

State Officials Determined To Prevent Another Walnut Creek Disaster

California Seeks Tougher

ACCORDING TO RON OLITSKY, PRESIDENT OF UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA, "NOTHING EVER HAPPENS UNLESS THERE HAS BEEN SOME SORT OF WAKE-UP CALL IN THE FORM OF AN ACCIDENT OR TRAGEDY." LAST NOVEMBER, THAT WAKE-UP CALL CAME WHEN A BACKHOE EXCAVATING FOR A WATER DISTRIBUTION LINE PUNCTURED A BURIED HIGH-PRESSURE FUEL PIPELINE IN DOWNTOWN WALNUT CREEK, CALIF. GASOLINE RELEASED INTO THE WATER PIPE TRENCH WAS IGNITED BY WELDING ACTIVITIES INSIDE THE PIPE, CREATING A FIREBALL SEVERAL STORIES HIGH THAT KILLED FIVE WORKERS AND SEVERELY BURNED FOUR OTHERS. THE BLAST WAS THE NATION'S DEADLIEST LIQUID PIPELINE EXPLOSION IN MORE THAN 20 YEARS. (SEE SIDEBAR FOR DETAILS.)



California Senator Tom Torlakson convened a hearing to solicit recommendations on how to prevent future breaches of hazardous subsurface utilities. Photo by Craig Cheslog, the senator's district director.

**BY SUSAN WILLIAMS,
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Since the completion of the accident investigation in May 2005, the California legislature, the California Division of Occupational Safety and Health (DOSH) and the local construction industry have been exploring ways to prevent future breaches of hazardous subsurface utilities.

A Preventable Accident

In a press release issued by the California Department of Industrial Relations on May 5, DOSH Acting Chief Len Welsh said: "After a six-month, thorough investigation, Cal/OSHA [DOSH's enforcement arm] has determined that the explosion that occurred

November 9, 2004, leaving five employees dead and four seriously injured, was completely preventable. The primary cause of the incident was that the location of the petroleum line was not known by the employees working in the area. Several employers failed to take required action and committed errors that contributed to the failure to determine and mark the location of the utility line."

Welsh later reiterated that "human performance failures" had been found at various levels. "The ultimate answer to something like this," he said, "is to construct a system that is resistant to such failures," that is, one with "back-up, redundancy and quality control."

Damage Prevention Recommendations

On June 10, California State Senator Tom Torlakson (D-Antioch), in whose

district the accident occurred, held a Senate Select Committee on Bay Area Infrastructure hearing to solicit damage prevention recommendations. "We had a tragedy here that was incredible in its consequences," said Torlakson. "We're here today to find out how we can avoid such a casualty ever happening again, and to look at where current state laws and regulations worked and where they didn't." Commenting that current methods of protecting hazardous underground utilities were "very ad hoc," he indicated that he intended to push for tighter laws regulating how utilities are marked.

At present, state law requires Bay Area excavators, before digging, to call the one-call center (Underground Service Alert of Central/Northern California, Nevada and Hawaii—USA

Locate Regulations

North) that in turn contacts the owners of any underground pipelines and utilities in the vicinity of the proposed excavation. Those owners must locate and mark their lines or otherwise advise workers of their location. Utility companies either use in-house “line riders” (personnel who mark pipeline locations) or outsource the job to professional locating firms. Currently, there are no state laws requiring that locators receive specific training or that their performance be monitored.

The primary recommendations for safe excavation near subsurface utilities suggested at the June 10 hearing included requirements that:

- locators be certified and monitored;
- locators use the “best technology available”—e.g., Ground Penetrating Radar (GPR), Global Positioning System (GPS), Orthographic and Satellite Images, Surface Utility Engineering (SUE) or Geographic Information System (GIS)—to determine/verify a pipeline’s location, or dig by hand at specific intervals to expose the pipeline;
- hazards be better highlighted on design and construction drawings; and
- pipeline companies respond in a timely manner to contractor requests for information about their underground utilities.

Torlakson also indicated that he might consider legislation to increase the fines that Cal/OSHA can levy. (See sidebar for the fines levied against the employers involved in the Walnut Creek accident.)

At the hearing, Mark Breslin, executive director of the Engineering & Utility Contractors Association (EUCA), made the following *additional* recommendations:

- Require multi-party verification of subsurface utilities by mandating

that utility owners respond to utility locate requests placed by design engineers through the one-call centers.

- Require as-built drawings [a detailed depiction of facilities as installed in the field] to be updated within a reasonable time period, either by the utility owner or the utility contractor.
- Require mandatory participation in requested “Field Meets” of all stakeholders in construction projects that involve hazardous subsurface utilities.
- Require USA North and its utility owner members to provide *direct* contact information to excavators, 24 hours a day, seven days a week, when requested, in the event that they have a question about the location of a facility. USA North members should also be required to respond to requests for additional utility verification within a reasonable timeframe.
- Require USA North to incorporate a variety of industry stakeholders on their board. These should include, but not be limited to, design engineers, excavation contractors, utility locators, and public agencies, as well as utility owners/operators. (Note: USA North responds to the latter two recommendations under the “Stakeholders Look Ahead” header below.)

Interviewed for a May 5 article in the *Contra Costa Times*, Frances Schreiber, a former staff attorney for

DOSH’s investigations division, added another recommendation—this one aimed at both public agencies and underground utility construction contractors. For some time she has publicly decried the fact that current laws do not require public agencies to review bidders’ safety histories before awarding multi-million-dollar contracts. “Without such a law,” she said, “contractors who cut corners gain an advantage in a state that requires public contracts go to the lowest ‘responsible bidder.’” Schreiber, who worked with Sen. Torlakson on an elevator safety bill several years ago, is expected to provide input on any new locate legislation.

The Implementation Process

EUCA’s Breslin concluded his June 10 hearing testimony by saying that “change will not come about without



Locator Erik Lawson uses a Radiodetection RD400 Line Locating unit while marking utilities for Citi Lites, Inc., a 15-year-old, family-run locating business that provides statewide coverage from its base in Pequot Lakes, Minn. (218-568-4744).

the oversight of the legislature and Cal/OSHA, as resistance to change is part of most organizational cultures, as well as the human condition.” Both Senator Torlakson, who has a long history of consumer protection and pub-

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—California Senator Tom Torlakson

lic safety legislation in California, and Cal/OSHA Acting Chief Welsh have risen to the challenge. At the hearing, Torlakson indicated that some of the proposed reforms would most likely require changes to state law. To that end, Cal/OSHA's Welsh convened a task force of representatives from public agencies, construction companies and utility owners on July 26 to develop specific recommendations for new state regulations and potential legislation.

While no new substantive damage prevention proposals were made, attendees did discuss the possibility of moving Government Code 4216 (current laws regarding excavation) to the Labor Code, which would allow Cal/OSHA to enforce those laws. At present, the only recourse for someone making a complaint under Code 4216 is through the agency issuing the work permit, the local district attorney or the State Attorney General's office. At press time, Welsh had plans to convene a smaller committee of stakeholders in early September to finalize the recommended changes to the regulations governing how utilities are located and marked.

According to Sen. Torlakson's office, CAL DOSH and the DOSH Standards Board (the rule-making body) can then act quickly to identify and establish any administrative or regulatory

changes in the Labor Code. If the task force process currently underway identifies potential legislation, the senator has said that he will support the necessary statutory changes. This would mean introducing a bill in early 2006. Under normal timelines, bills signed by the governor in 2006 would take effect on January 1, 2007.

Stakeholders Look Ahead

In order to provide readers with a realistic perspective of the recommended changes, *Utility Contractor*

asked a number of government and industry stakeholders to comment on the recommendations, implementation process and long-range effects of tougher locate rules.

California Sen. Tom Torlakson:

“We will find ways to tighten the laws to provide more safety and accountability,” said Torlakson at the June 10 hearing. When recently asked whether or not he was optimistic about his chances of getting such legislation passed, Senator Torlakson said: “In the past, I have been successful on many public policy issues when I've brought together diverse groups, started a positive dialogue and looked for areas of agreement. Regarding the matter at hand, we are awaiting the recommendations of the Cal/OSHA task force and looking forward to a broad-based, collaborative discussion of the issues.”

Bob Kipp, president of the Common Ground Alliance:

“In general, we are supportive any time safety and damage prevention is improved by replacing existing practices, when possible, with CGA Best Practices,” said Kipp. According to Kipp, the CGA practices that address the recommendations from the June 10 hearing include: minimum training

guidelines and practices for locators; guidelines for auditing the work of locators; designer adherence to *all* federal, state and local guidelines, codes, statutes and other facility owner/operator standards; and the facilitation of field meets by one-call centers. “It is important, however, to focus on all aspects of the damage prevention process, not just those specifically related to the Walnut Creek incident,” said Kipp. “The CGA Best Practices provides an excellent framework for considering all of the relevant issues.” (The latest version of the CGA Best Practices can be downloaded from the website at www.commongroundalliance.com.)

Mark Breslin, executive director of the Engineering & Utility Contractors Association:

While he expects that Senator Torlakson and Cal/OSHA will ultimately be successful in implementing changes, Breslin acknowledged that some of the recommendations were likely to generate opposition—for example: requiring utility locators to respond to locate requests from design engineers; any additional liability for owners, designers or locators; updating as-built drawings in a timely manner; and providing the contractor direct access to the utilities for the purpose of getting clarification on utility location. Asked what role EUCA was likely to play in the implementation process, Breslin replied that the association had already played a significant role in providing expert testimony to the state legislature and to Cal/OSHA on ways to prevent a similar incident from ever happening again. “And, as it has for more than three years,” said Breslin, “EUCA will continue to actively participate in the California Damage Prevention Committee, which is now a recognized Regional Common Ground Alliance Chapter.”

Ron Olitsky, president, USA South:

Olitsky's reaction to the four primary recommendations from the June 10 hearing was that he did not expect them to have a direct impact on the operations of the USA South one-call center. When asked if he thought

Torlakson and Cal/OSHA would be successful in their efforts to tighten the laws and regulations, he pointed out that the major changes in California's Government Code spelling out the responsibilities and requirements of excavators and owners of underground lines were made when one man was electrocuted after hitting a transmission line and that USA South was established three months after a hit on a Chevron line in 1976 that killed nine people. "My gut feeling," said Olitsky, "is that avoiding another Walnut Creek tragedy will require stronger adherence [to laws and regulations] by both excavators and facility owners."

Don Heyer, operations manager, USA North:

Like Olitsky, Heyer does not expect the four primary recommendations that came out of the June 10 hearing to place any additional burdens on the USA North call center. "Our center is dedicated to doing all that is possible to prevent such a situation from ever occurring again," said Heyer. He also expressed the opinion that the owners/operators of underground facilities should be required to use the "best technology available," specifically "Subsurface Utility Engineering (SUE) at its highest level" when locating their facilities.

With regard to Breslin's recommendations regarding USA North operations, Heyer said:

- "The center's board decided that 24/7 operation is not necessary because: 1) the excavator has sufficient time [two working days] to notify the center, and 2) the cost to operate the center 24/7 would be substantial. For convenience, the center has introduced Internet Access for excavators to manage their tickets online 24/7."
- "Calling the center [rather than the utility owner(s) directly] allows the excavator to make one call to notify *all* members who may have underground facilities at the excavator's job site, thereby creating a safety net. The center records the conversation with the excavator to provide proof of the call and document the information that was pro-

The Walnut Creek Pipeline Explosion

The following accident summary is from a May 5, 2005 press release issued by the Cal/OSHA: "On November 9, 2004, at 1:22 p.m., an excavator operated by Mountain Cascade, Inc. (MCI) punctured a high-pressure petroleum line owned by Kinder Morgan Energy Partners, L.P. (KMP). MCI was constructing a large water supply line for East Bay Municipal Utility District (EBMUD). Gasoline was released into the pipe trench and was ignited by the welding activities of Matamoros Pipelines, Inc., a welding subcontractor working for MCI. The resulting explosion and fire fatally injured five employees and seriously injured four other employees. All of the victims worked for Matamoros and MCI, and all fatalities and injuries were due to the explosion and fire. There was also extensive property damage."

The press release also announced the Cal/OSHA citations issued against the employers for violations leading to the explosion. Because Cal/OSHA determined that the failure to accurately mark the pipeline was the biggest single factor in the deadly blast, KMP was cited for two "serious willful" violations and fined \$140,000—the stiffest possible penalty. MCI and Carollo Engineering (the firm that designed the water main's route) each received "serious, accident-related" citations and were fined \$22,500. EBMUD, which was responsible for hiring MCI, was cited for one "serious" violation and fined \$6,750. All the parties cited have appealed the rulings.

Cal/OSHA has an additional investigation underway through its Bureau of Investigations. That body's findings, which focus on possible criminal liability involved in the accident, will be given in a confidential report to the Contra Costa District Attorney's Office this year for a determination as to whether criminal charges are applicable. The accident has also generated at least three wrongful death lawsuits and one injury lawsuit in Alameda and Contra Costa Superior Courts. On July 6, the state fire marshal slapped an additional \$500,000 fine—the legal maximum—on KMP for failing to accurately mark the location of its pipeline.

vided. This saves the excavator from making additional calls or making the *wrong* direct call."

- "For 30 years, our center has utilized a three "No Response" follow-up procedure. This procedure was reviewed, revised and approved with 100 percent consensus by the California Damage Prevention Committee. The center has also suggested that the CDPC recommend Active Positive Response to the board to increase communications between the excavator and our members by providing a copy of the ticket to the excavator with the explanation of how each member responded to the excavation site (provided information, marked or staked its facilities, advised of clearance, etc)."
- "As a Non-Profit Mutual Benefit Corporation, our board has a variety of industry stakeholders and they are public works, gas, electric, one-call, sewer, telecommunications, water, and oil. The board has already established two Regional Partnerships—in California (California Damage Prevention Committee) and Nevada (Nevada Regional CGA Partnership Committee)—and soon there will be a third in Hawaii. The Regional Partnerships are a committee of our board and have achieved representation from all stakeholders identified by the CGA except insurance and railroad. Our board is dedicated to doing everything possible to keep all stakeholders involved in damage prevention through the Regional

Partnership Committees.”

Eben Wyman, vice president of Government Relations, National Utility Contractors Association:

“The Walnut Creek incident underscores the fact that damage prevention is about communication among *all* parties involved in excavation activities,” said Wyman. “It’s true that requiring contractors to call the one-call center before digging is a fundamental part of protecting underground facilities, but the accurate marking and verification of the location of those facilities is just as important. That point is sometimes lost in the discussion of preventing accidents. NUCA will continue to work as an active member of the Common Ground Alliance to promote *shared* responsibility among all stakeholders

in damage prevention.” Responding to Breslin’s and Heyer’s comments regarding 24/7 one-call center operation, Wyman added, “NUCA supports the CGA Best Practices, and 24/7 operation is a CGA best practice.”

(Note: The National Utility Locating Contractors Association declined to comment on the proposed legislative and regulatory changes in California.)

In almost every case, accidents like the Walnut Creek explosion result from a series of events, each one compounding the possibility of an accident occurring. An action performed, or an action that is not performed, can be one of the links in the chain of events that leads to an accident, or as one reporter called the Walnut Creek explosion, “a virtual ‘perfect storm’ of industrial disaster.”

Interviewed for a May 6 article in the *Contra Costa Times*, Cal/OSHA’s lead investigator Steve Hart, said, “I’ll be the first to admit that in Walnut Creek the whole system did fail.” Breaking the links in the chain of human performance failures that can lead to such a system-wide failure is precisely the focus of current efforts by the California legislature and the California Division of Occupational Safety and Health. However, as Breslin noted in his hearing testimony, “contractors, design engineers, utility locators and utility owners all need to strive for a higher level of performance in the future.” In short, success in preventing another Walnut Creek disaster “will take a willingness to embrace change and responsibilities as never before.” **UC**