

Suggested Public Safety Response Guidelines for Radiologic Dispersion Devices

Detection:

- HAZMAT crews will check and record background radiation.
- Fire / hazmat personnel will assure that screening for radiation is performed at all explosive / EOD events.
- Any radiation levels >10x background or 2mrem/h will be considered significant.

Notification:

- Any "significant" radiation detected (survey activities or surveillance/monitoring) notify:
 - State Duty Officer 1-800-422-0798
 - State Duty Officer will notify MDH Office of Emergency Preparedness and Environmental Health personnel and Homeland Security and Emergency Management (HSEM)
 - State Duty Officer will notify National Guard 55th Civil Support Team (CST)
 - Additional radiologic and hazmat resources may be requested via the State Duty Officer if not available via usual mutual aid
 - During special events additional notifications / confirmation may need to be made – refer to event-specific guidance.
- Any radiation incident resulting in injury should be communicated immediately to hospitals / EMS agencies on Mn-Trac (web-based system) via Medical Resource Control Center (MRCC).

Response:

- Respond according to explosive device / hazmat protocols. Stage upwind. Prevent non-essential personnel from entering the area.
- Establish initial perimeter of not less than 400 yards (1/4 mile) if unable to quickly define thresholds. Perimeter may be larger based on explosive device guidelines (EOD / ERG).
- Fire HAZMAT and support agencies will work to identify the specific isotope(s) involved and communicate this information as rapidly as possible to dispatch and via dispatch to State Duty Officer. Samples should also be collected and sent to MDH EH laboratory. Federal radiological assistance (U.S. Department of Energy) should be obtained through HSEM.
- Define a probable area of contamination and a buffer zone where responders can be decontaminated and where victims are prepared for transport. 'Safe zone' perimeter will be established at 2mrem/h. Consider likely plume and wind conditions.
- Victim rescue per usual response. Type and amount of radioactive material likely in an RDD should not generate immediately dangerous levels.
- Injured persons should be transported via EMS per usual guidelines – clothing should be controlled as soon as possible and sealed in bags.

- Patient should be 'cocooned' if possible. EMS personnel should be aware of contamination.
- For large-scale event, use standard HAZMAT gross decontamination procedures -- a spray of water from a one-and-half inch hand line (if a decontamination shower is not available) and clothing control. Responders exiting the hot zone should doff their gear. Do not release responders from duty until they have been checked with radiation detection equipment to assure they are fully decontaminated.
 - Uninjured contaminated persons should be moved to 'safe zone' and provided soap and water decontamination until $<2x$ background or $<0.1\text{mrem/h}$. Nasal swabs should be taken from contaminated patients and saved for analysis. If positive, victim should be referred to a local hospital for further evaluation of internal contamination.
 - Uninjured, uncontaminated persons may be released AFTER contact information is obtained. Victim contact information lists should be compiled and sent to MDH / jurisdiction EOC.
 - Local EM, MDH, and Federal partners will assist with portal monitoring at ingress/egress to site (within 6 hours).
 - Rescuers should not exceed 5 rem exposure (in catastrophic situations and no other rescuers available, 25 rem permissible for rescue efforts) – highly unlikely to approach these thresholds except in nuclear event

Personal Protective Equipment:

- Respiratory protection should be used at all times by responders. Firefighters may use SCBA (Type B protection). Minimum level of acceptable respiratory protection is N95 mask.
- Tyvek suit is minimal level of barrier PPE. Structural firefighting apparel is sufficient but after initial rescue phase consider other PPE due to contamination issues.

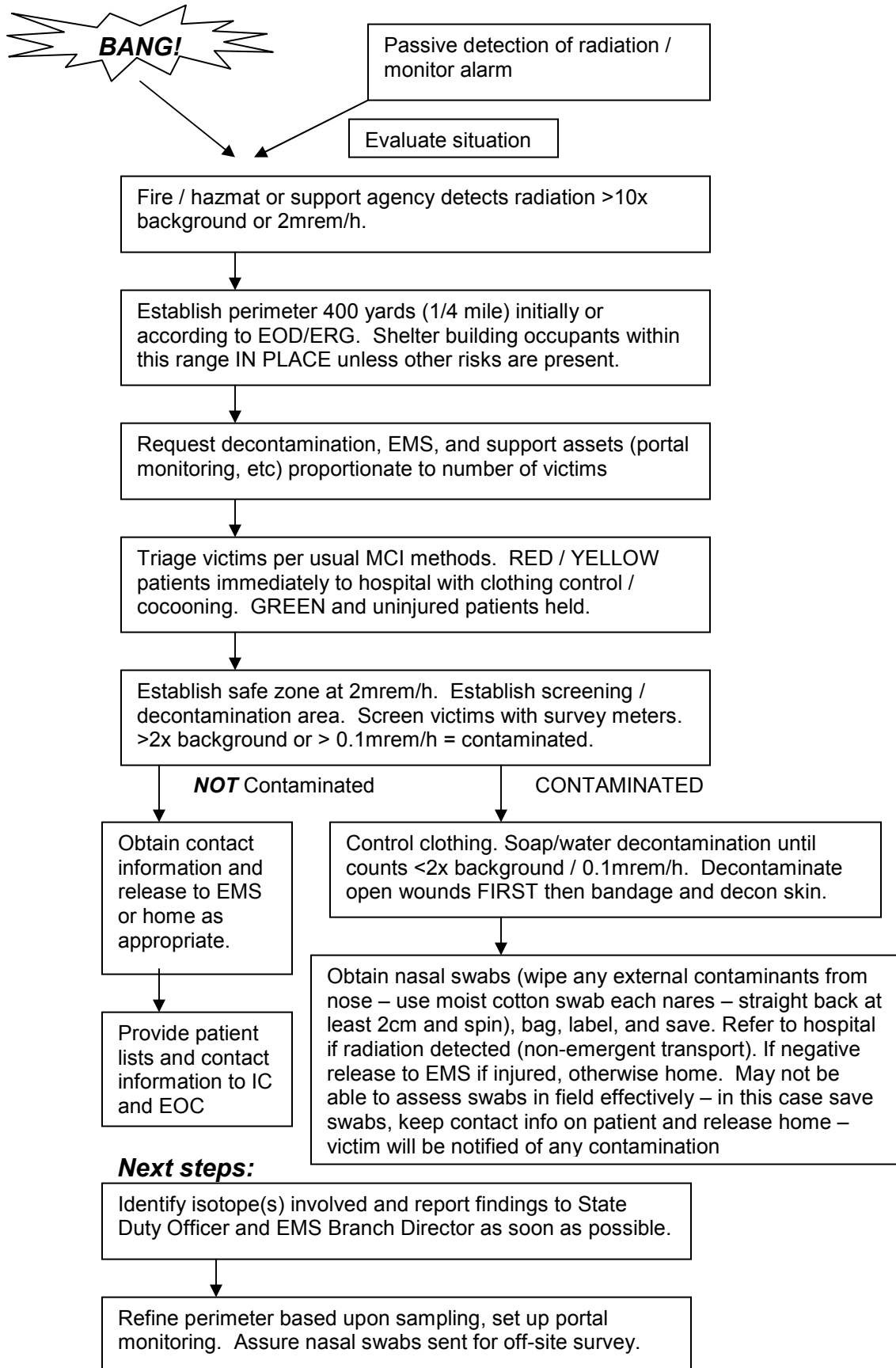
Plume Mapping:

- Initial plume estimates may be generated by HAZMAT / CAT responders and initial alerting / notifications made per jurisdictional decision.
- A more definitive plume map will be generated by the 55th Civil Support Team and later by the Interagency Modeling and Assessment Center (IMAAC). These maps will be shared with State and Local Emergency Management.
- Shelter-in-place orders / notification may require public safety assistance. Evacuation of more than immediate area is extremely unlikely.

Medical Countermeasures:

- MDH and Federal partners will rapidly communicate to local hospitals and EMS agencies information about medical assessment, dosimetry, and counter-measures appropriate to the situation. This information will be made available to the Hennepin Regional Poison Center, the RHRC, and via Mn-Trac.
- MN Homeland Security and Emergency Management, in conjunction with Local Public Health and Emergency Management will be responsible for Potassium Iodide (KI) distribution should the event warrant (involved radioactive iodine isotopes).

RDD Algorithm



RDD Victim Care Square:

		Contamination	
Injuries	No injury, No contamination After screening, obtain contact information and release to home	Contaminated, no injury Screening positive (> 0.1mrem/h) – provide soap/water decontamination until below these thresholds. Obtain nasal swabs and save for survey – if positive, will be referred to hospital (1)	
	Injured, no contamination Provide usual EMS care (2)	Injured, with contamination Usual triage / treatment / transport priorities for yellow / red patients (2) Green patients – depending on resources at scene and hospital consider referring to hospital if open wounds (3) after clothing control. Perform nasal swab assessment OR defer to hospital (4).	

1. Wipe any external contaminants from nose – use moist cotton swab each nares – straight back at least 2cm and spin), bag, and survey. Uninjured patients may use personal transportation to hospital if desired. Assure contact information obtained from all victims released on scene. May not be able to assay swabs in field due to surrounding contaminant – save for analysis away from site.
2. Yellow / red patients should be assumed to be contaminated and should be triaged / treated / transported per usual MCI guidelines but with clothing control and cocooning as possible. Surveying can occur later.
3. Open wounds must be decontaminated first, then the wounds bandaged and general skin decontamination performed.
4. Nasal swab assessment is a critical step in determining potential for internal contamination – if the patient does not have this performed at the scene they (and EMS) must understand it should be performed at the hospital. This may be impractical on-scene in larger events and patients should be referred to a screening location (designated by emergency management and public health) unless they have injuries requiring hospital assessment.