

# Western Regional Gas Conference

## Natural Gas Incident Investigation

### Attention to Details

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Associated

➤ Mutual Insurance Company.

Electric

➤ Created by the Natural Gas Industry in the mid 1970s.

Gas

➤ Risk Management.

Insurance

➤ 1<sup>st</sup> Layer of Insurance - \$90,000,000.

Services, Inc.

**Protect Life  
Then Property!**

Loss

Control

Products

And

Services.

- Focused Services
- Call Center Workshops
- Safety Meetings
- Field Operations Workshops/Training
- Incident Investigation Workshops
- NEW – Messaging Products for Field Operations – Fall 2022
- Onsite or Virtual

# Natural Gas Incident Investigation Workshop

## Attention to Detail

Pre-Incident	Incident Investigation	Post Incident
<ul style="list-style-type: none"><li>➤ Expectations</li><li>➤ Definitions</li><li>➤ Risk Exposures</li><li>➤ Company Responsibilities</li><li>➤ Incident Command</li><li>➤ Company Procedures &amp; Documents</li><li>➤ Equipment</li></ul>	<ul style="list-style-type: none"><li>➤ Communication at Scene</li><li>➤ Tailboard</li><li>➤ Scene Assessment</li><li>➤ Facility/System Checks</li><li>➤ Photographs</li><li>➤ Interviews</li><li>➤ Media</li><li>➤ Gathering Evidence</li></ul>	<ul style="list-style-type: none"><li>➤ Analyzing the Evidence</li><li>➤ Time Line of Events</li><li>➤ Communication – Emails, etc</li><li>➤ Debriefing Company Personnel</li><li>➤ Depositions</li><li>➤ Reports</li><li>➤ Preserving the Evidence</li></ul>

# Objective Of This Program

Assist personnel who in the course of their responsibilities may be called to perform an incident investigation.

- ✓ Lessons learned from around the industry,
- ✓ Model practices,
- ✓ Emphasis is on your procedures,
- ✓ Peer experiences.

## What it's not:

- A step by step guide on how to conduct an incident investigation,
- A workshop that tells you how to do your job.

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Associated

Electric

Gas

Insurance

Services, Inc.

**What we have learned over  
the past 46 years**

**Every Task, Every  
Job Matters**

# Columbia Gas – September 2018



- ✓ Liaison Program
- ✓ Emergency Response
- ✓ Safety Culture
- ✓ Organization

- ✓ Record Keeping
- ✓ Compliance
- ✓ Procedures
- ✓ Training
- ✓ Oversight of Contractors
- ✓ Gas Control Operators
- ✓ Time Line of Events – 3 Weeks
- ✓ Odor Complaints
- ✓ Call to 911
- ✓ Pipeline Integrity Program
- ✓ Public Awareness Effectiveness



# AEGIS Case Study



## Fusion Steps

1. Clean the Pipe.
2. Scrape the Pipe.
3. Mark the Pipe.
4. Insert the Fitting
5. Clamp the Fitting.
6. Scan the Fitting.
7. Recognize the Correct Fusion Time.
8. Cool Time.
9. Work Time.
10. Backfill.

# AEGIS Case Study

A 23 year old woman died when leaking gas from plastic weld migrated into her apartment and the natural gas exploded.

## Case Investigation

- The source of the leak was a plastic fusion butt weld that was misaligned.
- Welds of the company employee were excavated to determine if a pattern of misalignment existed.

- Company Employee
- Initial & Annual Qualification
- Fusion Records
- Leak Survey Records
- Recent Gas Emergencies
  - Call center & dispatch recordings
- Recent Work Orders in Area
- Odorant
- Public Awareness
- Recent Construction

# When to Conduct an Incident Investigation?

## Obvious events

- Explosions,
- Fires,
- Any fatality, serious injury or property loss fire.



## Not so obvious events

- Fire personnel evaluation or suspicions.
- Gasoline fires // Garage storage areas.
- Faulty appliance.



# AEGIS Review of Major Liability Losses

- Three children playing in the garage knocked over and spilled a container of gasoline.
- Fumes came in contact with pilot of the water heater ... in a room adjacent and open to the garage. The 3 children suffered 3<sup>rd</sup> degree burns over 90% of their bodies.
- The water heater was installed directly on the floor.
- 16 months prior to incident the gas company was in the home on a leak investigation. No records indicating a warning or violation tag has been placed at water heater.

## Lessons Learned

- The company's visit to the home was an opportunity to warn the occupants of the potential hazardous situation regarding the installation of water heater.

**Company SIR \$200,000 + AEGIS \$6,400,000 = \$6,600,000**

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# 1<sup>st</sup> Step – Is The Emergency Over?

A gas leak was called into the gas company with the caller stating “there is a strong odor of gas at the gas meter and its coming into my house.”

- A gas company first responder was dispatched three minutes after the company received the leak report and was enroute to the scene when the home exploded, fatally injuring one and critically injuring another occupant.
- The first responder from the gas company arrived at the scene approximately 29 minutes following the explosion.
- Additional company personnel were dispatched to the incident scene and began searching for the source of the leaking gas.
- About four hours after the initial explosion two other explosions in quick succession occurred, injuring two firefighters, a gas company employee and damaging several properties.

# Are You Ready?



# 1<sup>st</sup> Responder is fatally injured





# Tailboard Meetings

## Professional Conduct & Reminders

- Expect pictures and videos to be taken.
- Address the chaotic environment.
- Keep comments to a minimum.
- Don't openly speculate.
- Stay off social media.
- No pictures with personal cell phones unless directed by company to do so.



# Incident Command and Control

- Incident Command System (ICS).
- Essential – The decision-maker is in charge.
- Guidance for investigation.
- **Evidence preservation.**
- Evidence control.
- Communications control.
- Guidance for interaction with outside investigators.



# AEGIS Case Study

About 4:00 pm a seven-year-boy went into the kitchen in his family's rented mobile home. Approximately 10 minutes later, the boy's parents and siblings, who were outside, saw flames and smoke coming from the kitchen. The father reported hearing a whoosh. The father gained access through the front door and rescued the boy. The boy sustained burns to 98% of his body and will require medical treatment for the remainder of his life.

## Case Investigation

- The local fire investigator based his report on statements by the plaintiff's father.
- The insured supplied the fuel gas.
- It was alleged that the stove piping leaked and the gas company did not inspect the piping.

## Investigation by the Gas Company

- **Interviews** of visitors to the home earlier in the day saw carburetors and gasoline cans in the kitchen area.
- **Third party investigators** were brought in and determine that fire had characteristics of a gasoline fire and concluded that it was unlikely a natural gas leak.
- **Investigation** revealed that the father installed a gas range approximately one year prior to the incident.
- **Third party investigators were not able to inspect the house piping or line valves** collected at the scene ...this **evidence taken by the fire department was consequently lost and unavailable for inspection.**

## Case Results

- The **gas company was able to counter the allegations** made by the father and the report by the fire investigator. Due to the nature of the boy's injuries, the gas company settled the case.
- **The protection of the fire scene and evidence is critical in suspected gas incidents. Education of the fire departments officials may have helped protect the integrity of the scene.**

**Company SIR \$500,00 + AEGIS \$1,800,000 = \$2,300,000**

# System Checks



**Customer Facilities**



**Equipment**



**Odorization**



**Mains and Services**



**Procedures**



**Leak Survey**

# Investigation



**Photography**



**Witness Interviews**



**Media**



**Evidence Gathering**



**Procedures**



**Soil Testing**



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# Analysis of the Incident

## Create & Review time line

- Debriefing of company employees.
- Notes taken at the scene.
- Dispatch and Call Center recordings.
- Gas Control / Scada information.



## Time Line

3:58-4:06	Boring company hits service line
4:06	Company notified of damage
4:13	1 <sup>st</sup> Responder arrives on scene
4:20	3 other employees arrive – supervisor called need equipment
4:41	Equipment arrives and crew begins isolating the leak
4:48	Customers began calling in odorant detection – Company instructions are to leave
5:37	Service line is shut down
5:44	Explosion occurs

# Analysis of the Incident



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# Debriefing of Company Personnel

- Under consultation of Legal.
- Debrief initial responders as soon as possible.
- Conduct debriefing in a relaxed atmosphere.
- Express the importance of **honest** and **accurate** information.
- Question responders about what they **personally** saw and did at the scene. They should not speculate on the cause or actions of others at the scene.
- Follow your Gas Manuals.
  - Are qualifications in question...what is the protocol for reviewing the actions taken.
- Verify instrument calibration/daily checks.



# Depositions

- Work with your attorney.
- Follow his/her instructions.
- Be honest...honesty is always the best policy!
- It is okay to say, “I don’t know” or “I don’t remember” as long as it is the truth.
- Don’t speculate or answer what other people did if you did not witness their actions.
- Be calm and pause before answering, that will give your attorney time to object.
- Practice – Mock it up.



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# Attendees

- 1<sup>st</sup> Responder/Service Techs
- Construction & Maintenance Crews
- Call Center/Dispatch Operations
- Gas Operations Supervisors/Managers/Directors/VPs
- Claims & Legal Departments
- Public Awareness/Damage Prevention
- Training/Qualification/Safety/Compliance
- Media Relations & 3<sup>rd</sup> Party Contractors

# Questions or Comments?

**Be Alert,  
Be Prepared &  
Be Safe**



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