

## Emergency Procedures

### Dislodged Source or exposed source:

1. Immediately exit the area
2. Keep others out of area post area, verify dose rates, lock doors or post barricades insure that dose to members of the public does not exceed .002 rem in 1 hour in unrestricted areas (10 CFR 20.1301).
3. Evaluate dose
4. Develop a recovery plan (evaluate the need for a Planned special exposure that may be needed in accordance with 10 CFR part 20.1206) with long reach tools, shielding and dose estimates, document actions.
5. Make notifications per Table 8 in the Radiation Safety Manual (10 CFR part 30.50).

### Over Exposure Event:

1. Stop all work
2. Evaluation of dosimetry and notifications per 10 CFR Part 20.2202.
3. Notify facility RSO and regulatory authorities as required keep over exposed individuals in areas that are not greater than background.

### Alarming Dosimeter or Area Monitor:

1. Anytime there is an alarm from an area monitor, electronic Dosimeter or an off scale self-reading dosimeter work will immediately be put in a safe condition work will cease and exit the area (***in the case where multiple alarms are going off immediately exit the area***) until all determinations are made as to the reason for such alarm, and corrective actions are made. If an off scale survey meter is acquired exit the area until a determination can be made if the meter is faulty or there is a real problem.

### Medical Emergency:

1. Put work in safe condition if possible then stop and assist injured if needed.
2. Follow site specifics for a medical emergency.

### Fire:

1. Put work in safe condition.
2. Exit the area per site specifics, if entering the area after a fire monitor dose rates verify that the source integrity has been maintained.

### Flood

1. Exit the area per site specifics. If returning to an area that has been flooded monitor for dose rates and contamination.

### Irradiator Fails to function as designed:

1. Determine if the failure could cause a substantial safety hazard per 10 CFR part 21.21
2. Repair if possible to restore to a safe operating condition if repair can not be made remove the unit from service until it can be repaired.

### Leaking Source:

1. If a source is in excess of .005  $\mu\text{Ci}$  of removable radioactive material. Restrict access to the room, notify the customer facility's RSO and the Gamma Irradiator Service RSO, and take additional area smears document locations and contamination of each smear.
2. If a source is determined to be leaking ( $\geq .005 \mu\text{Ci}$ ) immediately remove from service develop a plan for decontamination, repair or disposal with the customer. Make notifications per 10 CFR 35.3067.

### Device topples over or Rigging fails:

1. Immediately perform a dose rate survey to insure the source has not been dislodged. If elevated dose rates other than what is anticipated or visual damage to the irradiator (that may have caused the source to leak) immediately restrict non-essential personnel from the area.
2. If the dose rates are acceptable and visual damage is observed that may have cause a source to leak

perform a smear survey for contamination.

3. Insure the irradiator cannot move until the plans to recover are evaluated based on the circumstances and location of the irradiator.
4. Make all regulatory notifications as required.
5. Develop a recovery plan and equipment needed to recover the irradiator.