

# Mammoth Lakes Incident Investigation Report

SAFETY AND ENFORCEMENT DIVISION  
GAS SAFETY AND RELIABILITY BRANCH

July 17, 2025

Final Report

<b>Report Date:</b>	July 17, 2024
<b>Investigators:</b>	Anthony Phu
<b>Date incident reported to CPUC</b>	April 01, 2023
<b>Utility:</b>	AmeriGas
<b>Date and Time of the Incident:</b>	April 01, 2023 at 0130 Hours
<b>Location of the Incident:</b>	Mammoth Lakes, CA, Mono County



California Public  
Utilities Commission

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# Executive Summary

## Summary of Incident

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On April 1, 2023, at approximately 0130 hours, AmeriGas was notified of an explosion and fire at [REDACTED] Juniper Ridge Road, Mammoth Lakes, Mono County, California, during a severe winter storm. The local Fire Department was on-scene and assisted AmeriGas in shutting off gas service to the residence, resulting in a service outage and evacuation of approximately twenty-seven (27) customers.

Initial responders estimated the snow level surrounding the building reached approximately twenty-five (25) feet high, with the foundation of the residence and high snowbanks forming the blast seat. Debris was located throughout the surrounding area, with the farthest flung piece of roof structure found approximately three hundred (300) feet east of the blast.

Hours after the explosion, California Department of Forestry and Fire Protection (CalFire) bomb and arson investigators arrived on-site and investigated the potential cause of the explosion, presenting the following statement:

“Based on my training and experience, as well as the significant explosion of the residence, I believe the explosion to be caused by a gas, namely propane. Based on the significant snowfall received, the meter on the south side of the house became compromised, thus allowing the propane to freely flow into the residence and locate a source of ignition. Once the correct fuel-air ratio was obtained, an explosion occurred, thus creating the large debris field. The high snowbanks acted as a tamp, forcing the explosive pressure within itself and directionally to the east.”

In the fifteen (15) months following the incident, AmeriGas failed to gather evidence from the scene to conduct a root cause analysis of the incident, citing legal difficulty working with the homeowner’s insurance company. On 11/20/2023, AmeriGas reported to SED that the home had been demolished and that AmeriGas was awaiting clearance to go on-site to perform abandonment work. On 01/04/2024, AmeriGas reported that they had received approval to go on-site, before following up stating that they did not recover any equipment for incident investigation. On 06/05/2024, AmeriGas closed their incident investigation, stating that they determined it to be inconclusive.

Based on the evidence, AmeriGas failed to complete a post-failure investigation into the incident cause. Therefore, SED finds AmeriGas in violation of Title 49 Code of Federal Regulations (CFR) §192.617(a) and §192.605(a).

# Incident Investigation

## Summary of Incident and Investigation

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On April 1, 2023, at approximately 0130 hours, AmeriGas was notified of an explosion and fire at [REDACTED] Juniper Ridge Road, Mammoth Lakes, Mono County, California. Personnel from the Mammoth Lakes Fire Protection District (MLFPD) were on-scene and assisted AmeriGas in shutting off gas service to the residence, resulting in a service outage and evacuation of approximately twenty-seven (27) customers. AmeriGas could not determine the cause of the explosion. Based on the evidence, AmeriGas did not complete a post-failure investigation for the incident. Therefore, SED finds AmeriGas in violation of Title 49 CFR §192.617(a) and §192.605(a).

### Fatalities / Injuries

No fatalities or injuries were reported.

### Property Damage

\$102,658 in damages resulting from the house explosion.

### Utility Facilities Involved

0.75-inch diameter polyethylene (PE) distribution pipeline at [REDACTED] Juniper Ridge Road within Juniper Ridge Co-Op propane system in Mammoth Lakes, CA.

### Investigators

	<b>Name</b>	<b>Title</b>
<i>1.</i>	Anthony Phu	SED, Utilities Engineer

### Documents Reviewed

See Appendix B.

## SED Investigation Process

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### Operator Investigation Requirements

General Order (G.O.) 112-F, Reference Title 49 CFR, Part 192, Section 192.617 requires that each operator must establish and follow procedures for investigating and analyzing failures and incidents as defined in §191.3, “including sending the failed pipe, component, or equipment for laboratory

testing or examination, where appropriate, for the purpose of determining the causes and contributing factor(s) of the failure or incident and minimizing the possibility of a recurrence.”

AmeriGas’ Emergency Response Plan Procedure “*Failure Investigation and Preservation*” establishes that AmeriGas “must recover and preserve all AmeriGas-owned gas equipment that survives an incident such as fire or explosion, even when the cause has been determined to be other than gas related.”

## SED Investigation

The Gas Safety and Reliability Branch (GSRB) of SED began the investigation of this pipeline incident on April 3, 2023. A Utilities Engineer was assigned the role of lead investigator. SED prepared and submitted several data requests to AmeriGas, Mammoth Lakes Fire Protection District (MLFPD), and CalFire.

SED’s investigation of this incident involved review of MLFPD and CalFire incident reports, AmeriGas incident investigation correspondences, and any related operations, maintenance, and emergency response standards and procedures. SED visited the incident location on September 21, 2023 when weather conditions improved and the site was more accessible and took photos and interviewed the AmeriGas area manager.

The purpose of this investigation was to determine whether there were probable violations of G.O. 112-F Reference Title 49 CFR Part 192, that may have caused or contributed to the incident. Furthermore, SED wanted to determine if the operator was implementing corrective actions to prevent similar incidents in the future.

## Incident Description

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From December 2022 through May 2023, the town of Mammoth Lakes experienced a severe winter storm which brought record snowfall, producing 212 inches of snow accumulation in December, 473 inches of snow accumulation by February, and a total of 715 inches by May. On January 17, 2023, Mono County issued an Emergency Proclamation. On March 3, 2023, the town of Mammoth Lakes issued its own Local Emergency Proclamation. The storm and accompanying heavy snowfall were determined to pose significant threats to the structural integrity of buildings, with emphasis on potential damage to utility connections.

On March 22, 2023, a propane explosion due to this winter event occurred at Val D’Isere Condominiums in Mammoth Lakes, resulting in 5 injuries. CalFire investigation determined the cause of this explosion to be the result of approximately 10 to 15 feet of heavy snow load, causing damage to the customer meter, resulting in propane leaking into the interior of a home, pooling, and finally igniting with a stovetop burner.

On April 1, 2023 at approximately 0130 hours, AmeriGas was notified of an explosion and fire at [REDACTED] Juniper Ridge Rd, Mammoth Lakes in Mono County. Mammoth Lakes Fire and Police

departments were on-scene and assisted AmeriGas in shutting off gas service to the residence at the propane tank feeding the neighborhood, resulting in a service outage to approximately 27 customers.

According to AmeriGas compliance manager's initial accounts, the cause of the incident could be a multitude of things such as heavy snowfall in recent months leading to excess snowpack on the roads/infrastructure, homes and roofs, and even the gas meters. He mentioned that the meters are covered and protected above for snow shear but may not be able to withstand the load if a snowbank came into it from the side. He reiterated that AmeriGas did not know the source of ignition or cause of incident at the time of contact.

## Chronology of Incident Investigation Activities

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This section provides a chronology of the investigative activities undertaken after the incident occurred on 04/01/2023.

### April 4, 2023

SED contacted AmeriGas for progress on post-incident investigation starting 04/04/2023 through 05/02/2023. AmeriGas stated they were waiting for MLFPD's investigation but also mentioned they would hire a third-party investigator to perform their own causal report if they did not agree with MLFPD's report.

### May 31, 2023

AmeriGas confirmed they had hired a third-party litigation team, Reed Smith LLP, to investigate the incident simultaneously with MLFPD's investigation. Initial investigation at this time led them to believe the incident occurred due to excess snowfall.

### July 5, 2023

AmeriGas stated that the homeowner's insurance company, Allstate Insurance, had denied MLFPD and AmeriGas full access to the incident site, as Allstate was completing its own incident investigation.

### September 21, 2023

SED visited the site of the incident. SED noted that trees nearby the site had branches snapped due to snow load approximately 25 feet high or were bent nearly 90 degrees horizontal. SED spoke with the neighbor living at [REDACTED] Juniper Rd, located adjacent to the south, who said that the owners of the site of the incident, an elderly couple, were at the residence about 2 weeks prior to the explosion, but were not present at the time of the incident. He stated that his own home received minimal damage in the form of 1 broken west-facing window approximately 60 feet from the center of incident site. The neighbor allowed access to his rear balcony, where SED could get a visual overview of the incident site.

SED located the service line and the gas meter, which seemed slightly scorched but otherwise undamaged and still attached, on the lower portion of the southern wall of the home. Scorch marks

on the wall of the home grew horizontally from the base of the riser up to the meter set. SED also noted that portions of the home were found an estimated 50 feet to the south and east.

While on-site, AmeriGas stated that they received a call from a local contractor on 09/20/2023 stating that the homeowner was planning on demolishing the home. SED requested AmeriGas to collect any evidence before this happened to complete their post-incident investigation. AmeriGas provided email evidence that their legal team attempted contact with the insurance company to postpone demolition to no avail.

November 20, 2023

AmeriGas reported that the site of the incident had been demolished and is flat ground. They noted that they had not gone on site yet to do any sort of equipment removal and were still waiting to get clearance from the homeowner's insurance company to go on-site and perform any abandonment work.

January 4, 2024

AmeriGas reported that they had received approval to go on-site to abandon the service line going to the demolished home. AmeriGas stated there was no recovery of equipment prior to demolition of the home.

June 5, 2024

AmeriGas produced a response on the progress of their investigation, stating "The Juniper Ridge incident root cause analysis/investigation that was being performed by our third-party team, was determined to be inconclusive. This was due in part to the property owner having the home site demolished and all debris removed without our third-party group being able to complete the investigation."

June 21, 2024

SED began gathering evidence outside of AmeriGas. While collecting evidence, SED got in contact with MLFPD's Fire Chief, who informed SED that CalFire had also done a site visit and brief incident investigation. SED submitted a data request to CalFire, and received response on 08/01/2024 and summarized below:

"MLFD Battalion Chief [REDACTED] told me that the crew was dispatched at approximately 0100 hours to a report of an explosion with a fire. [REDACTED] told me that she had spoke with the owner of the residence lived out of the area and that there were reportedly no occupants within the residence. [REDACTED] told me on 3-27-21, Mammoth Lakes Fire Department received a call of a odor investigation in the area, but were unable to locate the source.

The residence at [REDACTED] Juniper Road was a multi-level 6 bedroom, 5 bathroom, 3,824 square foot, residential home. The residence is built into a steep hill. Mono County received an extraordinary amount of snowfall which resulted in approximately 25' snow banks surrounding the structure. Upon my arrival, I observed fire still actively coming from the seat of the explosion. The seat of the explosion was the entire foundation of the residence. The walls of the blast seat were composed of the snow banks. Debris was spread throughout the area and the farthest piece of roof structure was located approximately 300' to the west of the location.

Based on my training and experience, as well as the significant explosion of the residence, I believe the explosion to be caused by a gas, namely propane. Based on the significant snowfall received the meter on the north side of the house became compromised, thus allowing the propane to free flow into the residence, ultimately locating a source of ignition. Once the correct fuel/air ratio was obtained, an explosion occurred, thus creating the large debris field. The snow banks acted as "tamps" to force the explosive pressure within itself and directionally to the west."

SED notes that the directions in the CalFire report were rotated 180 degrees from what SED had observed on-site.

CalFire had also requested the investigation report from the homeowner's insurance company (Allstate Insurance) on 09/05/2023 but received notice that "the insurance company would not release a report since AmeriGas had yet to receive a report." As of 06/10/2024, CalFire considers this incident closed (inactive) due to no further information coming in from AmeriGas or the insurance company.

## Findings and Corrective Actions

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### AmeriGas' Root Cause Evaluation

AmeriGas and their third-party investigators could not determine a root cause for the incident.

### SED's Findings

SED's investigation noted the following findings:

- 1) **G.O. 112-F Referenced Title 49 CFR, Part 192, Section 192.617 Investigation of failures and incidents.**

**§ 192.617 Investigation of failures and incidents states:**

*(a) Each operator must establish and follow procedures for investigating and analyzing failures and incidents as defined in §191.3, including sending the failed pipe, component, or equipment for laboratory testing or examination, where appropriate, for the purpose of determining the causes and contributing factor(s) of the failure or incident and minimizing the possibility of a recurrence.*

- 2) **G.O. 112-F Referenced Title 49 CFR, Part 192, Section 192.605 Procedural manual for operations, maintenance, and emergencies.**

**§ 192.605 Procedural manual for operations, maintenance, and emergencies:**

*(a) General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response.*

AmeriGas' O&M Manual Failure Investigation and Preservation procedure states, for any failures, AmeriGas must:

*"Recover and preserve all AmeriGas-owned gas equipment that survives an incident such as fire or explosion, even when the cause has been determined to be other than gas related. Tag and maintain this equipment until the case is officially closed.*

*The AmeriGas OPS Corporate Compliance Manager or other designated person shall coordinate the analysis of failed specimens and report findings, as appropriate. Any necessary additional follow-up action such as additional leak surveys, removal of the material from stock, etc., will be established after the cause of the failure has been determined."*

AmeriGas could not determine the cause of the Juniper Ridge Road explosion. In the fifteen (15) months following the incident, AmeriGas failed to gather evidence from the scene to conduct a root cause analysis of the incident, citing legal difficulty working with the homeowner's insurance company. On 11/20/2023, AmeriGas reported to SED that the home had been demolished and that AmeriGas was awaiting clearance to go on-site to perform abandonment work. On 01/04/2024, AmeriGas reported that they had received approval to go on-site, before following up by stating that they did not recover any equipment for incident investigation. On 06/05/2024, AmeriGas closed their incident investigation, stating that they determined it to be inconclusive.

Based on the evidence, AmeriGas did not make sufficient effort to complete their post-failure investigation. Therefore, SED finds AmeriGas in violation of Title 49 CFR §192.617(a) and §192.605(a).

## SED's Recommendations

1. AmeriGas should take appropriate steps to maintain constant communication with all parties involved with any incidents and failures.
2. AmeriGas should update their emergency response procedures to ensure completion of a root cause/apparent cause evaluation to implement incident lessons learned and minimize possibility of recurrence.

# Conclusion

AmeriGas could not determine the cause of the Juniper Ridge Road explosion. In the fifteen (15) months following the incident, AmeriGas failed to gather evidence from the scene to conduct a root cause analysis of the incident, citing legal difficulty working with the homeowner's insurance company. On 11/20/2023, AmeriGas reported to SED that the home had been demolished and that AmeriGas was awaiting clearance to go on-site to perform abandonment work. On 01/04/2024, AmeriGas reported that they had received approval to go on-site, before following up by stating that they did not recover any equipment for incident investigation. On 06/05/2024, AmeriGas closed their incident investigation, stating that they determined it to be inconclusive.

Based on the evidence, AmeriGas did not make sufficient effort to complete their post-failure investigation. Therefore, SED finds AmeriGas in violation of Title 49 CFR §192.617(a) and §192.605(a).

# Appendices

## Appendix A: Glossary of terms

<b>ACRONYM/ABBREVIATION</b>	<b>DEFINITION</b>
<b>CalFire</b>	California Department of Forestry and Fire Protection
<b>CFR</b>	Code of Federal Regulation
<b>GO</b>	General Order
<b>GSRB</b>	Gas Safety and Reliability Branch
<b>MLFPD</b>	Mammoth Lakes Fire Protection District
<b>O&amp;M</b>	Operations and Maintenance
<b>PHMSA</b>	Pipeline & Hazardous Materials Safety Administration
<b>SED</b>	Safety and Enforcement Division

## Appendix B: Documents Reviewed

<b>1.</b>	2022/2023 Winter Storms After-Action Report, Mammoth Lakes, 04/2024
<b>2.</b>	AmeriGas Incident Report to SED, GSRB 04/01/2023
<b>3.</b>	Operations & Maintenance Manual, AmeriGas, 07/31/2023
<b>4.</b>	Incident Report 23CABDU004273-1, CalFire, 06/10/2024
<b>5.</b>	Juniper Ridge Incident Report, Mammoth Lakes FPD, 05/16/2024
<b>6.</b>	Aerial Drone Overview, Mammoth 1 Real Estate, 04/02/2023

## Appendix C: Interviews

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On April 4, 2023, SED conducted a phone interview with AmeriGas' Director of Field Compliance for initial information related to the incident, AmeriGas' plan for investigation, and general probing for potential root cause.

On September 21, 2023, SED conducted an in-person interview with AmeriGas Mammoth Lakes' Area Manager for details during the day of the event, incident investigation progress, and information about the homeowner. SED learned at this time that a local contractor had informed the Area Manager that they had been hired to demolish the home. The Area Manager also provided SED with details about the winter season storm and noted that AmeriGas was improving their design standard for meter sheltering, to provide a barrier against snow shear from the side.

SED also conducted an in-person interview with the neighbor living next door to the incident site at [REDACTED] Juniper Rd. SED learned details during the day of the event and details about the incident site's homeowners. The neighbor allowed SED onto their rear balcony to view and take photos of the incident site.

On June 21, 2024, SED conducted a phone interview with Mammoth Lakes Fire Protection Department's Fire Chief for details about the day of the incident, information about the winter season storm, and incident investigation updates. The Fire Chief provided SED with the Town of Mammoth Lakes' winter storm season after-action report. The Fire Chief also got SED in touch with CalFIRE, who performed their own on-site investigation the day of the explosion.

On August 1, 2024, SED received a data request response from CalFIRE and contacted the CalFIRE Bomb and Arson investigator for more information from their incident report.

## Appendix D: Site Photos

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Figure 1. Incident site taken from the west on 9/21/23.



Figure 2. Excavation on southwest corner of property to locate and squeeze service line, taken from the west on 9/21/23.



Figure 3. Tree located on southwest corner of property, bent approximately 90 degrees horizontally, taken from the west on 9/21/23.



Figure 4. Incident site taken from the south on 9/21/23. Customer service meter was found behind a wooden beam still attached to the exterior of the home, marked by the red square.



Figure 5. Aerial photo taken of the incident site from the west on 4/1/23. Debris on rooftop in the background is approximately 150 feet from center of incident site.



Figure 6. Aerial drone footage overview of incident site taken from the east on 4/2/23. Snow banks are taller than the fire engine (approximately 10-12 feet) just concealed on the top right portion of street.