NUCLEAR power stations regularly conduct off-site emergency exercises to check preparedness for management of unusual occurrences, incidents and accidents in public domain. Strict compliance of the directive of the Atomic Energy Regulatory Board is being followed in all radiation emitting utilities in our nation. In fact, India has achieved an excellent safety record on the radiation front. Occupational and Environmental Radiation Protection is an in-built culture in all our utilities.

At the same time, systematic awareness programmes are necessary at regular intervals to educate the public about such exercises and also about radiation and its effects. Teachers and students of near-by educational institutions can be the target for effective, speedy and unbiased communication. The public must accept and co-operate with the management of radiation emitting units to save lives and to provide comfort and treatment to radiation-affected personnel in public domain in case of radiation emergencies.

Various committees function to cope up with radiation emergencies. The surrounding area is divided into various sectors and villagers are briefed about the impact of radiation and precautionary measures. Administration of iodine tablets, transport arrangements, shelter places, controlled use of food items and water, avoiding rumours, belief on official communication channels like radio, cable television network, announcements etc. are planned during these exercises. The observed deficiencies are discussed in feedback meetings and corrective and preventive actions are taken to remove deficiencies.

However, despite such exercises villagers are often confused and have lots of misconceptions, doubts and myths. It is a bitter fact that they are not able to comprehend technical talks and speeches. They do not understand the terminologies used by volunteers during the conduct of such exercises. They do not understand the meaning of radiation. They do not accept that natural background radiation prevails at all the places irrespective of the existence of a nuclear utility or plant. They think that radiation is the root cause of all their problems, diseases, hardships and poor quality of life.

In such circumstances, volunteers during such off-site emergency exercises face very embarrassing situations. Most often problems remain unsolved. Hence, the very purpose, goal and mission of such off-site emergency exercises get defeated. The management has no option left except to issue formal reports of such exercises.

Following strategies may be applied while talking to villagers, students and teachers about radiation and emergencies:

- Do not use English language. Talk in Hindi. It is preferable to use regional language. For example, Rajasthani/Hadoti around Rajasthan Atomic Power Station, Gujarati in Kakrapar Atomic Power Station, Marathi in Kaiga Generating Station, Tamil/Malayalam in Madras Atomic Power Station, etc.
- Do not try to teach high-tech nuclear technology. Emphasise on the phenomenon of natural background radiation, benefits of radiation like use in medicine, agriculture food preservation etc. to educate them that controlled radiation is good and useful.
- Convey the importance of off-site emergency exercises; convey their action and role clearly. Distribute printed leaflets along with pictures/photos for Do’s and Don’ts.
- Use charts to convey the message.
- Use simple words, easy language and short sentences.
- Get the feedback. Remove misconceptions.
- Encourage teachers and students to ask questions.
- Visit schools regularly, not once in two years at the time of exercise.
- Arrange short competitions like quiz, essay, slogan writing, etc. on radiation for monitoring their awareness and understanding about radiation.
- Tell teachers and students to talk to their parents and villagers to propagate the message as a chain reaction.
- Invite teachers and students to visit the Information Centre of the nuclear utility or plant, so that they can understand better with help of display models and simulators, etc.

PREVENTIVE MEASURES DURING OFF SITE EMERGENCIES

(i) Siren and Announcement: Emergency is declared and called off through sounding of sirens and announcement. Information is also broadcast through local radio and television.

(ii) Stay Indoor: Keep doors and windows closed. Place a wet cloth over nose. Cover eatables and drinking water.

(iii) Stable Iodine Administration: Tablets of Iodine or liquid iodine are distributed to the public to prevent accumulation of radio-active iodine in thyroid.

(iv) Evacuation: Depending upon the severity of accident, the public is advised to evacuate the place. Transport is arranged by the plant and district authorities.

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