



Contribution ID: 85

Type: Poster

## Evaluation of Influence Factors within Implementing of Nuclear Safety Culture in Embarking Countries

*Tuesday, 23 February 2016 10:20 (30 minutes)*

### Synopsis

The evaluation of the implementation nuclear safety culture at BATAN has been performed. BATAN is Indonesia's national nuclear energy agency. Nowadays BATAN is planning to develop an experimental power reactor. To implement the nuclear safety culture BATAN has issued BATAN chairman regulation (Perka BATAN 200) [1]. Perka BATAN is the reference for individuals and organizations to implement nuclear safety culture which includes basic principles, mechanisms, assessment, as well as the implementation of the application of safety culture. It covers the establishment of safety policies, program development, program implementation, development and measurement of safety culture. Each facilities within BATAN is expected to well implement a safety culture. The implemetation of safety culture is developed by considering the characteristics, attributes and indicators. The characteristics, attributes and indicators referenced are elaborated from the IAEA [2] The activities to strengthen safety culture are monthly workshop with participants is head of every facilities, safety leadership training and workshop for safety division manager in every facilities. It is also issued a handbook of safety that is distributed to all employees BATAN. For assessment the implementation, after conducting an explanation of the concept of safety culture implementation, for a facility at BATAN Serpong Nuclear Zone, Ps. Jumat Nuclear Zone, Headquarters, Bandung Nuclear Zone and Yogyakarta Nuclear Zone questionnaire-based data are retrieved. Factors to be considered are how performance of implementation can be monitored and improved as required by driving indicators, monitoring indicators, or indicators feedback. It is obtained that almost facilities are at the level of good enough implementation. Statistical analysis was performed by factor analysis approach using testing KMO (Kaiser-Meyer- Olkin) criterion which should be greater than 0.5. [3] [4] [5]. Rotation technique used is oblique rotation with the presumption to statistical construct a factor consistent with purpose of the characteristics and attributes of reference. As a result, it is obtained that the set of constructs with KMO of 0.951 has a significance level of 0.000. The results of the attributes is grouped into three groups. The first group is a group of safety management [SCD05, SCD07, SCE01, SCD08, SCE05, SCD09, SCE04, SCE02, SCD06, SCE07, and SCC03] which is a combination of the characteristics of safety integrity and safety as a driver of learning. Although there is an element in which safety accountability (i.e. degree of compliance with the rules and procedures (SCC03)). This group can be expressed as a group of safety management. The second group is a group of SCB04, SCB05, SCB03, SCB06, SCB08, SCB07, SCB10, and SCC02. This group were declared as safety leadership group. The second group is derived from the characteristics of safety with the negative correlation coefficient for supposing the reciprocal or bidirectional affect. The third group is a group of SCA01 and SCA02 which are derived only from the safety characteristics. Its meant that the third group will be explained only the safety value system and expressed as a factor of safety significance. Safety accountability that inherent in group management and safety leadership has smallest correlation coefficient within its grouping, such that can be ignored in the naming of new obtained factors. All of the three grouped factors is called as characteristics of BATAN's safety culture implementation Each characteristic has a number of different attributes, namely safety management, and safety leadership, and the importance of safety char-

acteristic consists of 8, 11, and 2 attributes respectively. The total number of attributes is 21 (twenty-one). It can be concluded that the importance performance characteristics in BATANs safety culture implementation, namely safety management, safety leadership and the importance of safety.

## **Country or International Agency**

Indonesia

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Yes

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**Session Classification:** Pause and Posters