

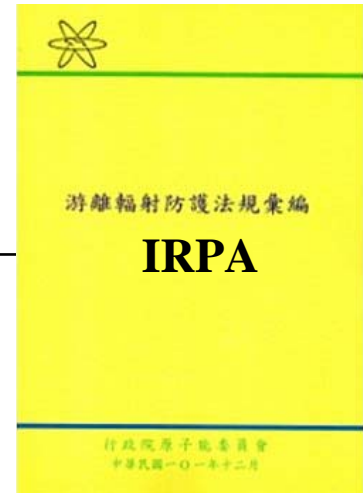


# Regulatory Measures on NORM (Naturally Occurring Radioactive Materials) in Taiwan

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Radiation Protection Department  
Atomic Energy Council of Executive Yuan

# Fundamental Regulation



## ○ ***Ionizing Radiation Protection Act***

### ● Article 4

The provisions of the Act **do not apply to naturally occurring radioactive material (NORM), background radiation, and their exposure herein.**

Provided there is a threat to public safety, AEC may take the NORM source under its jurisdiction by announcement; the regulatory measures shall be imposed by AEC.



# Regulatory Standards for managing NORM

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- ***Regulations on the Management of Naturally Occurring Radioactive Materials***
  - Drafted in accordance with Article 4 of IRPA
  - For those NORM nuclides which would cause the so-called “there is a threat to public safety”
  - Standards
    - **thorium and uranium** series nuclides having radioactivity concentration **greater than 1 Bq/g** and causing **annual effective dose of greater than 1 mSv for the general public**



# Regulatory Standards for Building Materials Containing NORM

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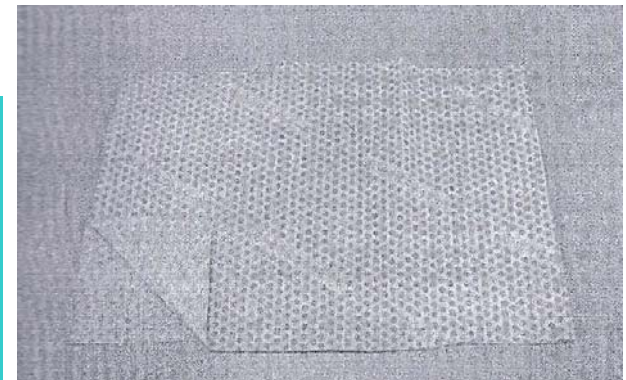
- ***Regulations on the Management of Naturally Occurring Radioactive Materials***
- Article 9: the usage of **building materials containing NORM** is conditional upon comparison between the dose rates detected at 0.1 meters from surface and the following standards
  1. No constraints for usage if the dose rates are under 0.2 uSv/hr
  2. Be used only for outer decoration or other outdoor usages if the dose rates are between 0.2 and 0.4 uSv/hr
  3. Subject to case-by-case review by AEC if the dose rates are above 0.4 uSv/hr, and can then be used after being approved

## A Recent Case – Commercial Goods containing NORM

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- In June 2014, a Taiwan company was intending to import a kind of medical absorbent fiber containing NORM.
- The company was claiming that using such kind of medical absorbent fiber can have far infrared, negative ions or antibacterial and other health-keeping effects, capable of manufacturing jackets, mattresses, and eye masks sorts of products.

Currently we are requesting the company to **submit the information on justification and dose evaluation** of using the batch of fiber materials to manufacture **commercial goods**





# The Japan Guideline for NORM

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- As the indicative values to guarantee that exposure doses due to raw materials, products and others are kept at **1mSv/year or lower**, **1 Bq/g** is applied to **those materials that contain natural uranium or thorium** that can be considered being in the state of radioactive equilibrium with daughter nuclides.
- the quantity of radioactivity of **uranium or thorium contained in consumer goods** that are used in contact with or close (within one meter) to human bodies is set at **8,000 Bq** for those materials that contain natural uranium or thorium. In case that the activity is less than 8,000 Bq, it is not subject to the regulation.



## Question

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- We would like to know how the USNRC or state authorities regulate consumer goods containing NORM?