACKEND FUND

- ESTABLISHED IN 1986 TO FINANCE THE FOLLOWING PROGRAMS :

SPENT NUCLEAR FUEL	PACKAGING, TRANSPORTING, DRY STORAGE, DIRECT DISPOSAL / REPROCESSING
LOW LEVEL WASTE	FINAL DISPOSAL
DECOMMISSIONING	<ul style="list-style-type: none">• DISMANTLING OF NUCLEAR POWER PLANTS• DISPOSAL OF DECOMMISSIONING WASTE

- THE “NUCLEAR BACKEND FUND ADMINISTRATIVE COMMITTEE” UNDER THE MOEA IS MANAGING THE FUND.
- KEY FIGURES:

ESTIMATED TOTAL BACKEND COST	335 BILLION NTD (~ US\$ 11.16 BILLION), BASED ON EXISTING 6 OPERATING UNITS, 2008 CURRENCY VALUE.
RATE	0.17 NTD (~ US\$ 0.0056) PER KWH OF NUCLEAR ELECTRICITY GENERATED
ACCUMULATED AMOUNT (As of Dec. 2013)	233.6 BILLION NTD (~ US\$ 7.8 BILLION)

6. CLOSING REMARKS

- LLW DISPOSAL

FAILURE IN COUNTY REFERENDUM WOULD FORCE THE SITING PROGRAM BACK TO THE ORIGIN. AMENDING THE SITING ACT IS THE LIKELY WAY FOR MOVING FORWARD.

- SPENT FUEL MANAGEMENT

GIVEN SETBACKS IN THE SITING FOR LLW DISPOSAL, LOCAL PUBLIC STRONGLY SUSPECT THAT DRY STORAGE MAY BECOME A DE FACTO REPOSITORY IN THE LONG RUN. THE FEASIBILITY OF OVERSEAS REPROCESSING OR DISPOSAL CONTINUES TO BE EXPLORED.

- DECOMMISSIONING

IT IS A FIRST-OF-ITS-KIND UNDERTAKING IN TAIWAN. TAIPOWER NEEDS TO LEARN FOREIGN EXPERIENCES AND INTRODUCE EXPERTISE AND TECHNOLOGIES INTO THIS FIELD.

6. CLOSING REMARKS (Cont'd)

- NUCLEAR BACKEND FUND
EVERY 5 YEARS, TAIPOWER WILL RE-ESTIMATE THE TOTAL BACKEND COST AND RATE TO ASSURE THE ADEQUACY OF FUND.
- NATIONAL RADIOACTIVE WASTE MANAGEMENT CENTER
THE RADWASTE MANAGEMENT PROJECT OFFICE WAS SET UP IN DEC. 2013 BY MOEA, MAIN FUNCTION IS TO ESTABLISH THE NATIONAL RADIOACTIVE WASTE MANAGEMENT CENTER. THE MISSION OF THE CENTER WILL RESPONSIBLE FOR IMPLEMENTING LONG TERM MANAGEMENT SOLUTIONS OF RADIOACTIVE WASTE IN TAIWAN.

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CHAMPION OF WORLD CUP IN BRAZIL



THANKS FOR YOUR ATTENTION