



**OFFICE OF ENERGY INFRASTRUCTURE SAFETY
UNDERGROUND SAFETY BOARD**

**2024 ANNUAL REPORT TO THE
GOVERNOR AND LEGISLATURE**

ABOUT THIS REPORT

The Dig Safe Act of 2016 (Gov. Code section 4216 et seq.) created the Underground Safety Board (Board). Section 4216.23 requires the Board to annually report its activities and recommendations to the Governor and Legislature. The Board is charged with coordinating the state's education and outreach efforts on safe excavation around buried facilities, developing safe excavation standards, investigating possible violations of the Act, and enforcing the Act within its enforcement jurisdiction.



For a hard copy of this report, please contact the California Underground Safety Board at the Office of Energy Infrastructure Safety at (916) 902-6000. This report may also be accessed on the Board's website at [Annual Reports & Plans | Office of Energy Infrastructure Safety](#).

LETTER FROM THE CHAIR

The Honorable Gavin Newsom, Governor of the State of California, and distinguished members of the California State Legislature:

The Underground Safety Board (Board) is committed to educating people about safe excavation practices, developing safety standards, and investigating and enforcing the Dig Safe Act to improve public and worker safety. To accomplish this, the Board is working on several multi-year initiatives, including the development of safety standards for exposing buried facilities, the creation of a planning and design ticket process, improvement of the 811 emergency excavation notification process, enhancement of the Electronic Positive Response communication between excavators and operators, increased safety education and awareness through a coordinated statewide effort, and improving the "No 811" damage reporting and evidence collection processes to expedite the investigation process for failure to use the 811 notification system. The Board continues to collaborate with its partner state jurisdictional agencies on enforcement.

This report highlights the lessons learned through enforcement investigations and engaging with the industry and stakeholders. It details the actions the Board took to apply the information learned and outlines the work we strive to accomplish in 2025. We want to share our progress with you and give you an indication of anticipated improvements to safe excavation practice in California.

Sincerely,

Amparo Muñoz
Chair, Underground Safety Board

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EXECUTIVE SUMMARY

This report outlines the progress made by the Underground Safety Board (Board) in 2024, highlighting the past year of dedicated efforts to enhance the state’s “call before you dig” process. The report also presents the Board’s recommendations to the Governor and Legislature that address longstanding issues in excavation safety, emphasizing that many of these initiatives are multi-year projects designed to ensure safer digging practices around buried facilities for everyone.

The Board, supported by the Office of Energy Infrastructure Safety (Energy Safety), has leveraged technology to drive improvements in its investigations, policy development, and compliance efforts. For example, the “No 811” pilot program, launched in partnership with Southern California Gas Company (SoCalGas), found 85 cases in 2024 where digging happened without a required ticket. The program uses surveys to collect information from the excavators and operators to expedite the process and reduce investigation timelines. In 2024, the Board also laid the foundation for expanding the program to include more utility operators in 2025 so that it can be evaluated for statewide implementation.

Often, parties involved in investigations fail to engage with the investigative process, resulting in no response or delayed responses to requests for information or interviews. These delays waste state resources and impede timely resolution. Furthermore, the Board does not have enough investigators to handle all the work, as only 13 percent of damage and complaint notifications are currently being investigated. This underscores the urgent need for additional resources to fulfill the Board’s regulatory mandate.

Many utility operators continue to disregard the rules for using the Electronic Positive Response (EPR) process, despite it being in place for four years. The Board is planning to begin conducting regular audits to improve operator compliance while prioritizing ongoing education to ensure operators understand their responsibilities. To facilitate improving communication between an excavator and utility operator regarding the location of buried facilities, the Board is evaluating revising EPR codes and developing a two-way positive response communication framework.

In 2024, the Board addressed the ongoing lack of coordination between utility operators and excavators during pre-project design. This lack of coordination increases safety risks, causes delays, and increases costs for excavation projects. The Board is continuing its efforts to define the planning and design work process and the transfer of buried facilities information during the project planning phase. To assist in the effort of improving coordination between utility operators and excavators, the Board continues to recommend (as they have in this report), that utility operators be required to participate in the Planning and Design Ticket process and to require that excavators provide reasonable advanced notification and utility coordination requirements when planning to make significant excavation notifications.

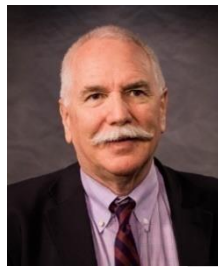
THE BOARD

The Board is composed of nine members, seven of whom are appointed by the Governor and one each is appointed by the Speaker of the Assembly and the Senate Rules Committee.

Members



Amparo Muñoz
Chair



Bill Johns
Vice Chair



Ron Bianchini
Served through
January 8, 2024



Randy Charland



Marjorie Del Toro
Served through
January 8, 2024



Marshall Johnson



Carl Voss



Dave Sorem
Appointed July
12, 2024, by
Governor Gavin
Newsom

Committees

Unmarked and Abandoned Lines

Chair Amparo Muñoz and Vice Chair Bill Johns

Geographic Information Systems

Chair Amparo Muñoz and Carl Voss

Legislative

Chair Amparo Muñoz

Education and Outreach

Marshall Johnson and Carl Voss

Ticket Process

Randy Charland and Marshall Johnson

Potholing and Planning and Design

Vice Chair Bill Johns and Marshall Johnson

BOARD RESPONSIBILITIES

Government Code Section 4216.12

- Coordinate education and outreach activities that encourage safe excavation practices
- Develop excavation safety standards
- Investigate possible violations
- Enforce the Dig Safe Act

Mission

The Board improves public and worker safety by facilitating communication and learning among excavators and the operators of subsurface installations, by investigating accidents to determine their causes, and by developing solutions to improve safety outcomes. The Board strives to create a model regulatory and investigatory board for other states to emulate.

Vision

The Board is committed to a California in which the state's excavators and subsurface installation owners know and understand:

- How to identify the locations of subsurface installations,
- How to protect against dangerous contact with those installations, and
- How to resolve unexpected situations that may arise, and

in which the state's excavators and subsurface installation owners exercise that knowledge and understanding to promote a culture of mutual respect and dedication to the cause that everyone goes home safe.

Values

The actions and decisions of the Board members and staff will be guided and informed by their commitments to:

- Have respect for and attentiveness to the expression of differing backgrounds and perspectives of the Board's members, the public, and stakeholders, as well as for the missions of excavators, operators of subsurface installations, and other federal, state, and local agencies.
- Have a culture of continuous learning based upon the development and free exchange of safety information.
- Inquire into the facts of and context behind accidents, near misses, and latent safety-related conditions in the field.
- Be accessible to the public and stakeholders, within the bounds of the law, constitutional principles of due process, and ethical conduct.
- Have integrity in serving in the public interest and devotion to maintaining the public's trust.

Legislative History

SB 661 (Hill, 2016) The Dig Safe Act of 2016

Created the Board within the California Department of Forestry and Fire Protection with the following overarching charges:

1. Coordinate education and outreach activities that encourage safe excavation practices;
2. Develop standards;
3. Investigate possible violations of the Dig Safe Act; and
4. Enforce the Dig Safe Act.

AB 1914 (Flora, 2018)

Directed the Board to determine through regulation what types of power tools may be used around buried facilities prior to determining their exact location using hand tools.

AB 1166 (Levine, 2019)

Required operators to electronically communicate (EPR) to the excavator their locate and mark activities beginning on January 1, 2021, and required the Board to develop an application process to approve one-year extensions for good cause.

SB 865 (Hill, 2020)

Required GIS mapping of new buried facilities, required regional notification centers to share certain information with the Board, and moved the Board to the newly formed Office of Energy Infrastructure Safety (Energy Safety) as of January 1, 2022.

SB 297 (Durazo, 2021)

Increased penalties for “knowing and willful” violations of the Dig Safe Act up to \$100,000 for certain violations.

SB 778 (Ochoa Bogh, 2024) Effective January 1, 2025.

Among other changes, revisions were made to: (1) clarify the procedure an excavator must follow if a ticket expires; (2) add new notice requirements when an excavator intends to use vacuum equipment; (3) the response an operator provides to an excavator who has attempted to locate facilities and has requested more information; (4) clarify that an operator’s response to an excavation notification must meet certain requirements; and (5) the emergency notification procedures to be used when an excavator discovers or causes damage to a subsurface installation.



State Capitol, Sacramento

THE PROCESS, IN A NUTSHELL

The “call before you dig” process is based on communication:

- the excavator notifies the regional notification center of a planned excavation;
- the regional notification center finds the registered utility operators in the area and relays the notification to them;
- the utility operators respond to the notification by identifying any buried facilities they have in the area, and then letting the excavator know what they did.

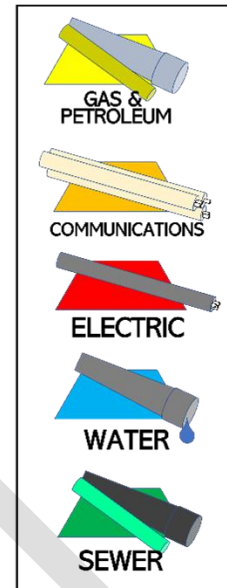
Operators of buried facilities are required to provide digital information to the state’s regional notification centers that identify the areas in which they may have buried facilities. These utility operators do not provide utility maps, but instead provide digital “shapefiles” that outline their service territories.

Anyone who digs is an excavator, and each excavator (with limited exemptions) needs to contact a regional notification center by calling the 811 “call before you dig” line (or go online) to indicate where they are going to dig and when. The regional notification center then passes that excavation notification to each utility operator whose “shapefiles” indicate that they may have buried facilities near the excavation site. On average, seven to eight utility operators are notified for each excavation.

A utility operator then has a minimum of two days to determine if they have buried lines in the excavation area. If they do, a utility locator will mark the area with paint, flags, or another means, or the utility operator will provide a map to the excavator. The utility operator will then notify the excavator of their actions (or say that it has no buried facilities in the area) through a message to the regional notification center’s electronic response portal. The excavator can then go online and check those responses to ensure that all utility operators have completed their work before starting excavation. Excavators are prohibited from beginning excavation until all utility operators have responded.

Simple in concept, complex in operation, the “call before you dig” process has yet to reach its full potential. This report outlines opportunities for improvement.

BURIED FACILITIES



EXCAVATORS



BOARD ACTIVITIES

Through the Board’s 2024 activities, that included investigations, stakeholder workshops, and public meetings, several areas for safety improvements in excavation practices have been identified.

Partnerships for Effective Education and Engagement

Issue to Address: In 2023, the Board held a stakeholder workshop at the Annual Education and Outreach meeting. During the workshop, gas utility operators and regional notification centers shared how they improved their education and outreach efforts. Through the discussion, all workshop participants expressed a desire to collaborate further, leverage their strengths, and maximize the reach of their resources. The challenge has been to find a party to take on the responsibility and to organize the joint effort.

Board Activities: In 2024, the Board hired and onboarded staff for the new Education and Outreach Unit dedicated to coordinating education and outreach activities that encourage safe excavation practices.

To continue fostering collaboration efforts discussed during the 2023 Annual Education and Outreach Meeting, staff interviewed 16 stakeholders and found that they have invested a great deal of time and money into marketing safe excavation practices, but they’ve done so without a unified approach resulting in fragmented education and training. At the 2024 Annual Education and Outreach meeting held in Riverside, the Board determined they would conduct a series of workshops in 2025 to identify the most critical industry issues, evaluate current training methods, set clear success metrics, and create an actionable improvement plan. The cumulative effort will increase inclusiveness of different experience and knowledge and will guide consistent and effective education and training efforts.

Additionally, the Board is working to increase outreach and strengthen relationships with trade and safety organizations. Chair Muñoz delivered the keynote speech at the 2024 California Regional Common Ground Alliance (CARCGA) 2024 Safety Summit and Expo. CARCGA is one of the largest buried facility safety organizations in the state and includes members from regional notification centers, utility operators, and professional excavators. The event was held at the Safety Center in Sacramento on October 2 and consisted of a mock strike event followed by safety training and concluded with an expo.



Underground Safety Board Chair, Amparo Muñoz, serves as the keynote speaker at the CARCGA Safety Summit and Expo.

The Board also held a stakeholder workshop to gain insight on the impact that geographical information systems (GIS) regulations could have on their operations. This workshop had the most stakeholder participation in the history of the Board, a result of stakeholder engagement at the CARCGA Safety Summit and the direct outreach work of staff. Input and feedback from stakeholders are essential. In 2025, the Board plans to continue direct stakeholder engagement on various initiatives to build partnerships, increase safety awareness, and to continue to inform policy initiatives and the development of effective regulations.



Board members engage stakeholders at the Geographic Information Systems Committee's October 2024 workshop.

Ongoing “No 811” Investigations Pilot

Issue to Address: Common Ground Alliance data indicates that failure to use the 811 notification system led to nearly 38 percent of California's damages in 2023. This is about 14 percent higher than the national average. While both utility operators and contractor groups support investigating these types of violations, few of the Board's notifications are complaints, and fewer still are for failure to contact a regional notification center. Additionally, these investigations can be difficult to execute because the evidence collection burden for "No 811" investigations has proven to be a significant impairment to conducting investigations for all but the most serious accidents.

Board Activities: In 2023, Board staff began a "No 811" investigation pilot program with Southern California Gas Company (SoCalGas) to develop the process and examine technological solutions that could kickstart these types of investigations. With better quality damage notification information and supporting documentation, staff would be able to review evidence and complete "No 811" investigations more efficiently. San Diego Gas & Electric (SDG&E) joined the pilot in 2024. The two pilot participants submitted 85 notifications of damages without a ticket.

During 2024, Board staff and the Energy Safety Data Analytics team revised and enhanced the "No 811" damage reporting survey to improve evidence collection to accelerate the investigation timeline for these cases. Board staff also developed an excavator survey to collect information and documentation on their contact with the regional notification center and the incident under investigation. The “No 811” damage notification and the excavator surveys assist in the collection of critical information and documentation early in the investigative process. Board investigators are testing the dual survey approach, with feedback from pilot

participants, and will continue to refine the process in anticipation of its public release. The Board will also be evaluating adding additional participants to the pilot program.

In 2025, staff will continue to make additional improvements to the DigCase system to drive the efficiency of these investigations. Energy Safety’s IT upgrades to DigCase will allow the Board to automatically load the damage notifications, excavator survey responses, and supporting documentation for examination in a single system. Once the process and the technology are proven, the Board intends to direct investigations’ staff to end the pilot and open the program to all complaints statewide. If successful, the Board intends to pursue pilot programs for other complaint types, such as when a utility operator fails to respond to an excavation notification.

Continued Development of Standards for Safely Exposing Buried Facilities

Issue to Address: Several years ago, the Board discussed how a failure to identify the location of an existing buried gas line led to an explosion and fire in the streets of San Francisco. In this incident, the contractor installing a fiber optic line should have potholed (made small, hand dug, bore holes) to locate any lines in conflict with their planned excavation. The excavator did not pothole and struck a main gas line with heavy digging equipment. During the Board’s workshops, both excavators and operators have expressed the need for standards guidance on where to expose existing lines before excavating with heavy equipment.

In addition to the Board’s efforts, national damage prevention organizations have also shown the importance of potholing. Common Ground Alliance identified “failure to pothole” among their top six root causes for excavation damage **again** in 2023.

Board Activities: In June of 2024, the Potholing Committee released two surveys to gather more information for development of the Board’s Safe Excavation Standards (see Chart 1 above). These surveys asked stakeholders to identify which buried facility characteristics affect the development of a pothole plan and how other buried facility information, such as depth, is used or provided during potholing. The survey results provided useful data for determining

where and how often to pothole lines before construction and it has informed the development of standards in 2024.

In July, recognizing the importance of planning facility exposures in advance and before construction, the Board merged the potholing and the planning and design policy work together under a single committee. The Board plans to conduct more outreach regarding these topics, either through additional surveys or stakeholder workshops in 2025.

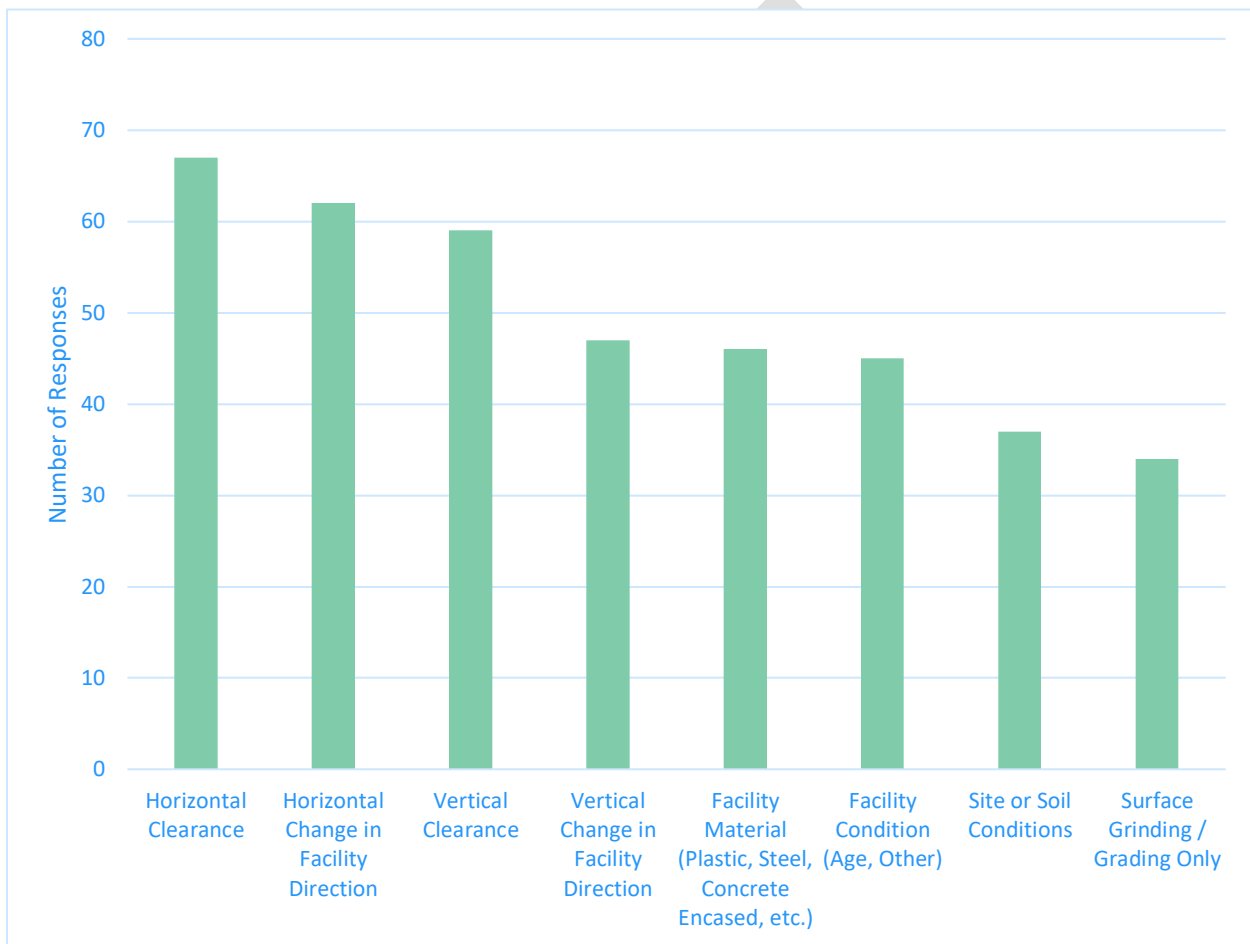


Chart 1 - Responses from one of the June 2024 Potholing Surveys. This chart shows the number of participants that felt each factor was important for determining the spacing between potholes that should be made over buried facilities in the project area before construction.

Future Board work, including standards development for potholing and planning and design, will harmonize with another vital Board effort focused on operators timely mapping buried facilities. These efforts include developing standards or regulations to implement an amendment to the Dig Safe Act, which became effective on January 1, 2023, that requires operators to map new subsurface installation locations using a geographic information system (GIS). GIS is a vast improvement to paper-map recordkeeping. Digital records can be updated easily whenever potholing and other exposures reveal location errors and unmarked lines. As more accurate maps are available to project design engineers and locators, their work



becomes easier and presumably more accurate. Consequently, the job of an excavator to expose buried facilities in the field before construction should be safer.

Emergency Excavation Notification

Issue to Address: Currently, there is no requirement to notify a regional notification center when excavating in response to an emergency. The regional notification centers have created an “emergency” ticket type to allow an excavator to alert operators in the vicinity of an emergency excavation, but its use remains optional.

During its April 2024 meeting, the Board considered the conditions under which an excavator should make an excavation notification in the case of an emergency, and how an operator should respond. The Board concluded that excavators should be required to make excavation notifications in all emergencies, the excavator should not need to wait for operators to respond to begin addressing the emergency, and operators should continue to be required to respond to all emergency related tickets within the existing two-day timeframe.

Board Activities: At the July 2024 meeting, staff presented a report^{1, 2} that included the following:

The Board recommends retaining current laws permitting emergency excavations to begin before an operator responds, with targeted modifications to ensure safety and accountability during emergencies, including mandatory excavation notifications and streamlined operator-excavator communication.

¹ [July 8-9, 2024, Board Meeting, Item 11 Recommendation to the Governor and Legislature Regarding the Emergency Exemption to 811 Notification](#)

² [July 8-9, 2024, Board Meeting Minutes, Item 11, Revised Recommendation to the Governor and the Legislature Regarding the Exemption to 811 Notification](#)

Enhanced Safety and Communication: Streamlining Electronic Positive Response (EPR) Systems

Issue to Address: Electronic positive response (EPR) is a critical safety communication channel between utility operators and excavators. The enactment of AB 1166 (Levine, 2019) enhanced utility operator's accountability following a 2018 California Public Utilities Commission investigation of Pacific Gas and Electric Company's locate and mark practices. However, Board investigations revealed that many operators failed to implement EPR requirements into their day-to-day operations.

Since EPR participation became mandatory in 2021, Board members have expressed concerns about the redundancy and ambiguity of various response options. While some codes offer valuable information, others introduce obligations that are not legally required or do not inform the excavator about how an operator fulfilled their requirement to locate and mark.

Board Activities: To address the EPR issues identified above, in 2024, staff proposed merging redundant codes and eliminating misleading codes to promote clearer communication and reduce misunderstanding. The proposed "revised codes," developed by staff, include categories that identify the status of locate and mark more quickly, and clearly outline the next steps required for the operator and excavator.

Additionally, staff developed a framework for a two-way EPR and a simulation tool to demonstrate how the two-way EPR framework works. The two-way EPR framework provides a record of interactions between excavators and operators, which is visible to both parties and can be helpful for understanding post-incident situations and investigations. It further helps with proper EPR code usage during excavation, ensuring transparency and is expected to improve compliance with the Act and its regulations. Both parties can select from a predefined set of EPR codes and users can add comments to provide additional context or clarify specific details related to the marking status, excavation schedule, or other relevant information.

In 2025, the Board's Education and Outreach team will collaborate with stakeholders to identify, develop, and implement initiatives to better inform operators of their obligation to provide electronic positive responses and perform field locate and marking to promote more efficient communication and compliance. By enhancing operator awareness and knowledge, the Board will foster collaboration and a more effective safety culture for excavation projects.

RECOMMENDATIONS FROM PRIOR YEARS

In its 2022 Report to the Governor and Legislature, the Board made the following recommendations:

1. The Board recommends that utility operators be required to participate in the Planning and Design Ticket.
2. The Board recommends that it be authorized to place reasonable advanced notification and utility coordination requirements on excavators planning to make significant excavation notifications.

SUMMARY OF RECOMMENDATIONS

The Board reiterates its recommendations from its 2022 Annual Report.

By supporting these changes, the Legislature can help the Board keep people safe, prevent accidents, and improve how digging projects are handled across California.

Conclusion

Throughout 2024, the Board identified several areas for improvement that go beyond excavator failure to “call before you dig.” Board investigations and outreach uncovered more details about the links between project design, excavator and operator practice, the 811 notification system, and how the failure of any of these can lead to unintentional and unsafe consequences. As the Board heads into 2025, it will continue develop partnerships and solicit stakeholder input with the goal of improving public and worker excavation safety in California.

Investigations Highlighted in this Report

23NTS00001: Residential (Palm Desert) No 811 Complaint

CAS-01555-W6JSP1: Saddleback Drive (Bakersfield) No 811 Compliant

C223470004-0096: Broad Avenue (Wilmington) No Response Complaint

C223470004-0118: Lecouvreur Avenue (Wilmington) No Response Complaint #1

C223470004-1105: Lecouvreur Avenue (Wilmington) No Response Complaint #2

C223470004-0138: West Harry Bridges Avenue (Wilmington) No Response Complaint

C223470004-0201: North Marine Avenue (Wilmington) No Response Complaint #2

C223470004-0254: North Marine Avenue (Wilmington) No Response Complaint #2

D222980003: Sixteenth Street (San Francisco) Line Strike

19SA01279: Geary Boulevard (San Francisco) Natural Gas Rupture and Fire

Board Meetings and Investigations Information

For more information regarding Board meetings and investigations, please visit:

- **Board meetings and activities:**
<https://efiling.energysafety.ca.gov/Dockets.aspx?caseId=1254>
- **Investigations, enforcement notices, and Board decisions:**
<https://efiling.energysafety.ca.gov/Dockets.aspx?caseId=1255>.

DRAFT



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