



Background Information Concerning
the Success Criteria for
On-site Nuclear Emergency Exercise and
Full Participation Exercise
in Taiwan

Atomic Energy Council 行政院原子能委員會
Department of Nuclear Technology 核能技術處

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Outline

- **Laws and Regulations on Nuclear Emergency Exercise**
- **Onsite EP Exercise**
- **Full Participation Exercise**

Laws for Nuclear Emergency Exercise

- ❑ The Nuclear Emergency Response Act
- ❑ Each nuclear power plant in Taiwan is required to conduct EP exercise once per year.
- ❑ Annually, a Full Participation Exercise is conducted together with a onsite EP exercise.

Regulations on Nuclear Emergency Exercise

- ❑ Exercises are conducted according to the approved plans.
 - The Emergency Response Basic Plan, and the Nuclear Emergency Public Protective Action Guides (Central Government)
 - The Public Protection Plan within the EPZ (Local Government)
 - The Emergency Response Plan for the Nuclear Reactor Facility (nuclear licensee)



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Onsite EP Exercise



Onsite EP Exercise

- ❑ Exercises including all of the following items shall be carried out for each nuclear reactor facility at least once every four years:
 1. Accident reporting and information transmission.
 2. Mobilization of emergency response organizations.
 3. Accident control and emergency repair.
 4. Accident impact assessment.
 5. Nuclear security and anti-terrorism.
 6. Radiation detection and dose evaluation.
 7. Facility personnel protection (first aid) actions.
 8. Press release

Onsite EP Exercise

□ Evaluation

- Scenario of exercise and evaluation items are developed by utility and reviewed by AEC.
- Two groups of evaluators , one formed by AEC and the other by utility, will perform the exercise evaluation. A Hot Wash right after the exercise.
- AEC will issue a detailed evaluation report and require utility to correct.

Onsite EP Exercise

□ Evaluation Items/Groups

- A1. TSC Operation
- A2. Rx Control and Accident Management
- A3. Fire Protection
- A4. OCS Operation
- A5. Onsite Non-Emergency Response Staff
- A5-1. Security Operation
- A6. OCS Re-entry
- A7. EMS Response to a Radiological Emergency at Facility
- A8. Radiation Detection within Facility
- A9. Offsite Environment Radiation Detection
- A10. EPIC
- A11 Severe Accident Management

Onsite EP Exercise

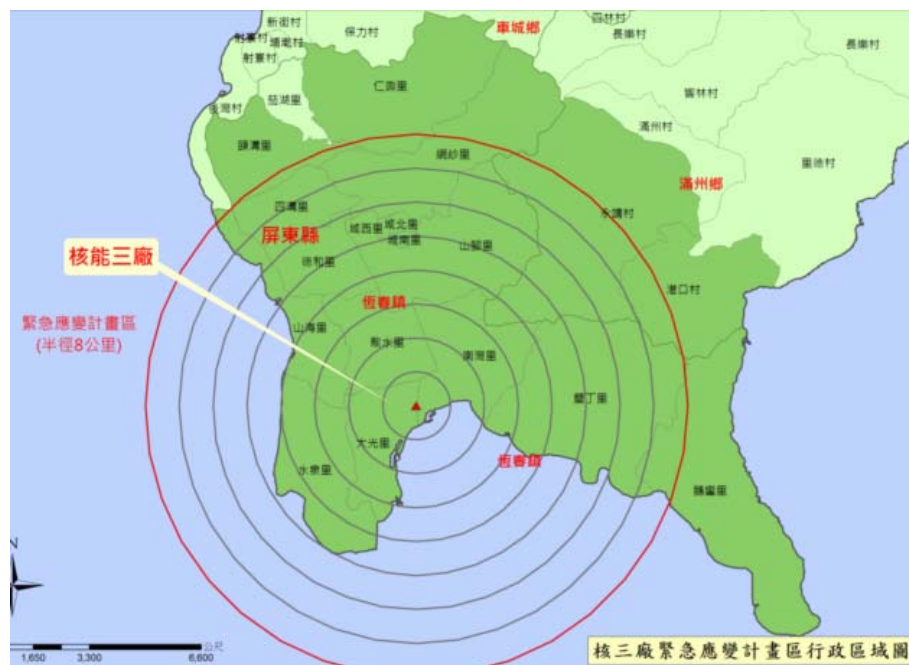
▣ TPC Evaluation Sheet

- Exercise Unit: KS NPP
- Exercise Date: 2014/07/23
- Evaluation Group: A1 (TSC)
- Evaluator: John Wu
- Exercise Location: TSC Building
- Exercise Items:
- Evaluation Results:
 - ☐ Meet (符合) ☐ Meet with conditions (符合但有建議)
 - ☐ Deficiency(不符合) ☐ N/A (免評)
- Evaluation Remarks:
 - ☐ Deficiency ☐ Suggestions

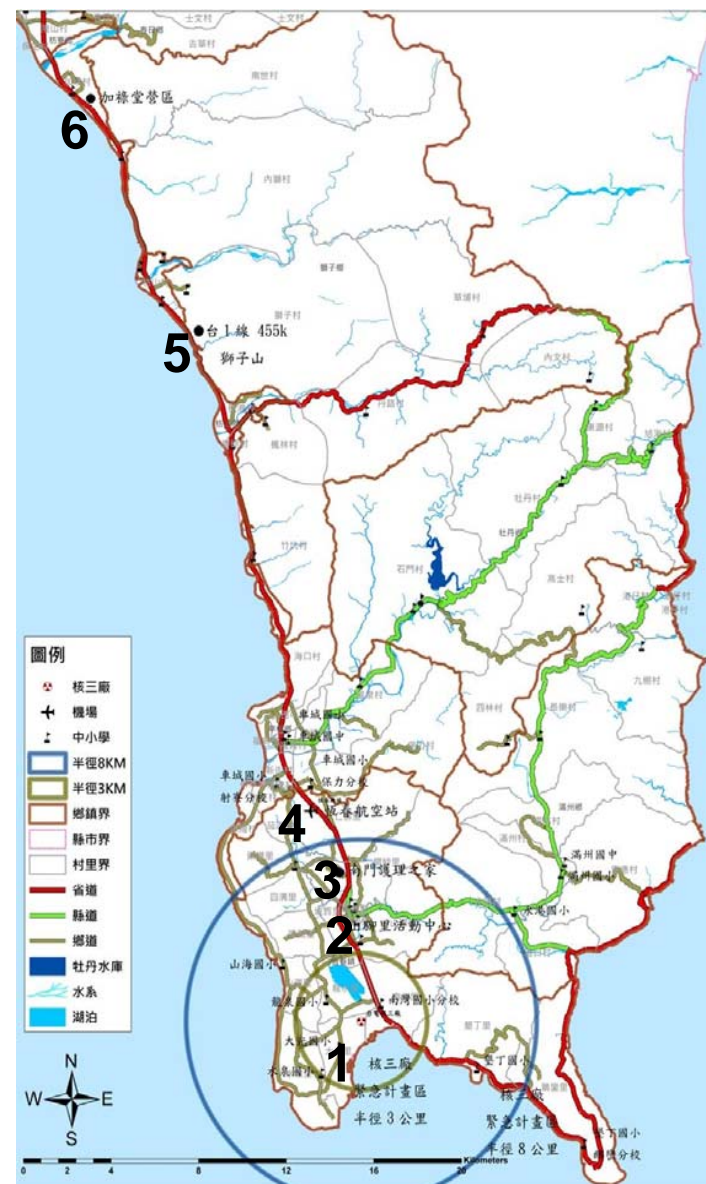
Onsite EP Exercise

- AEC would like to know
 1. NRC's evaluation items and criteria before and after Fukushima accident.
 2. The unacceptable items, and the following actions by NRC.
 3. Whether NRC evaluates an exercise as Fail/Pass.

Full Participation Exercise



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Full Participation Exercise

- ❑ Each year AEC coordinate with other Agencies, Local Governments and relevant Emergency Response Organizations to conduct a Full Participation Exercise, which of the following items (all or part) will be included:
 1. Accident reporting and information transmission.
 2. Mobilization of emergency response organizations.
 3. Accident impact assessment.
 4. Radiation detection and dose evaluation.
 5. Area control.
 6. Public protection (first aid) actions.
 7. Decontamination.
 8. Recovery measures.
 9. Press release.

Full Participation Exercise

□ Exercise Evaluation

- An Evaluation Team about 25 experts invited by AEC
- Evaluators with different areas of expertise and perspectives, such as Nuclear Safety, Radiological Science, Emergency Response, Media and Communication, Health Care, Disaster Management, etc.

Full Participation Exercise

□ Evaluation Topics/Groups

1. Operation of Nuclear Emergency Response System
2. Emergency Response by Local Governments
3. Radiation Detection and Dose Evaluation
4. Response and Support from Military
5. Press release
6. Hospital Protocol for Radiation Medical Emergencies.

Full Participation Exercise

演習主題 Exercise Group		<div style="border: 2px solid black; padding: 5px; text-align: center; color: magenta; font-weight: bold;">Evaluation Sheet</div>		
演練重點 Exercise Items				
規劃單位 Planning Unit		Time		
參演單位 Participation Units		Location		
評核要項暨衡量指標 (Evaluation items and index)		達成度評估 Achievement Assessments		
		已完成 Meet	未完成/待改進 Unmet	結果不明確 Unacceptable
Evaluation Results	<input type="checkbox"/> 優Excellent <input type="checkbox"/> 良Good <input type="checkbox"/> 可Meet <input type="checkbox"/> 差Poor <input type="checkbox"/> 劣Deficiency			
Evaluation Remarks				
肯定事項 Good Practice				
應檢討事項 Recommendations				
建議事項 Suggestions				

Full Participation Exercise

□ AEC would like to know

1. The clear and precise criteria to identify **M** (Met), **D** (Deficiency), **A** (Area Requiring Corrective Action, ARCA), **P** (Plan Issue), **N** (Not Demonstrated) as a result of a full participation exercise.
2. If any **D**, **A** or **P** is identified as a result of full participation exercise, what actions should be taken respectively by licensee, local government, FEMA and NRC? Would it be possible to request the reactor shut down?
3. If **D** (Deficiency) is identified as a result of the first full participation exercise for a new reactor under 10 CFR part 50 process, what's the impact to the issuance of Operating License? Pending the issuance? Stop all Pre-Operation Tests? No Fuel Loading? Or others?



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**Thank You
for Your
Attention!**

