

OSART Good Practices

CORP. EMERGENCY PREPAREDNESS AND RESPONSE & ACCIDENT MANAGEMENT

Emergency preparedness and planning

EDF corporate, France

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Multi-layered resources for emergency response.

EDF Corporate has provided successive levels of emergency response resources that will help the stations to succeed in unexpected situations. The material resources include local mobile equipment, Nuclear Rapid Response Force (FARN) and remote controlled equipment of "Intervention by Robotics in Accident" (INTRA). An important element of these resources is that their operation is ensured by well-trained and skilled personnel.

There is mobile equipment available on each site to support emergency functions. The hook-ups are provided and hose routings are pre-planned for water supply with mobile pumps e.g. to auxiliary feed water tanks to cool steam generators and direct line-ups to cool spent fuel pools. Plenty of other mobile equipment is available. The use of all this emergency equipment has been trained on-site. There is a plan to upgrade the current mobile pumps and hoses into fixed installations.

FARN is tasked with responding within 24 hours at any nuclear power plant affected by an emergency in order to limit further deterioration of the situation, prevent large off-site radioactive releases and prevent core melt if possible. FARN deploys skilled human and equipment resource to support the site shift teams. It takes action to restore water, electrical power and compressed air in order to limit worsening of the situation and if possible, prevent core meltdown. Trained and skilled FARN teams are available on-call.

EDF has founded together with Areva and CEA Groupe INTRA at Chinon. INTRA has developed and maintains remote controlled equipment (such as in-door robots, out-door robots, civil machinery - bulldozer, dump truck, digger - and aerial devices for monitoring). The equipment can be sent to any site for various tasks, which cannot be performed by people due to high radiation or chemical toxicity levels.

The successful use of the equipment is ensured by the personnel and skills that are developed and maintained by training. Telecommunication is ensured under all conditions by providing diverse devices (wired telephones, radiophones, satellite telecom). Following Fukushima accident, the diversity was further enhanced with autonomous satellite connections (e.g. Iridium).

The structure of the whole emergency response arrangements is clearly illustrated with the diagram that integrates decision making and actions both within EDF and authorities in local and national levels. The diagram also explains, what support and expertise is available for the emergency response centres. The key item among the various players is successful communication among the various players and also external crisis communications through group crisis cell.

