



# Emergency Management Issues Special Interest Group Annual Meeting

## A Focused Unified Response to a Radiological/Hazardous Spill/Spread

Plutonium Finishing Plant (PFP) Closure  
Project

Emergency Preparedness

Incorporating PRC-PRO-EM-40325 – Radiological/Chemical Event Response

May 2–5, 2011 Charleston Marriott • Charleston, South Carolina



# Overview

- During an event, facility and responding site personnel are expected to make notifications; take appropriate actions based on conditions; and maintain overall command and control of the emergency
- Today we will explain the basic expectations and response of the facility and site emergency response organizations to a radioactive/hazardous material spill/spread.



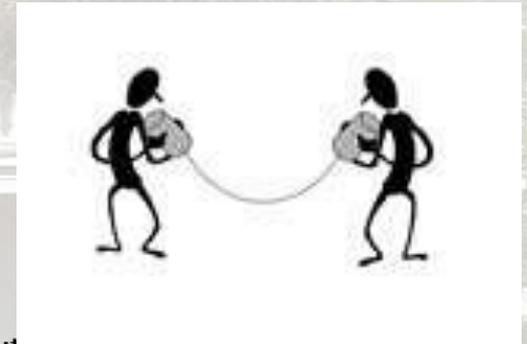
# Priorities

- Decisions should support these priorities:
  - Protection of People
  - Protection of Environment
  - Protection of Property



# BED Decisions/Communications

- Where to establish ICP
- Communicate safe routing to personnel
- Tell people where and what the hazard is (Event Description)
- Ensure RCTs bring instruments and equipment
- Ensure ICP positions are staffed
- Protective actions needed
- Delegation



# Response Resources

- Initial response to the victims
- 911/373-0911 cell phone: HFD response to the event
- HFD resources
- Facility personnel assisting HFD entry
- EOC interaction
- Facility, HFD, and Hanford Patrol interaction
- Neighboring facility personnel assistance



# Resource Assignments

- Safe Routing of Ops/Radcon Personnel (don't hold them up)
- Habitability in the ICP (allows you to move personnel while maintaining control)
- Ensure full staffing of necessary ICP positions
- Provide timely response of personnel by quickly establishing response team



# Resource Assignments (cont)

## Resource Lead *(SAM or designated person)*

- Responsible for mustering area, as determined by the BED (ie: Main Staging Area)
- Ensure response teams enroute with proper PPE
- Should immediately call for second team of RCTs and NCOs if assistance is needed to get contaminated people out of the affected area (e.g. firefighters)
- Provide additional resources as requested
- Use engineers, maintenance and others as needed



# Donning of PPE

- PPE dependent on level of hazard
- Personnel in zone assisting HFD have full protection
- Personnel marking boundaries, assisting undress, outer surveys will be dependent on hazard as dictated by wind direction, exposure, etc.

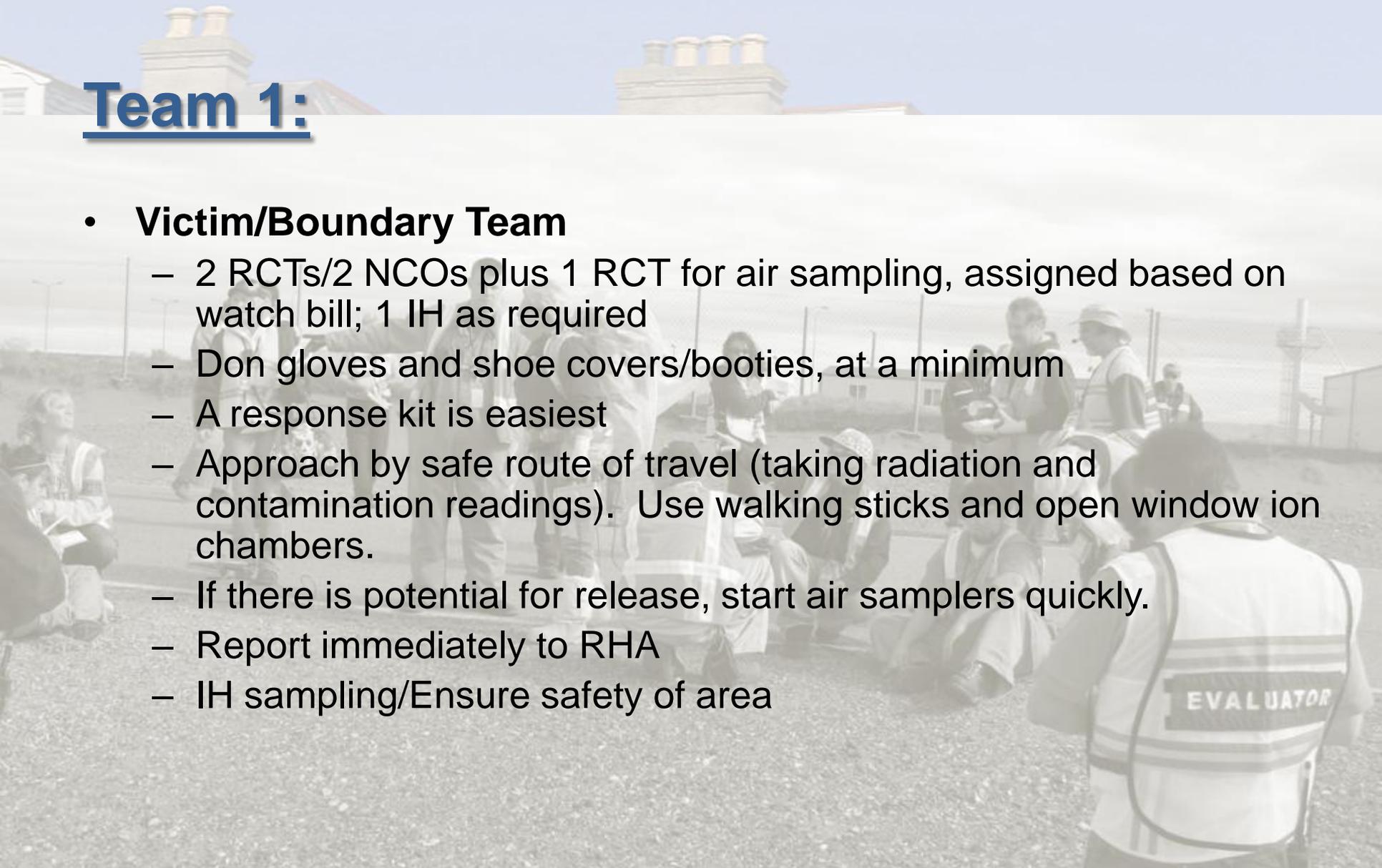


# Response Teams

## Team 1:

- **Victim/Boundary Team**

- 2 RCTs/2 NCOs plus 1 RCT for air sampling, assigned based on watch bill; 1 IH as required
- Don gloves and shoe covers/booties, at a minimum
- A response kit is easiest
- Approach by safe route of travel (taking radiation and contamination readings). Use walking sticks and open window ion chambers.
- If there is potential for release, start air samplers quickly.
- Report immediately to RHA
- IH sampling/Ensure safety of area



# Response Teams

## Team 2:



- **Donning Assistance**

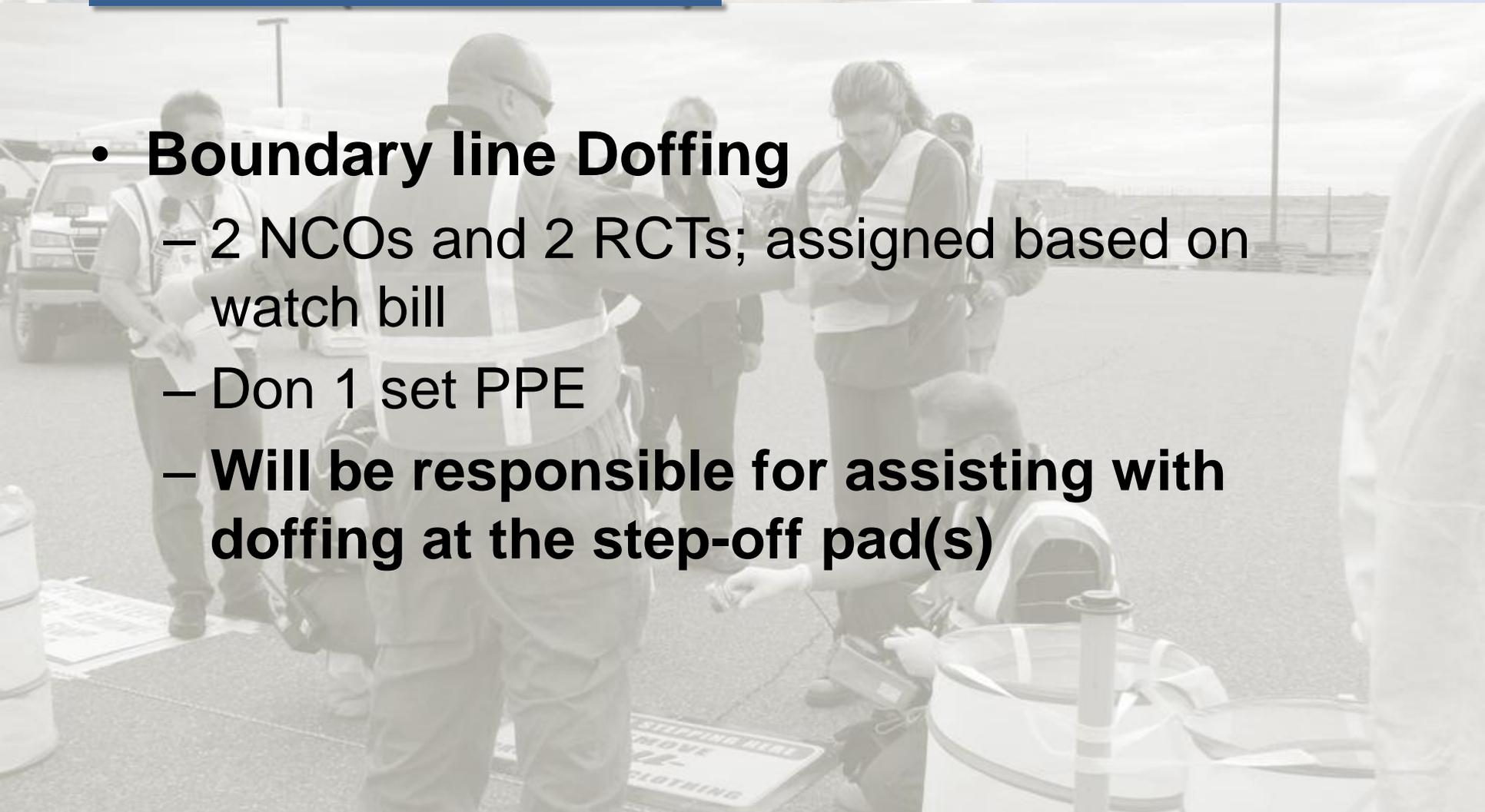
- 2 NCOs; assigned based on watch bill, or similar
- **Will be responsible for assisting others with donning PPE**

- **Inner Doffing**

- 2 RCTs/2 NCOs; assigned based on watch bill, or similar
- 1 IH as required
- Immediately start donning PPE and report to event scene
  - Don 2 sets PPE and PAPR (or prescribed respiratory protection)
- Receive turnback values from RHA. (Contamination levels based on airborne generation coupled with respiratory protection.)
- Nasals? (Was there a potential motive force for airborne generation?)
- **Will be responsible for assisting HFD out of bunker gear**

# Response Teams (continued)

## Team 2 (Continued):

- **Boundary line Doffing**
    - 2 NCOs and 2 RCTs; assigned based on watch bill
    - Don 1 set PPE
    - **Will be responsible for assisting with doffing at the step-off pad(s)**
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# Support Needs

- Soil Sement®
- Emergency equipment locations
- Types of equipment available
- Response vehicle: Team 1 and 2 response equipment
- Contact numbers for nearby facilities



# Injured Person Response

- How to assess injuries
- What equipment to bring
- How to get the equipment to the event scene
- What to do until help arrives



# Event Scene Response Activities

- **Priority #1 – Deal with the victims**
  - Determine extent of injuries
  - Determine travel path
  - Survey for contamination



# Event Scene Response Activities (continued)

- Determine/establish boundary
- Perform habitability (including air sampling)



# Event Scene Response Activities (continued)

- Assist HFD out of bunker gear
- Survey all personnel out of hazard area
- Plan for follow up/recovery actions
- Keep it simple!



# Event Scene Response Activities (continued)

## General RCT Advice:

- Keep thinking about what you should be doing.
- Keep the RHA abreast of what's going on. Help the RHA if you see something. (Teamwork!)
- Keep taking measurements.
- Be aware of what potentially contaminated people are doing/touching.
- Minimize dose.

# HFD Doffing of Bunker Gear

- Determine distance from spill
- Systematically remove bunker gear starting with headgear *(use Appendix C)*
- Ensure HFD personnel have temporary foot coverage *(rubber booties)* at inner step-off pad
- Final survey of personnel at final step-off pad



# What Controllers Are Looking for *(from a RadCon standpoint)*

- Habitability Surveys – Negative data!
- Boundary control
- Team 1/Team 2 Concept
- Proper evaluation of the hazard – Injury vs. radiological response
- Proper instrumentation techniques and proper units and communication of the units (for contamination and airborne), proper radiation instrument scale
- Minimizing contamination spread
- Minimizing airborne generation

# Remember Your Priorities

- Decisions should support these priorities:
  - Protection of People
  - Protection of Environment
  - Protection of Property



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EMERGENCY MANAGEMENT ISSUES  
SPECIAL INTEREST GROUP

Thank you for your  
Participation!

**THANK  
YOU**

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