



DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES
COMMISSIONER ADAM H. PUTNAM

ACCIDENT INVESTIGATION REPORT

FILE NO. 01-14-55		PAGE 1 OF 3		<input type="checkbox"/> PRELIMINARY REPORT <input type="checkbox"/> INSPECTORS REPORT <input checked="" type="checkbox"/> FINAL REPORT	
DATE & TIME OF ACCIDENT: 01/29/2014 / 1:31 p.m.		INVESTIGATION REQUESTED BY: Inspector Supervisor		DATE HQ NOTIFIED: 01/29/2014	
LOCATION OF PROPERTY: 1330 Fruit Cove Road S			CITY/COUNTY: St Johns / St Johns		
DESCRIPTION OF PROPERTY: Single family dwelling frame & brick			NUMBER OF OCCUPANTS: 1		
OWNER OF PROPERTY/ADDRESS: John R & Scottie A. Rust / Same					
POINT OF ORIGIN: In attic, near the gas line			INCIDENT CLASSIFICATION:		
			<input type="checkbox"/> LEAK		<input type="checkbox"/> EXPLOSION
			<input checked="" type="checkbox"/> FIRE		<input type="checkbox"/> OTHER __ Describe:
PROBABLE CAUSE: A service technician searching for a leak, moved a bare electrical wire, which arced and ignited the surrounding gas					
NO. OF INJURIES: 0		NAMES: NA			
NO. OF FATALITIES: 0		NAMES: NA			
SERVICING GAS COMPANY: ProGasCo #9274 / D & D Gas #409		FIRE DEPT RESPONDING: St Johns Fire & Rescue			
GAS STORAGE CAPACITY: 2 – 100# Cylinders			APPLIANCES INVOLVED/TYPE: None		
DATE OF THIS REPORT: 03/26/2014		INVESTIGATED BY: Michael C Chandler, LP Gas Inspector			

TIME LOG:

03/03/2010		Initial service set up by D&D Gas of 2-100# cylinders for fireplace
01/11/2014	6:00 p.m.	House is struck by lightning during a storm
01/13/2014		D&D Gas makes delivery of 1-100# cylinder and notes odor in home
01/15/2014		D&D Gas returns and confirms a leak in the system
01/29/2014	12:30 p.m.	ProGasCo arrives to determine source of leak, the incident occurs, and the tanks are removed. Bureau is notified of incident.
01/30/2014	8:00 a.m.	Bureau starts fire investigation

SYNOPSIS:

Lightning struck the residence causing damage to electrical devices in the home. Several weeks later, during a leak test by a service company, escaping gas ignited when a bare electrical wire shorted in the attic.

INVESTIGATION:

On January 29, 2014, the Bureau received a report of a fire at the John Rust residence on 1330 Fruit Cove Road South in St Johns. This was reported by Melvin Luciano of ProGasCo, a licensed (803) service company. The residence was supplied with fuel by D&D Gas, a sister company of ProGasCo.

The fire had occurred on January 29, 2014, while service technician, Richard "Cody" Likens was trying to isolate a gas leak in the attic using a soap bottle and a UEI combustible gas detector, commonly called a "sniffer". The gas ignited and flashed in the attic starting the roof on fire. Mr. Likens was "shaken-up", but generally unhurt, except for some facial hair. Mr. Likens was able to exit the home and dial 911 immediately.

On January 30, 2014, I was notified by the Inspector Supervisor of the incident and began my investigation.

On January 31, 2014, I arrived at the Rust residence to inspect the gas system. The residence was built in 2009 and is a wood framed home with a brick exterior (Photograph 1). The gas piping in the home was installed by the builder during construction. This piping included a mix of both Schedule 40 black iron and Corrugated Stainless Steel Tubing (CSST) as shown in Photograph 2. Although the builder piped the home for a water heater and a grill, the only gas appliance in the home was a vented gas fireplace. That fireplace was supplied by 2- 100 pound DOT cylinders, which had been removed at the time of my inspection.

Due to the fire, portions of the attic were unstable and therefore I could not examine all of the gas piping without a ladder.

On February 4, 2014, I asked Melvin Luciano and Cody Likens of ProGasCo to meet me at the Rust residence with a ladder to examine the remaining gas line. I also met with Rob Dowling, St. Johns County Fire Marshal, and received a copy of his fire report of the incident (attached). The fire report also includes a statement by Mr. Likens and information on the gas detector Mr. Likens was using. Mr. John Rust, the homeowner, was at the residence and also gave me his statement of what had happened.

Prior to the arrival of Messrs. Luciano, Likens, & Dowling, Mr. Rust and I walked through the residence. Mr. Rust informed me that on Saturday January 11, 2014, he and his wife had left the residence to attend their grandson's ball game. He stated that they did not return until about 8 p.m. that evening and noticed all of his smoke detectors were alarming, but there did not appear to be a fire. During his inspection, he also noted that seven (7) breakers had been "thrown" in the electrical panel.

Mr. Rust stated that, after some time, he was able to disconnect all the smoke detectors and reset all seven (7) electrical breakers. He noted that the cable box and TV still did not work. He continued that the next day, he was informed by his neighbor that "they had heard a loud bang and their cable went out also." Mr. Rust stated

that he proceeded to file an insurance claim because several other appliances in the home had been affected, or did not work, and he was a little concerned about other damage.

Mr. Rust stated that on Monday January 13, 2014, D&D Gas arrived to change out the 100 pound cylinders and Mrs. Rust asked the driver to step into the home because she thought she could smell gas in a hallway. Mr. Rust stated that the driver confirmed that the odor was related to propane and he disconnected the tanks and arranged for a leak test to be performed. Mr. Rust stated that the gas company came back on January 15, 2014, and confirmed there was a leak but they did not have the proper equipment to continue, so they turned the gas back off and left.

Mr. Rust stated that on January 29, 2014, he was home when Mr. Likens arrived from ProGasCo to locate and repair the gas leak. He stated that while Mr. Likens was in the attic, he was talking to him by cell phone and was standing by the propane cylinders. He indicated that Mr. Likens would ask him to turn on the gas slightly so Mr. Likens could use his gas detector (sniffer) to find the leak. Mr. Rust stated that he heard Mr. Likens drop something and then yell, "Fire!"

After my interview with Mr. Rust, Mr. Luciano and Mr. Likens arrived at the residence with a ladder. After we inquired about how Mr. Likens felt physically and mentally, Mr. Likens proceeded to describe how the event happened. Mr. Likens confirmed Mr. Rust's version of the incident and stated that he was "using his combustible gas detector to check the gas line" when "all of a sudden a fireball came at [him] from the area of the soffit." He was able to exit the attic and called 911. He said it all happened "very quickly."

I was able to access the gas piping (along with Mr. Luciano and Mr. Likens) using a 10' ladder in the area that Mr. Likens indicated he was located when the incident occurred. As seen in Photograph 3, an elongated hole was noted in the black iron pipe. I also noted that directly under and at the same elongated angle, there was an electrical wire which had exposed wiring (see, Photograph 4).

It appears that the gas line developed this hole after being exposed to a high current or high temperature event, which melted the black iron pipe. Other than the insulation on the electrical wire beneath it, the wire did not, however, show signs of having been subjected to the same type of event that the black iron pipe was exposed to. Typically, if the wire had been similarly exposed, it would have appeared to have either been "welded" back together (i.e., showing signs of having melted), or would have been broken apart from the incident, in a condition similar to the gas piping.

CONCLUSION:

After all seven (7) electrical breakers were turned back on by the homeowner following an apparent lightning strike, a bare electrical line running beneath the gas piping in the attic became energized. It is likely that Mr. Likens, who was in the attic to examine the gas line for a possible leak, may have stepped on or otherwise moved the energized electrical line, which caused it to arc and ignite the leaking/accumulated gas.

EQUIPMENT INVOLVED:

None

CONTRIBUTING CODE VIOLATIONS:

None

ENCLOSURES:

Photos x 4
Fire Report x1
ACCODE x1

Revised 12/10