U.S. Department of Energy – Fact Sheet

Agency Role.

To provide advice and radiological assistance to the Regional Response Team when an event occurs that involves radioactive materials.

Responsibilities.

- To make DOE resources available to other federal agencies, state, local, and tribal agencies, private organizations, or private persons to assist in resolving incidents involving radioactive materials. Assistance may be in the form of advice or field deployment of specialized assets.

- To coordinate the initial offsite federal radiological monitoring and assessment assistance during the response to a radiological emergency.

- To assume the role of the Lead Federal Agency for radiological emergencies at facilities owned or operated by DOE or involving materials shipped by of for DOE.

Capabilities and Abilities.

The Department of Energy has seven major radiological Emergency Response assets:

- **Accident Response Group (ARG)**. The ARG is composed of a cadre of weapons designers and engineers, physical scientists, and other technical specialists from DOE's weapon complex, together with specially designed equipment that can collectively or independently be deployed by the Department to provide timely assistance to peacetime accidents and significant incidents involving nuclear weapons throughout the world. ARG deployable capabilities include weapon diagnostics (radiography); robotics; liquid abrasive cutters; anti-contamination clothing and respirators; personnel decontamination stations (showers/hot line operations); ground/soil contamination survey monitors/equipment; air, soil, and water analysis equipment; weapon packaging and containment equipment; and ground transportation for damaged weapons. ARG provides technical advice for determining the radioactive hazards; assists in the collection, identification, and disposition of contaminated materials; and advises on what additional DOE resources may be required. Equipment and personnel are based in several locations including Albuquerque, New Mexico; Las Vegas, Nevada; Amarillo, Texas; Livermore, California; and Los Alamos, New Mexico.

- **Aerial Measuring System (AMS)**. The AMS is an aerial detection system, based in Las Vegas, Nevada and at Andrews Air Force Base, near Washington, D.C., and is capable of measuring extremely low levels of gamma radiation and locating and tracking airborne radiation. This system also includes aerial photography and multi-spectral scanning capability. AMS capabilities include fixed wing and rotary wing aircraft with radiological measuring equipment (gamma), computer analysis of aerial measurements, and aerial photographic equipment (color and infrared) to locate lost radioactive sources, conduct aerial surveys, or map large areas of contamination.

- **Atmospheric Release Advisory Capability (ARAC)**. ARAC is a computer-based emergency preparedness and response predictive capability operated by the Lawrence Livermore National Laboratory at the National Atmospheric Release Advisory Center in Livermore, California. ARAC provides rapid predictions of the transport, diffusion, and deposition of radionuclides released to the atmosphere and dose projections to people and the environment. ARAC generated dispersion charts/isopleths are valuable tools for planning and implementing protective actions.

- **Federal Radiological Monitoring and Assessment Center (FRMAC)**. The FRMAC provides the organization and structure to coordinate all federal agency radiological monitoring and assessment efforts and activities. The FRMAC is responsible for providing the Lead Federal Agency and the

state, tribal, or local authorities involved in a radiological incident with a single source of complied, quality controlled monitoring and assessment data. The Department provides various capabilities from the other assets to support the FRMAC including management and technical personnel, command and control, communications equipment, administrative and logistical personnel and equipment, etc. In addition, the FRMAC coordinates, integrates, directs, and manages the efforts of the personnel and equipment responding from the other federal agencies in accordance with the FRERP.

- **Nuclear Emergency Search Tam (NEST)**. NEST consists of engineers, scientists, and other technical specialists from DOE's national laboratories and the nuclear weapons complex. NEST is prepared to respond within four hours of notification with specially trained teams and specialized equipment to assist the FBI in addressing nuclear/radiological threats. Deployable NEST assets include intelligence, communications, search, assessment, access, diagnostics, disablement, operations, containment/damage limitations, logistics, and health physics capabilities. A large cadre (approximately 200) of trained personnel and specialized radiation detection systems are available to search for ionizing radiation-producing materials.

- **Radiation Emergency Assistance Center/Training Site (REAC/TS).** REAC/TS is a unique asset that provides medical advice, specialized training, and on-site assistance for the treatment of all types of radiation exposure accidents. REAC/TS is designated as the World Collaboration Center for radiation accident management and is operated by Oak Ridge Associated Universities in Oak Ridge, Tennessee. The REAC/TS center provides a modern multipurpose facility available for handling victims of radiation emergencies who may also have other physical injuries. REAC/TS also provides medical advice to on-scene medical professionals, either by telephone or through direct consultation from field deployable teams. Specialized training courses for physicians, health physicists, and paramedical personnel are provided routinely.

- **Radiological Assistance Program (RAP).** RAP provides advice and radiological assistance to federal, state, tribal, and local governments, and the private sector for incidents involving radioactive materials that pose a threat to the public health and safety or the environment. The initial DOE radiological responders, RAP can provide field deployable teams of Health Physics professionals equipped to conduct radiological monitoring and assessment activities. RAP personnel can also provide radiological advice/consultation, public information, and access to the other DOE Emergency Response Assets. RAP is managed at eight Regional Coordinating Offices across the country.

Response Scenarios. The DOE Emergency Response Assets could be used to provide assistance in responding to incidents involving the following:

- Fixed Nuclear Facilities
- Transportation of radioactive materials
- Nuclear weapons
- Satellites or spacecrafts containing radioactive materials
- Ionizing radiation sources
- Any radioactive material releases
- Malevolent nuclear or radiological acts

Requests for DOE support are made through the appropriate Regional Coordinating Office or the Headquarters Emergency Operations Center (EOC). Although DOE will respond to major radiological emergencies using the Federal Radiological Emergency Response Plan (FRERP), access to the DOE Emergency Response Assets does not require FRERP activation. When responding to radiological emergencies without a Stafford Act Declaration, DOE will use existing funding resources.