

**Docket No. SA-534**

**Exhibit No. 5-C**

**NATIONAL TRANSPORTATION SAFETY BOARD**

**Washington, D.C.**

Belmont-San Carlos Fire Department  
Origin and Cause Narrative

(5 Pages)

---

**BELMONT-SAN CARLOS FIRE DEPARTMENT**  
**FIRE INVESTIGATION REPORT**  
**ORIGIN AND CAUSE NARRATIVE**

---

**Incident # 2010CASBR-002612**

**Date of Incident: 09-09-2010**

**Location: Glenview Drive at Earl Avenue, San Bruno California**

**Fire Type: Pacific Gas & Electric, Natural Gas Service Main Explosion with Fire**

---

1 **References:**

2 City of San Bruno Police Department Incident Report

3 City of San Bruno Fire Department Incident Report

4  
5 **Investigation Team:**

6 I-1, James Palisi, Belmont San Carlos Fire Department-Investigation Group Supervisor

7 I-2, Jeremy Davis, Santa Clara County Fire Department

8 I-3, Eric Emmanuele, Milpitas Fire Department

9 I-4, Brian Parker, Bureau of Alcohol, Tobacco and Fire Arms (BATF)

10 I-5, Barbara Maxwell, Bureau of Alcohol, Tobacco and Fire Arms (BATF)

11 I-6, Gabrielle Solleder, Bureau of Alcohol, Tobacco and Fire Arms (BATF)

12 I-7, Ron Keifer, Menlo Park Fire Protection District

13 I-8, Christine Reed, Central County Fire Department

14 I-9, Julie Parenti, Central County Fire Department

15 I-10, Mike Leong, San Mateo Fire Department

16 I-11, Bill Euchner, San Mateo Fire Department

17 I-12, Mark Duri, San Mateo County Sheriff's Department

18 I-13, Heidi Schindel, City of San Bruno Police Department

19 I-14, Troy Fry, City of San Bruno Police Department

20  
21 **Legal Descriptive Location:**

22 N 37° 37.366 x W 122° 26.454, Property Owner, ~~(R)~~----- - -----

23  
24 **Cause:**

25 Unknown

26  
27 **Chargeable Offense(s)**

28 None applicable at this time.

29  
30 **Weather Conditions:**

31 On the fire scene at 18:15 hours, partly cloudy winds from the West at approximately 20 mph  
32 sustained. The temperature was 65° with a RH of 58%. The sky was clear with scattered clouds  
33 with no recent reportable rain fall or lighting activity. This information was obtained from the  
34 National Weather Service Web Site.

35  
36 **Synopsis:**

37 At approximately 18:12 on 09-09-2010, San Bruno Fire Department responded to a reported  
38 explosion with fire at Glenview Road and Earl Avenue. First arriving fire department reported a  
39 major fire burning at several locations along Glenview Road, Earl Avenue, and easterly towards  
40 Clairmont Drive. There was active advancing fire east, into the open space canyon.

41 This area is located within the incorporated City of San Bruno of San Mateo County.

---

**BELMONT-SAN CARLOS FIRE DEPARTMENT**  
**FIRE INVESTIGATION REPORT**  
**ORIGIN AND CAUSE NARRATIVE**

---

**Incident # 2010CASBR-002612**

**Date of Incident: 09-09-2010**

**Location: Glenview Drive at Earl Avenue, San Bruno California**

**Fire Type: Pacific Gas & Electric, Natural Gas Service Main Explosion with Fire**

---

42  
43 The incident was given the name Glenview as permitted under the Incident Command System for  
44 the closest area landmark for reference. There was several single family structures well involved  
45 with fire, along with several parked vehicles along the aforementioned city street. City streets were  
46 littered with a variation of debris from the blast which delayed access for emergency vehicles and  
47 personnel. To further hamper fire suppression effort, city water mains were damaged by the initial  
48 blast, thereby reducing water flow and pressure. In some cases, fire hydrant located in the incident  
49 area did not function at all.

50  
51 **Damaged Property:**  
52 Approximately 10 acres of open space, 37 structures completely destroyed, approximately 125  
53 damaged, 4 fatalities, 57 injured. See main city damage assessment report for structure loss with  
54 estimated dollar loss.

55  
56 **Police Department:**  
57 City of San Bruno Police lead agency, supported by various local, state and federal law enforcement  
58 agencies. See main report for specific functions of the aforementioned law enforcement agencies  
59 and agency report numbers.

60  
61 **Evidence/Photos:**  
62 Origin investigation photographs were taken by I-2, I-3 and I-4 on Friday, 09-10-2010.  
63 Potential evidence was located and GPS by I-8, I-9, I-10, I-11, I-12. All suspected evidence  
64 Located was secured, documented and left in place for the National Transportation Safety Board  
65 investigation team. All confirmed pieces of physical evidence were located within the specific  
66 origin area. No evidence was collected by any members of this preliminary origin and cause  
67 investigation team.

68  
69 **DETAILS OF INVESTIGATION**

70 **Source:**  
71 On Friday September 10, 2010 at approximately 01:25 hrs, I-1 Palisi (me) was paged by San Mateo  
72 County Public Safety Communication and notified me that I was being requested for an assignment  
73 on the fire investigation team for the aforementioned incident

74  
75 **Details:**  
76 At 2:45 on 09-10-2010, I arrived at the incident command post located at San Bruno Avenue and  
77 Glenview Road. I was briefed by the Fire Mutual Aid Coordinator, Fire Chief Doug Fry, and was  
78 given the assignment of leading the origin and cause fire investigation team. I was then given the  
79 authority to order those additional personnel resources to complete the assigned task. I then  
80 proceeded to the general origin area of the incident at approximately 03:15 hours, escorted by San  
81 Bruno Police Department personnel to assist me with securing the origin and any visible physical  
82 evidence that may have contributed to the blast and subsequent fires.

---

**BELMONT-SAN CARLOS FIRE DEPARTMENT**  
**FIRE INVESTIGATION REPORT**  
**ORIGIN AND CAUSE NARRATIVE**

---

**Incident # 2010CASBR-002612**

**Date of Incident: 09-09-2010**

**Location: Glenview Drive at Earl Avenue, San Bruno California**

**Fire Type: Pacific Gas & Electric, Natural Gas Service Main Explosion with Fire**

---

83  
84 When I arrived at the site, I observed several structures still burning along Glenview Road and  
85 Claremont Drive to the east and smaller fires burning along Earl Avenue to the West. I then  
86 observed a large section of metal pipe lying in the street on Glenview Road and a large pond near  
87 the intersection of Earl Avenue and Glenview Road. Viewing this area and the damage differential  
88 observations, I determined that this area was the suspected general origin area for the blast and fire.  
89 I then instructed the police officer with me to secure an area approximately 150' x 150' around the  
90 blast seat and piping material, to secure from people entering the area and to establish visible scene  
91 security. I then continued to the west up to Claremont Avenue to the north, north/east were I  
92 observed several completely destroyed single family home, in the area that was determined to be the  
93 advancing portion of the fire's origin. At this site, medical examiners and other police officers were  
94 investigating the locations and remains of three confirmed human remains found during the  
95 firefighting operations. I then returned to the ICP at approximately 06:30, to place the order for  
96 additional investigators to complete the preliminary origin and cause investigation.

97  
98 At 10:00, an investigation team briefing was conducted with assigned personnel, on the current  
99 status for the incident, goals and objectives and team member assignments. Team assignments were  
100 given to those present; I-2, I-3, I-4, I-5, I-6, I-7 were assigned to Origin and Cause, and I-8, I9,  
101 I-10, I-11, and I-12 were assigned to scene GPS for potential evidence identification, waypoint, and  
102 logging for map overlay. I-1 stayed as Investigation Group Supervisor and transitioned into unified  
103 command with San Bruno Police Department detectives, as to prepare for the transition with the  
104 NTSB investigation team.

105  
106 In review of the completed reports by the Origin and Cause Team the conducted the fire scene  
107 investigation of the general origin area down to the specific origin area, deliberate cause, potential  
108 natural causes, and accidental causes for the source of ignition were evaluated and ruled out. Based  
109 on the origin and cause investigation of the fire, the following exclusions were made:

110  
111 **Lightning**  
112 A thorough investigation of the area in and around the general area of origin did not reveal any  
113 indications or evidence of a lightning strike in the area. There were no signs of a tree strike and no  
114 evidence of fulgurites or other evidence of a possible ground strike.

115  
116 **Arson**  
117 Based on the fire scene examination noted at the general origin area, as well as a lack of any  
118 evidence of incendiary devices, arson is excluded.

119  
120 **Smoking**  
121 Based on the fire scene examination noted at the general origin area, as well as a lack of any  
122 evidence of discarded smoking material, smoking material has been excluded.

---

**BELMONT-SAN CARLOS FIRE DEPARTMENT**  
**FIRE INVESTIGATION REPORT**  
**ORIGIN AND CAUSE NARRATIVE**

---

**Incident # 2010CASBR-002612**

**Date of Incident: 09-09-2010**

**Location: Glenview Drive at Earl Avenue, San Bruno California**

**Fire Type: Pacific Gas & Electric, Natural Gas Service Main Explosion with Fire**

---

124 **Children**

125 Based on the remoteness at the general origin area, as well as a lack of any evidence of children  
126 playing in the area, child play has been excluded.

127  
128 **Equipment Use**

129 There was no evidence of any recent equipment use in the general origin area.

130  
131 **Miscellaneous**

132 There are no miscellaneous sources of ignition in or near the specific origin area. There was no  
133 ammunition casings found littered throughout the area. There were also no rock strikes or other  
134 evidence in the general origin area to support shooting as a cause.

135  
136 There were overhead power lines in the general origin area, but they appear not to have been  
137 cause for ignition of the underground gas transmission line, escaping gas product. There were no  
138 broken glass fragments in the specific origin area to support glass refraction and/or  
139 magnification. There was no evidence of spontaneous combustion in the general origin area.  
140 There was no evidence of welding or cutting operations in the general origin area.

141  
142 **Opinions and Conclusions:**

143 Based on the fire scene investigation, known facts, it is the opinion of this Fire Officer that the  
144 cause for the fire cannot be determined as of this writing. Given the facts known; the established  
145 trajectory of the fire's growth, the blast seat, expelled underground high pressure gas main  
146 piping, the debris path, it can be concluded that an explosion occurred with escaping natural gas  
147 underground, came into contact with an unknown ignition source at an unknown location. The  
148 actual point of (ignition) origin could not be located.

149  
150 **Recommendations:** Transfer investigation authority to the NTSB to continue the investigative  
151 process.

152  
153 END OF REPORT

154  
155  
156  
157 **James Palisi, Fire Marshal**  
158 **Belmont-San Carlos Fire Department**  
159 **Fire Marshal**