Disclaimer
Harborview Incident

Why Discuss This Incident Here?

What’s the Applicability to the HLRWTTF?

Who Was Involved?
Applicability To NTSF

- Transportation of Radioactive Material
- US DOT
- DOE
- NRC
- State
- City/Town
- Government Contractors
The Incident

- May 2, 2019
- Part of NNSA’s Off-Site Source Recovery Program (OSRP)
- Remove 2900 Curies of Cs-137 from the Harborview Research and Training Facility in Seattle, Wa.
- Required Removal of Source from Source Holder
1,000 R/hr @ 1 m from an unshielded 2900 Ci source
• Exceed occupational 5 rem limit in 20 s
• Exceed Emerg 25 rem limit in 1 minute
• Onset of Radiation Sickness (100 rem) in 6 minutes

@ 1 ft onset of radiation sickness in ½ minute
1600 Source moved from basement to loading dock
- Irradiator to MHC misaligned
- No donut shield
- Source holder modified with hacksaw (not in procedure)

1830 Prejob Brief
- 3 untrained techs getting OJT
- Observers from DOH and FBI not present and no dosimetry
- No rad access restrictions
- Higher than expected radiation

1900 Start cutting
- No swipe surveys
- No air samples
- No rad barriers
- Doors not closed

1930 Extra cuts to free source
- Fewer sparks
- Camera bright sparks
- Source most likely breached

2100 Changing Roles
- DOH and FBI leave
- RCT goes to buy batteries
- Rigger taking dose rates

2127 “Source may have been breached”
- Falls apart in MHC
- Frisker pegged >500,000 cpm
- RSO notified
- NRC HOO called 2200
27 Cuts Later...
Immediate Response May 2-3
- SFD HAZMAT
- WA DOH
- UW
- CST
- REAC/TS

Post Event Response May 3-5
- UW
- DOE RAP

Post Event Recovery May 6-12
- UW
- Chase Environmental

Unified Command May 13
- UW
- DOE
- NIT
13 exposed to radioactive material at UW research site near Seattle’s Harborview Medical Center

May 3, 2015 at 7:12 am | Updated May 3, 2015 at 6:26 pm

By Ryan Blethen

Seattle Times staff reporter

The spill of a radioactive substance at a loading dock of a University of Washington Medicine research building on First Hill left 13 people exposed to...
• Failure to perform a radiological risk assessment or develop an adequate plan with contingencies
  – Removing a source from a sealed source holder with high speed cutting tools without positive contamination controls should never have been performed
  – Multiple missed Stop Work opportunities
  – First time evolution with trainees
• Overreliance on Appeal to Authority
  – Unclear roles and responsibilities
• Stop the release
  – No JHA or contingency plan
  – Encapsulation without oversight

• Warn Others
  – SFD not aware of the evolution
  – Believe your meters

• Isolate the Area
  – Ventilation not shutdown or understood
  – Doors remained open
  – No radiation or contamination postings
  – Observers had unencumbered access

• Minimize the spread of contamination
  – MHC did not provide positive confinement
  – No contingency plan
  – People allowed in contaminated areas
  – No swipe or air samples
  – Techs remained in contaminated area after breach

• Survey and Cleanup
  – Need for Radiological expertise in response and recovery – ROSS
  – Underestimated spread
  – Prompt assessment of internal contamination
HHCC Source Removal

[Image of a GammaCell 1000 Elite machine with a sign that reads, "Did You Remember the Stickers and Fill Out Notebook?"]
HHCC Source Removal
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Questions?

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