

A Study for measure of reduction radiation of exposure based on the awareness of radiation protection for radiation workers

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Key words : radiation protection, reducing radiation of exposure, ALARA.

Introduction

Radiation exposure must be accompanied to workers Who work at nuclear power plant radiation management area and nuclear power plants educates to workers for such radiation exposure as variety ways of training and information meanwhile radiation workers must trained for radiation protection for issuing of work permit. In this paper, We are going to suggest measures of reducing radiation of exposure based on our experience that we had accounted in the field of management radiation workers and based on the awareness of radiation protection for radiation full-time workers and irregular workers regardless of whether harmless in human body.

Survey research methods and eligibility

Survey research target workers are consist of two kinds of part as 50 workers of irregular access worker and full-time 50 workers who take part in planned preventative maintenance ○th and ○th of ○unit and survey research depended on questionnaire. It passed long time from the time of questionnaire, but re-survey questionnaire dose not carried because we couldn't to see any

changes awareness of them accordance with experience and comment at job site.

Content and format of questionnaire

The contents of survey are consist of following 5 kinds of questions and focused correlation between reduction of radiation exposure and awareness of workers.

1. Questionnaire for identify whether the worker try to actual practice at radiation management area as trained in protection education.
2. Questionnaire for identify whether the worker check with interest for notation, such as radiation dose of workplace and the surrounding.
3. Questionnaire for identify whether the worker have any complaint in good faith so as to wear personal protective equipment.
4. Questionnaire for identify there awareness an effort that to protect worker from radiation dose and offer protective information by health physicist
5. Questionnaire for identify whether they have experienced unnecessary radiation of

exposure.

Result of questionnaire

According to the result of questionnaire, could find common and different part between full-time workers and irregular access worker.

1. In case of full-time workers, the answer that generally to keep the protective regulations are carried out as educated exceeds 90% as 47 workers are "yes" by 50 of the respondents meanwhile in case of irregular access worker, exceeds 50% as 28 workers by 50 of the respondents are ignore or only keep the regulation when monitored only.
2. In case of full-time workers, was shown to check and recognize related to radiation dose conditions of workplace before the working on the other hand, irregular access workers almost either only depend on informations from their leader or were quite indifferent.
3. they choose radiation shielding garment as most inconvenient protect equipment with reason that do not wear too heavy. But 80% of respondents gave a response to wear if the weight reduced by half.
4. almost workers gave a response the activities of health physicist are helpful but sometimes to be disturbed on their jobs and
5. all respondents had experience unnecessary radiation of exposure.

measure of reducing radiation of exposure based on above results.

We can suggest two kinds of plan for measure of reducing radiation of exposure. One is to change the principal of efforts for reducing radiation of exposure to job leader from health physicist If so do, would be minimized to

unnecessary radiation of exposure and radiation of exposure by fail to perform of regulation and another one is to improve the radiation shielding garment more lightly even if the attenuation depended on density and specific gravity because to wear is more effective than too heavy to wear even reducing weight by half. we had experienced half of weight radiation shielding garment. It was no problem to wear long time. If so not, worth reviewing advanced materials such as alloyed tungsten & elastomer recently developed in Japan.

Conclusion

Radiation workers and health physicists make an effort to reduction radiation of exposure through such as training for reduction of working time or adequate shielding . But approximately 20% of gross radiation of exposure are un-necessary exposure caused by unnecessary waiting at job site or avoid wearing of radiation shielding garment or violations of regulation. In order to improve these problems, some parts of exposure management would rather shared to front line works supervisor as well as If improve radiation shielding garment, so all workers wear positively, can get final expected effects.

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