

## Using ALOHA Code to Evaluate CO<sub>2</sub> Concentration for Maanshan Nuclear Power Plant

**Authors :** W. S. Hsu, S. W. Chen, Y. T. Ku, Y. Chiang, J. R. Wang , J. H. Yang, C. Shih

**Abstract :** ALOHA code was used to calculate the concentration under the CO<sub>2</sub> storage burst condition for Maanshan nuclear power plant (NPP) in this study. Five main data are input into ALOHA code including location, building, chemical, atmospheric, and source data. The data from Final Safety Analysis Report (FSAR) and some reports were used in this study. The ALOHA results are compared with the failure criteria of R.G. 1.78 to confirm the habitability of control room. The result of comparison presents that the ALOHA result is below the R.G. 1.78 criteria. This implies that the habitability of control room can be maintained in this case. The sensitivity study for atmospheric parameters was performed in this study. The results show that the wind speed has the larger effect in the concentration calculation.

**Keywords :** PWR, ALOHA, habitability, Maanshan

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