Merrimack Valley Gas Emergency

Mayor Dan Rivera

September 13th, 2018
Initial Response

• https://www.youtube.com/watch?v=T7HYA_HJbP4#action=share
TV Footage

- https://youtu.be/5QyGvgFBq6g
- https://youtu.be/E6QTXWv_U1c
- https://youtu.be/1r_2Xw7FHeo
Power out Effected Area

NORTH LAWRENCE

LAWRENCE...
POWER TURNED OFF

SHOWCASE CINEMAS

I-495
EXIT 42

NORTH ANDOVER...
POWER TURNED OFF
Fire Mobilization

• One of the largest Fire Mob Activations in the Commonwealth to date

• 15 Regional Task Forces

• 180 responding Departments (133 MA, 50 NH, and 1 ME)

• 167 Engines, 65 Ladders, Command and Support Vehicles

• MEOC served as the Fire Mobilization Command Post
Additional Mutual Aid

- NEMLEC, SEMLEC, CEMLEC provided 660 Officers across 140 different Law Enforcement Agencies

- EMS Mobilization provided 54 ambulances to the Staging Area

- Statewide Mutual Aid law helped provide additional Inspectional Services personnel from other communities to assist

- EMAC was used to bring in Pipeline Inspectors from across the Country (AZ, CT, MN, NH, NY, OH, OR, PA)
Initial Response Challenges

- 60-80 Structure Fires across 3 Communities
- Multiple Reports of Explosions
- Terrorism?
- Self Dispatched Support vs. Requested Support
- Multiple Command Posts/Operations Centers
- Whose in charge?
- Staging Areas
- Feeding
- Restrooms
- Fuel for Vehicles
- Locksmiths?
Unified Command
Evacuation Order/WEA

- Decision was made to evacuate all of South Lawrence out of abundance of caution
- MEMA sent Wireless Emergency Alerts out to the area (Spanish and English) to hit all cellphones
- Shelters were opened at multiple locations in North Lawrence, Andover, and North Andover
- Coordinated busses and pick up points for residents to gather to catch busses if needed
Damage Assessment

• Unknown extent of damage area or number of homes involved

• Multiple agencies conducting assessment (MEMA, OPSI, Red Cross, MSP, Communities, etc.)

• Used Civil Air Patrol to help with aerial coverage of the area

• Struggled to reach a consensus on numbers of homes affected/damaged

• Homes we could not get in to were self reporting damage
4 Conclusions

4.1 Findings

1. None of the following were factors in this accident: the training and qualification of the construction crew, the use of alcohol or other drugs, or the condition and operability of the regulators at the Winthrop Avenue regulator station.

2. The multiple overpressurization accidents investigated by the National Transportation Safety Board over the past 50 years demonstrate that low-pressure natural gas distribution systems that use only sensing lines and regulators as means to detect and prevent overpressurization are not optimal to prevent such incidents.

3. A comprehensive and formal process should have been identified to overpressurize the system.

4. Columbia Gas of Massachusetts’ procedures led to the incident.

5. The abandonment of the original system overpressurization, which led to the incident.

6. The delay between the development of the incident and the time it took for the authorities to respond.

7. The Columbia Gas of Massachusetts’ system is not robust enough to detect the overpressurization.


9. Reviewing the design and implementation of the construction project that led to the abandonment of the original system.

10. The municipal public safety and emergency management policies.

11. The field radio communications and the interoperability and availability of interdepartmental and intradepartmental communications.

12. The communications issues during the September 13 overpressurization illustrate the need for emergency planning for a multi-jurisdictional response.

4.2 Probable Cause

The National Transportation Safety Board determines that the probable cause of the overpressurization of the natural gas distribution system and the resulting fires and explosions was Columbia Gas of Massachusetts’ weak engineering management that did not adequately plan, review, sequence, and oversee the construction project that led to the abandonment of the original system without first relocating regulator sensing lines to the new polyethylene main. Contributing to the accident was a low-pressure natural gas distribution system designed and operated without adequate overpressure protection.
Mitigation Measures

Operation Temp Heat
- Trying to keep people in their homes
- Columbia purchased around 24,000 space heaters
- Majority of homes could not support the heater due to unavailable dedicated circuit
- Ultimately failed
- Installed around 6,000 Smoke and CO detectors

Operation Hot Plate
- Columbia Gas purchased over 7,000 Hot Plates
- MA National Guard was activated to help manage and distribute to residents
- All impacted homes were visited
NiSource/Columbia Gas

• Initial full restoration date of November 19th
• Near end of October, date changed to Dec. 16th
• Replaced 43.3 miles of gas pipeline
• Replaced 5,086 service lines
• Donated $10 Million to Greater Lawrence Disaster Relief Fund
• Claims process to reimburse residents for ANY reasonable cost related to the emergency
• End of Nov. Columbia had paid out over $67 Million in claims
Alternative Housing
Hotels

- NiSource (parent to Columbia Gas) bought out blocks of hotel rooms within a 30 mile radius of Lawrence
- Provided a per diem to residents living in hotels to help pay for food and gas
- Contracted with Uber and Lyft to provide free rides to residents commuting to and from work, stores, etc.

- **Total Number of Hotel Rooms Booked:** ~6,300
- **Peak Occupancy:** 1,862 Families (6,236 individuals)
- **Grand Total:** $65 Million
Challenges with Hotels

• Tracking check in/out
 • Communication with residents
 • School Children/Bussing
 • Refusing to Leave
 • Distances!
Travel Trailers/Campers
# Travel Trailers

<table>
<thead>
<tr>
<th>2018 27DBS Specifications</th>
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<tr>
<td>Sleeps</td>
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</tr>
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<td>8 ft</td>
</tr>
<tr>
<td>Ext Height</td>
<td>10 ft 8 in</td>
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<tr>
<td>Interior Color</td>
<td>Portobello</td>
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<tr>
<td>Exterior Color</td>
<td></td>
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<tr>
<td>Hitch Weight</td>
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<tr>
<td>Dry Weight</td>
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<tr>
<td>Fresh Water Capacity</td>
<td>48 gals</td>
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<tr>
<td>Grey Water Capacity</td>
<td>64 gals</td>
</tr>
<tr>
<td>Black Water Capacity</td>
<td>34 gals</td>
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* 5-6 Gallon Hot Water Heater...
Location, Location, Location!

- Worked with each community to identify a location to stage trailers and set up site (200 total to start - 100 Lawrence, 50 Andover, 50 North Andover)

- Large parking lots, baseball fields, parks, old industrial/commercial space, wide streets, driveways?

- Each trailer is about 30 ft. long and 8 ft. wide + space between them + emergency access and service lanes + distance between them and generators + distance from propane storage
The Execution
Lawrence: South Common

- Largest Site
- Just under 250 trailers on site
- Peak Trailers Occupied: 210
- Peak Occupancy: 908 residents
- First Trailers on Site: 10/5/18
- First Residents on Site: 10/10/18
- Last trailer removed: 12/14/18
Lawrence: Pemberton Park

- Second Largest Site
- 99 Trailers on Site
- Peak Trailers Occupied: 88
- Peak Occupancy: 376 residents
- First Trailers on Site: 10/10/18
- First Residents on Site: 10/17/18
- Last trailer removed: 12/9/18
Lawrence: Sullivan Park

- 75 Trailers on Site
- Peak Trailers Occupied: 29
- Peak Occupancy: 127 residents
- First Trailers on Site: 11/1/18
- First Residents on Site: 11/5/18
- Last trailer removed: 12/8/18
North Andover: Grogan Field

- 60 Trailers on Site
- Peak Trailers Occupied: 53
- Peak Occupancy: 211 residents
- First Trailers on Site: 10/10/18
- First Residents on Site: 10/16/18
- Last trailer removed: 12/6/18
Andover: Recreation Park Rd.

- 32 Trailers on Site
- Peak Trailers Occupied: 30
- Peak Occupancy: 130 residents
- First Trailers on Site: 10/7/18
- First Residents on Site: 10/10/18
- Last trailer removed: 12/9/18
Trailers by the Numbers

- **Total Number of Sites**: 5 across 3 communities
- **Total Number of Trailers Across Sites**: 515
- **Maximum population supported**: 1,752 residents
- **Highest One Day Peak Occupancy**: 376 Trailers
- **Total Cost per Trailer per Month**: $50,000 (x2 months $100K)
- **Total Cost for Trailers Alone**: $5.15 Million
- **Total Cost for Contractor Support**: $45 Million
- **Grand Total for Trailer Operations**: $50.15 Million
Trailer Site Teams

- Site Specific Maintenance
- Support Services (Laundry, Water, Fencing)
- Housing Structures
- Contracted Services (Wastewater, Fresh Water, Dumpsters)

- “Human Side”
- 24/7 Resident Care/Inquiries
- Trailer Assignment and Familiarization
- Restocking and Tracking OOS Trailers

- Unarmed Site Security
- “Site Surveillance Concierge”
- ID Checks/Access Control
Initial Challenges with Trailers

- Understanding Logistics Requirements
- Maintenance (on site vs. on call)
- Cleaning/Stocking
- Figuring out contractor/owner roles - inside vs. outside
- Teaching residents how to work/use them
- Service schedule
- Security/Keys per Household
- Terms of Agreement
- Inspections
“Massachusetts received nearly double the average amount of rainfall in October”

• “Boston area has seen its wettest fall on record. More rain is coming”

- The Boston Globe

<table>
<thead>
<tr>
<th>Rainfall</th>
<th>Max</th>
<th>Sum</th>
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<tbody>
<tr>
<td>September:</td>
<td>2.75”</td>
<td>5.07”</td>
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<tr>
<td>October:</td>
<td>1.18”</td>
<td>3.16”</td>
</tr>
<tr>
<td>November:</td>
<td>1.76”</td>
<td>6.55”</td>
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</table>
And in Boston, this Thanksgiving will be the coldest November day in at least the last 80 years.

We are currently forecasting near record cold temperatures on Thursday. The last time it was this cold on Thanksgiving?

Try 1901 and 1873! If that doesn’t shift conversation off of politics and on to lighter topics, I don’t know what will.

“Snowy Tuesday Likely Followed by ‘Coldest Thanksgiving In More Than 100 Years’”
And it snowed....

November 15th-16th
New Challenges

- Frozen Valves/Underbelly
- Propane Usage/Freezing Regulators
- MUD
- Unoccupied Trailers
- Ice
- Snow Removal
- MUD
- Pooling Water
- Exposed Cabling
Creative Thinking!
Congregate Sheltering
Why Congregate Sheltering?

• Emergency Option
• Delta between available housing (hotels, trailers, apartments ~7,000 families) and # of impacted families (close to 11,000)
• Had to plan for worst case meaning all families need housing
• Ability to quickly move people somewhere if weather or emergency came up
# Shelter Team

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<tr>
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<tbody>
<tr>
<td>Site Identification</td>
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<tr>
<td>Logistics Planning/Movement</td>
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<tr>
<td>Shelter Management</td>
</tr>
<tr>
<td>Reporting</td>
</tr>
<tr>
<td>Turn Key Shelter Solution</td>
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<table>
<thead>
<tr>
<th>BCYFS</th>
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</thead>
<tbody>
<tr>
<td>“People” people</td>
</tr>
<tr>
<td>Shelter Management Staff</td>
</tr>
<tr>
<td>Shelter Support Staff</td>
</tr>
<tr>
<td>Catering</td>
</tr>
<tr>
<td>Nursing</td>
</tr>
<tr>
<td>Janitorial</td>
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Shelter By the Numbers

- **Shelter Site:** IndusPAD Mill (old Malden Mills)
- **Shelter Capacity:** Up to 1,000
- **Total Meals Served to Guests:** 2,704
- **Total Meals Served to Community:** 162,008
- **Total Beds Used:** 246
- **Total Guest Count:** 242

- **Peak Occupancy:** 12
- **Peak Meals Served:** 127
- **Peak Registered Guests:** 187
- **Grand Total for Sheltering:** $30 Million
Apartments/AirBNB

• Less than 150 available apartments. Residents still need to qualify for the apartment and go through the process and checks

• AirBnB/HomeAway/Vacation Rental sites: block of times homes are available are not long enough
## Summary of Housing Numbers

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### Grand Total for Alternate Housing Operations:
- ~$150 Million (parking, Uber/Lyft, apartments)
Senate Hearings
Recovery Continues

Questions?
The TEAM
Contact Information

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