Wide area Atmospheric Deposition of Asbestos Site-Specific Scenario
(River Street Warehouse Asbestos Fire Emergency Response)

Randy B. Nattis
Federal On Scene Coordinator
Background

3-Alarm Fire at 10:00 PM Sunday May 14, 2017
Background

River Street Warehouse Site
1300 N River Street
Background

Former
Montgomery Dock #2 & Warehouse

Built in 1898, 253,000 Sq. Ft., 900 Ft. Dock
Background
Background
On May 15, 2017 (Monday) at 1100, ODEQ responds as suspect Asbestos Containing Material (ACM) is found at the site and down wind from the site.
ODEQ

Preliminary Survey - Noted Observations

Surveyed Area
Suspected ACM
Observed
On the morning of May 16th (Tuesday), it became clear that additional support and resources were needed and ODEQ made a request to EPA.

EPA personnel started to arrive the afternoon of the 16th and entered into Unified Command with ODEQ.
Unified Command

River Street Warehouse Fire

Liaison Officer
Cheryl Grabham – DEQ LNO
Wenona Wilson – EPA Assistant LNO 5/31
Mike Zollitsch – DEQ Assistant LNO
Jasmin Guerra – EPA Assistant LNO CIC 5/31

Operations Section
See next page

Unified Command
Randy Nattis – EPA FOSC
Michael Greenburg – DEQ SOSC
Marty McComb – EPA Deputy FOSC

Planning Section
Matthew Magorrian – EPA PSC 5/27
Don Pettit – DEQ Deputy PSC
Maggie Waldon – EPA Deputy PSC 5/26
Audrey O’Brien – DEQ PSC LNO

Resource Unit
Rob Grandinetti – RESL 5/26

Situation Unit
James Lopez-Baird – SITL 5/31

Environmental Unit
Dale Becker – EUL 5/25

Finance Section
Tom Townsend – EPA FSC 5/25 Johnson work remotely after

Logistic Section
Cathy Villa – EPA LSC 5/30

Public Information Officer
Jennifer Flynt – DEQ PIO
Rusty Harris-Bishop – EPA Assistant PIO 5/26

Analytical Data Management Specialist
Melissa Bryant – ERT 5/25

Safety Officer
Dave Varela – USCG SO 6/1
Isaac Chavalla – USCG ASO 6/1

Environmental Unit
John Pavitt – Tech Specialist 5/27

Environmental Unit
Steve Hall – Sample Coordinator
Objectives

1. Assess and stabilize Warehouse site
2. Determine where the ACM fire debris ended up
3. Determine if asbestos levels in the ambient air posed a risk to the public
4. Evaluate public exposures from any residual ACM fire debris
Assessment and Recovery

Operations Section
Eric Vanderboom - EPA OPS 5/26
Stephen Ball - EPA Deputy OPS 5/26

Recovery Branch
Brad Martin – Branch Director 5/25
Jerry Wade – Deputy Branch Director

Recovery Team 1
Erin Lynch
503-201-8113

Recovery Team 2
Bradley Heusinkveld
206-450-9270

Recovery Team 3
Stephen Ball
208-530-9107

Reconnaissance Branch
Brad Martin – Branch Director 5/25
206-419-9780

Reconnaissance Team 1
Seth Wing
206-419-3419

Reconnaissance Team 2
Zane Beal
503-260-5476

Reconnaissance Team 3
Ilja Nieuwenhuizen
503-709-3004

Reconnaissance Team 4
Rachel Locke
559-917-7359

Burn Site Management
Jerry Wade – Branch Director
503-953-5263
Assessment and Recovery

◆ Reconnaissance team
  ▪ EPA team leader - EPA
  ▪ Community Involvement Coordinator - EPA
  ▪ Asbestos Supervisor - ODEQ
  ▪ Health and Safety officer - USCG
  ▪ Data specialist – EPA contractor

◆ Recovery team
  ▪ EPA team leader - EPA
  ▪ Community Involvement Coordinator - EPA
  ▪ Asbestos Supervisor - ODEQ
  ▪ Health and Safety officer - USCG
  ▪ Data specialist – EPA contractor
  ▪ Response Manager – EPA contractor
  ▪ Industrial hygienist – EPA contractor
  ▪ Asbestos abatement specialists – EPA contractor
Assessment and Recovery

Objective 1 - Assess and stabilize warehouse site
Assessment and Recovery

Objective 1 – continued…

- Collected daily air samples and provided continuous dust monitoring (PM)
- Collected 4 composite bulk samples for Contaminant Of Concern (COC) identification
Assessment and Recovery

Objective 1 continued…

◆ Assess and stabilize Warehouse site
  ▪ 40% Chrysotile Asbestos was found in bulk samples – no other COCs
  ▪ Due to ongoing dust suppression, no Asbestos fibers of concern were detected in the air samples
Assessment and Recovery

Objective 2 - Determine where the ACM fire debris ended up

Soot Deposition Model by IMAAC

- Interagency Modeling and Atmospheric Assessment Center (IMAAC)
- Modeling of soot plume indicates potential for much larger plume and down-gradient impacts
Assessment and Recovery
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5/21/2017

2018 U.S. EPA International Decontamination R&D Conference
Assessment and Recovery
Objective 2 continued…

- The Unified Command leveraged ESRI full suite of tools and EPA’s GeoPlatform, in doing so, once DQOs were established and the Data Management Plan was finalized, the collector application was set up for easy and consistent data collection practices.
- A Common Operating Picture (COP) was used real time to track where the reconnaissance teams were finding debris and where recovery teams were cleaning it up.
- The COP was utilized as a meeting tool at most meetings throughout the day.
- Real-time assessment and remediation information drove response operations – usually the same day.
  - As Assessment teams surveyed new areas, the deposition plume became more apparent, and resources were able to be diverted to priority locations.

- Progress Tracking
  - Recon progress
  - Removal progress
Objective 2 continued…

Added benefits of the COP

- **Reconnaissance teams**
  - Marked locations of asbestos and took photos. Indicated area surveyed and update the status categories.

- **Recovery teams**
  - Navigated to previously identified contaminated areas and preformed remediation activities. As the contamination was removed, the features within the database were updated to communicate progress.

- **Air Monitoring Teams**
  - Teams identified pre-determined air station locations and adjusted or create new ones as necessary.

- **Data Managers**
  - Data was continuously QA/QC’d and any errors were caught and addressed in near real-time.

- **GIS Analysts**
  - Figures could be created utilizing real-time data, and other advanced data processing could occur.

- **Incident Command**
  - Planning/Environmental Unit
    - Utilized for location selection for air samples and activity based samples
  - Situation Unit
    - Used live data to provide topical briefs and metrics
  - PIOs
    - Live data helped craft message throughout the day

- **Conclusion** – Nature and extent was established and the entire response organization had near real-time information to help the decision making process.
Objective 3 - Determine if asbestos levels in the ambient air posed a risk to the public

Air sampling during the first 6 days of the response

- Action level was set at 0.01 fiber per cubic centimeter (f/cc) – risk-based calculation based on 3 months continuous exposure to residents.
- 38 ambient air samples were collected and analyzed by Phase Contract Microscopy (PCM).
  - 4 of these had detections (0.001 – 0.002 f/cc)
- 20 of the 38 were analyzed by Transmission Electron Microscopy (TEM), a few had low level detections but only 2 of these had PCME fibers
  - Chrysotile, winchite (0.002 f/cc), actinolite (0.001 f/cc)
- 44 personnel samples were collected and analyzed by PCM
  - 9 of these had detections (0.003 – 0.016 f/cc)
- 16 of the 44 were analyzed by TEM, 4 of these had PCME fibers
  - Actinolite (0.001) in one recovery worker
  - Remaining detections were in personnel who collected the bulk samples from the Warehouse
    - Chrysotile, actinolite, winchite, richterite, tremolite, anthophyllite were detected.
    - Concentrations were 0.006, 0.007 and 0.02 PCME f/cc in these workers.

Conclusion – No Air samples above the Action level
Assessment and Recovery

Objective 4 - Evaluate public exposures to any residual ACM fire debris
Objective 4 continued…

- Eleven ABS samples were collected (high and low flow)
  - 4 of these had asbestos detected by PCM (0.007 – 0.017 f/cc)
- 6 samples were submitted for TEM analysis
  - 3 of these had PCME fibers detected (0.001 – 0.002 f/cc)
  - Mean concentration is 0.0067 f/cc
  - Chrysotile and actinolite were detected

- Conclusion - these sampling events showed no short-term exposures
In summary

- All 4 Unified Command Objectives were met

- The Environmental Unit and the Unified Commanders felt confident that if small amounts of ACM remained, that exposures to the general public wouldn’t result in unacceptable risks

- Guidance for how to handle HVAC Systems, Catch Basin Waste, etc.

- Unified Command demobilized on June 3rd, 18 days after it stood up.
Field Teams.. By the numbers

# Teams (Recon, Recovery, Air Sampling)

In summary

Max # Field Teams: 9
Average Field Teams Daily: 4.59
Assessment Days: 17
Total Team Deployments: 78
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