INTRODUCTION

IAEA and UK transport regulations require consignors of radioactive materials to have in place emergency response arrangements for the event of a transport incident. RADSsafe fulfills this requirement for its members, who include the UK MOD (Ministry of Defence) and civil nuclear power operators.

RADSsafe

- is a UK mutual support company that provides an emergency response in the event of a road/rail transport accident involving radioactive materials belonging to a member.
- provides swift radiation protection advice and support to the emergency services.

RADSsafe response levels

- Level 1: The Civil Nuclear Constabulary’s Communications Centre (CC) receives notification of an incident, usually from the police, via the RADSsafe emergency telephone number. The CC provides generic radiological protection advice and alerts the Level 2 and Level 3 responders.
- Level 2: The RADSsafe member nearest to the incident provides radiological protection advice by telephone, to the emergency services and attends the scene (nominally within 2 hours) to provide further advice and support.
- Level 3: The consignment owner provides specific advice to the Level 2 responder and to the emergency services and attends the scene to retrieve the consignment and carry out any remediation necessary.

DStl’s role

DStl forms part of the RADSsafe emergency response cover on behalf of the MOD and could be requested to respond at Level 2.

AIM AND OBJECTIVES OF THE EXERCISE

Aim

DStl undertook an exercise on its Porton Down Range in Wiltshire in December 2009 to test its RADSsafe Level 2 response to a road/rail accident involving radioactive material.

Objectives

- To test: • The notification (alerting) procedures. • Communications. • Procedures and responses. • Specialists in their roles. • Interfaces with other agencies, particularly the emergency services. • Support to the recovery phase.

DESCRIPTION OF THE EXERCISE

An exercise scenario was set up on a road on the DStl Porton Down Range, to simulate a road/rail accident. The key aspects of the scenario were:

- A van collision with a car.
- Two metal drum containers of simulated radioactive contaminated solid waste (plutonium, etc.) being transported by the van.
- A number of Americium 241 smoke detectors (each 2.2 MBq) were placed amongst the spilled material to simulate plutonium contamination.

The CC also informed the consignor (package owner).

At the accident scene, the police set up an outer cordon at 100m and WFRS set up an inner cordon at 50m. WFRS took the role of lead emergency organisation.

Communications links were quickly established between the emergency services at the scene, the DStl response team and the consignor.

EXERCISE SCENARIO

The DStl response team consisted of two personnel, a Duty Health Physicist and an Environmental Monitor.

On arrival at the scene, the DStl team had a briefing with the emergency services. They entered the inner cordon, wearing appropriate personal and respiratory protective equipment (overalls, gloves, overboots and face mask) and monitored the WFRS crew and casualties. For exercise purposes, low-level contamination was “detected” on the WFRS crew, who exchanged their contaminated suits for fresh coveralls. The WFRS crew and casualties were given a clearance level to the inner cordon and the casualties were handed over to the ambulance crew.

The exercise highlighted the following areas for improvement:

- Correct assessment of the hazard
- Correct advice to the emergency services.

CONCLUSIONS

1. The exercise was a successful demonstration of DStl’s ability to respond to a transport accident involving radioactive material, meeting the aim of testing its RADSsafe response. All the specific objectives were met.

2. Valuable lessons were learned and these have been emphasised in training sessions.

3. The DStl Porton Down Range proved to be an excellent facility for undertaking this type of exercise, particularly because the scenario and accident scene were subsequently available to provide training for DStl staff who had not taken part in the exercise.

4. The use of radioactive sources added an extra element of realism to the scenario.