

## EXPERIENCE REPORT A TRAINING CENTER FOR HEALTH RESPONSE

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### ABSTRACT

The Professor Nelson Valverde Training Center was created within FEAM (The Eletronuclear Medical Assistance Foundation) with the objective of capacitating Radio Nuclear Accident Responders for the Health Area in the Almirante Álvaro Alberto Nuclear Central (Angra dos Reis – RJ – Brazil). The first step was structuring the contents for this training using IAEA's Manuals as base (EPR Medical – 2005, EPR First Responders – 2006 and TMT – Handbook - 2009) and data from REAC/TS. The second step was to capacitate instructors. The third step was the integration with the Company's Radiological Protection Division, giving radiological assessment. Finally, the development of training applications, ending with Drills, Tests and Assessment, gathering data and suggestions, objectifying the constant improvement. Training Programs with pre and post evaluations have been started. Since 2004 training internal courses were ministered for 125 professionals with annual re-training and were ministered to 130 professionals from several external institutions. During the same period training courses were ministered to 140 trainees from the Radiological Protection Division of The Nuclear Power Plant of Angra dos Reis, as First Lay Responders, objectifying the improvement of the quality of the emergency response.

### 1. INTRODUCTION

The Professor Nelson Valverde Training Center was created within FEAM (The Eletronuclear Medical Assistance Foundation) with the objective of capacitating Radio Nuclear Accident Responders for the Health Area in the Almirante Álvaro Alberto Nuclear Central (Angra dos Reis – RJ – Brazil). The first step was structuring the contents for this training using IAEA's Manuals as base (EPR Medical - 2005 and EPR First Responders - 2006), from REAC/TS and ARCAL. The second step was to capacitate instructors. The third step was the integration with the Company's Radiological Protection Division, giving radiological assessment. Finally, the development of training applications, ending with Drills, Tests and Assessment, gathering data and suggestions, objectifying the constant improvement. Training Programs with pre and post evaluations have been started. Since 2004, constant internal courses have been ministered to 80 Nursing Technicians, 12 Medical Radiology Technicians, 6 Locomotion Immobilization Technicians with, at least, 6 drills applied annually, 5 Doctors and 2 Nurses from the Immediate Response Team with, at least 3 drills ministered annually,

and 8 Pharmacy Biochemists, 12 Nurses and 20 Doctors from the local Hospital with, at least, one drill ministered annually. During the same period training courses were ministered to 130 professionals from several external institutions (The Fire Department, The Civil Defense and The Navy), plus 140 trainees from the Radiological Protection Division of The Nuclear Power Plant of Angra dos Reis, as First Lay Responders, objectifying the improvement of the quality of the emergency response.

## **2. EXPERIENCE REPORT**

### **2.1. Subjects taught during the training programs**

The following are the subjects taught during the training programs:

- Basics of Radiological Protection
- Biological Effects of Radiation
- Basic Management of ARS and CRS
- Management of the Response to Emergencies
- Leadership - Flow of Information - Analyses of Accidents
- Monitoring
- The Use of Special Clothes (IPE)
- Environment Preparation
- Particular attention to the preparation of hospital environments, such as emergency rooms, operating rooms and wards
- Ambulances and aircrafts for the transportation of Radiation Victims
- Emergency Room, CCO and Infirmary Procedures
- Circulation of contaminated/irradiated patients within the local Hospital
- External and Internal Decontamination.

### **2.2. Evaluations Methods**

The development of training applications, ending with Drills, Tests and Assessment, gathering data and suggestions, objectifying the constant improvement. Training Programs with pre and post evaluations have been started.

### **2.3. Teaching methods and class material given on a Course of 40 hours**

- Power-point based classes
- Theoretical and practical expositions
- Distribution of studying material and CD/DVD.
- Pre and Post evaluations tests and assessments
- Drills after all steps and a final drill.

## 2.4. Professionals and Institutions trained

### 2.4.1 Internal Professionals

- 80 Nursing Technicians
- 12 Medical Radiology Technicians
- 6 Locomotion Immobilization Technicians
- 5 Doctors and 2 Nurses from the Immediate Response Team with
- 8 Pharmacy Biochemists
- 12 General Nurses
- 20 Doctors of several specialties

### 2.4.2 External Professionals

- 65 from The Fire Department and The Civil Defense (Nurses, Doctors and Combatants)
- 65 from The Brazilian Navy (Nurses and Doctors)
- 140 trainees from the Radiological Protection Division of The Nuclear Power Plant of Angra dos Reis as First Lay Responders, objectifying the improvement of the quality of the emergency response.

## 3. Image File



An ambulance ready prepared



Equipments for emergency response



A helicopter ready prepared





### Environment Preparation



### Use of Special Clothes (IPE)



### Drill Images

### 3. CONCLUSIONS

We have noticed that the methodology has had shown very positive aspects and results and we intend to continue using it, improving it whenever necessary.

### REFERENCES

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3. Carlos Rojas-Palma, Astrid Liland, Ane Naesss Jerstad, George Etherington, Maria del Rosario Pérez, Tua Rahola, Jaren Smith, “*TMT-Handbook – 2009*” – NRPA – Lobo Media As – Norway – 2009