

**PIPELINE SAFETY: ASSESSING  
THE SAN BRUNO, CALIFORNIA EXPLOSION  
AND OTHER RECENT ACCIDENTS**

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**HEARING**

BEFORE THE

SUBCOMMITTEE ON SURFACE TRANSPORTATION  
AND MERCHANT MARINE INFRASTRUCTURE,  
SAFETY, AND SECURITY

OF THE

COMMITTEE ON COMMERCE,  
SCIENCE, AND TRANSPORTATION  
UNITED STATES SENATE

ONE HUNDRED ELEVENTH CONGRESS

SECOND SESSION

SEPTEMBER 28, 2010

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ONE HUNDRED ELEVENTH CONGRESS

SECOND SESSION

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**PIPELINE SAFETY: ASSESSING  
THE SAN BRUNO, CALIFORNIA EXPLOSION  
AND OTHER RECENT ACCIDENTS**

**TUESDAY, SEPTEMBER 28, 2010**

U.S. SENATE,  
SUBCOMMITTEE ON SURFACE TRANSPORTATION AND  
MERCHANT MARINE INFRASTRUCTURE, SAFETY, AND SECURITY,  
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,  
*Washington, DC.*

The Subcommittee met, pursuant to notice, at 3:05 p.m. in room SR-253, Russell Senate Office Building, Hon. Frank R. Lautenberg, Chairman of the Subcommittee, presiding.

**OPENING STATEMENT OF HON. FRANK R. LAUTENBERG,  
U.S. SENATOR FROM NEW JERSEY**

Senator LAUTENBERG. My apologies for the delay in starting, because today was the funeral service at Arlington for Senator Stevens, who was Chairman of this committee at one point—Chairman of many things in his career, but he was at this committee, as well.

I understand that Senator Feinstein has a heavy calendar, which we know always exists here. And I'd be pleased to let you make your statement, and we'll make ours. And we'll send you a copy, so you don't miss anything.

[Laughter.]

Senator LAUTENBERG. Please, take your time—

**STATEMENT OF HON. DIANNE FEINSTEIN,  
U.S. SENATOR FROM CALIFORNIA**

Senator FEINSTEIN. Well, thank you very much, Mr. Chairman. I very much appreciate that. I'm chairing an Intelligence Committee hearing, and it's of some importance, and so, I doubly appreciate this courtesy.

Senator Lautenberg, Senator Thune, my friend and colleague Senator Boxer, on September 9, at 6:11, I was watching television in my home in San Francisco, and onto the tube flashed this explosion. The initial reports—because the location was northwest of San Francisco International Airport, in the foothills, was that there was possibly an airplane crash. Initial witnesses on the television said that the Earth shook. It was apparent, after watching this on TV for at least a half hour, that the fire did not diminish, that it pumped out, that it became almost an incinerator-type fire, and that it burned very hot and heavy.

This was a quiet residential zone. And suddenly it was turned into something that resembled a war zone. The firefighters actually were powerless. The water main in the area had burst in the blast. CAL FIRE helicopters were then brought in. This inferno burned for 1 hour and 29 minutes before the gas to the 30-inch transmission pipe could be turned off at two different locations.

One of the turn-off valves was a mile from the blast and the other was one and a half miles away. Both were in secured locations. To shut each valve, a worker needed to drive through rush-hour traffic, use a key to get into the area, and attach a handle to the valve to crank it. It took more than 5 hours to turn off the gas-distribution pipelines to the homes on fire because of the gas residually in the pipeline.

The blaze damaged or destroyed 55 homes, injured 66, and killed, at this time, 7 people. It consumed 15 acres.

The next day, I called the National Transportation Safety Board, spoke to its Chairman, who suggested that I meet and talk with the Vice Chairman, Chris Hart, who is sitting directly behind me. Sunday morning, I did that, and visited San Bruno. I know that my friend and colleague Senator Boxer had already been there, as had Representative Speier. I walked through the devastation with Mr. Hart, Vice Chairman of the NTSB. I saw homes and cars totally incinerated. It was like a bomb had struck. Sections of pipeline that exploded, now a key part of the investigation, appeared to have ripped apart—appeared to have ripped apart—along longitudinal and circular welds, now 60 years old.

A gaping crater demonstrated the size of the initial blast. This crater was located at the low point in the valley. This has to be explained. The street went slightly down, like this, and then rose. The pipeline went down the middle of the street. The explosion was at the low point in the valley.

This tragedy, I believe, shows the heavy toll in death and destruction when high-pressure natural gas pipelines fail. And this risk, candidly, is unacceptably high. So, last week I joined with my colleague, a distinguished member of this subcommittee, Senator Boxer, to introduce the Strengthening Pipeline Safety and Enforcement Act. This bill strengthens and expands legislation proposed by U.S. Transportation Secretary Ray LaHood.

Here's what the legislation does:

First, it doubles the number of pipeline safety inspectors from the current number of 100, responsible for 217,000 miles of Interstate pipeline, to 200. Each inspector is responsible for over 2,000 miles of pipeline. That's the distance from San Francisco to Chicago. The NTSB recently recommended, and I quote, "Inspectors must establish an aggressive oversight program that thoroughly examines each operator's decisionmaking process." Doubling the number of inspectors will make this possible.

Second, the bill requires deployment of electronic valves capable of automatically shutting off gas in a fire or other emergency. Manually-operated valves must be located, accessed, and physically turned off in an emergency. Automatic valves could dramatically reduce damage caused by a pipeline breach.

Third, the bill mandates inspections by what are called "smart pigs"—we call this an "electronic robot"—that goes through the

pipe, or the use of an inspection method certified by the Secretary of Transportation as equally effective at finding corrosion. I've been told it isn't possible to use "smart pigs" everywhere. But, there can be an equally efficient method, as approved by the Secretary. Accident statistics over the past decade identify corrosion as the leading cause of all reported pipeline accidents.

Fourth, it would prohibit natural gas pipelines from operating at high pressure if they cannot be inspected using the most effective inspection technology. This is important. This was a 30-inch pipeline operating at well over 300 psi. There was a lot of gas coming through this pipeline. It was 60 years old. So, I think this precautionary approach to pipeline operations assures that they are more likely to not have undetected problems operating at risk.

Finally, it prioritizes old pipelines in seismic areas for the highest level of safety oversight. Today, regulators consider a pipeline's proximity to homes and buildings. Other risk factors are not a defined consideration, although pipe age and seismicity have a clear impact on the risk of a catastrophic incident.

And it directs the Department of Transportation to set standards for natural gas leak detection equipment and methods. Today, there are no uniform standards how to detect leaks. I think that's a big problem throughout the United States.

And finally, we adopt a number of common sense provisions proposed by Secretary LaHood to improve pipeline safety. These include: increasing civil penalties, expanding data collection, closing jurisdictional loopholes, and requiring consideration of a firm safety record when considering its request for regulatory waivers.

I think this is a basic bill. Senator Boxer and I submit it to you and urge—it's a work in progress. We don't pretend to know all the answers. These seem to us to be the common sense answers. We know what state-of-the-art pipeline inspection is. We simply don't have it. And I think we need to have it. It's going to cost additional people. It's going to cost additional money. But, I actually do believe that the utilities using this understand this.

Also, I want to say a word about PG&E. They have truly stepped up. They have recognized the liability. They have recognized the costs. They have indicated they will make every homeowner come out of this—you can't come out equally, but they will reimburse every homeowner to the extent of the loss if they don't have insurance. They have provided funding and hotel rooms, and have made a generous contribution to the city. The Mayor is here. I know he's going to testify.

And so, I think the best way to approach this, really, is to listen to the NTSB. I had the privilege of listening to all of Chris Hart's press statements, and I can tell the three of you, we can be very proud of the National Transportation Safety Board. The releases have all been factual, they've all been practical. And I think that this is one part of government that really is functioning very well on behalf of the people it represents.

So, I want to thank you for taking my testimony. And I appreciate the courtesy extended to me.

[The prepared statement of Senator Feinstein follows:]

## PREPARED STATEMENT OF HON. DIANNE FEINSTEIN, U.S. SENATOR FROM CALIFORNIA

Good afternoon Chairman Lautenberg, Ranking Member Thune, and other members of the Committee. Thank you for giving me the opportunity to testify on this very important legislation.

On September 9, at 6:11 p.m., a natural gas pipeline in San Bruno, California, just south of San Francisco, exploded, turning a quiet residential area into something resembling a war zone.

The blast in the Crestmoor neighborhood shook the ground like an earthquake.

The first reports suggested it was a plane crash, as the blast site was only two miles from San Francisco International Airport. But as the fire raged on it became clear that something was fueling it.

Firefighters were powerless, as the water main in the area had been burst in the blast. Cal Fire helicopters were brought in.

The inferno burned for one hour and twenty-nine minutes before the gas to the 30-inch transmission pipe could be turned off at two different locations.

One of the valves was 1 mile from the blast, and another was 1.5 miles away.

They were both in secured locations. To shut each valve, a worker needed to drive through rush hour traffic, use a key to get into the area, and attach a handle to the valve to crank it.

It took more than 5 hours to turn off the gas distribution pipelines to the homes on fire.

The blaze damaged or destroyed 55 homes, injured 66, and killed 8 people. It consumed 15 acres.

The next day I called the National Transportation Safety Board Chair. Two days later, I visited San Bruno. I walked through the devastation with Christopher Hart, Vice Chairman of the NTSB.

I saw homes and cars totally incinerated. It was like a bomb had struck.

The sections of pipeline that exploded—now a key part of the investigation—appeared to have ripped apart along longitudinal and circular welds, now 60 years old.

A gaping crater demonstrated the size of the initial blast.

This crater was located at the low point in the valley, where the street and pipeline, that ran down the middle of the street, dipped and rose.

This tragedy shows the heavy toll, in death and destruction, when high pressure natural gas pipelines fail. The risk is unacceptably high.

So last week I joined with my colleague, Senator Barbara Boxer, to introduce the Strengthening Pipeline Safety and Enforcement Act of 2010.

This bill strengthens and expands legislation proposed by U.S. Transportation Secretary Ray LaHood. The legislation:

- Doubles the number of Federal pipeline safety inspectors. The Pipeline and Hazardous Materials Safety Administration currently has 100 pipeline inspectors, responsible for 217,306 miles of interstate pipeline. Each inspector is responsible for 2,173 miles of pipeline—the distance from San Francisco to Chicago. NTSB has recently recommended that inspectors “must establish an aggressive oversight program that thoroughly examines each operator’s decision-making process.” Doubling the number of inspectors will make this possible.
- Requires deployment of electronic valves capable of automatically shutting off the gas in a fire or other emergency. Manual operated valves must be located, accessed, and physically turn off in an emergency. Automatic valves could dramatically reduce damage caused by a pipeline breach.
- Mandates inspections by “smart pigs,” or the use of an inspection method certified by the Secretary of Transportation as equally effective at finding corrosion. Accident statistics over the past decade identify corrosion as the leading cause of all reported pipeline accidents.
- Prohibits natural gas pipelines from operating at high pressure if they cannot be inspected using the most effective inspection technology. This precautionary approach to pipeline operations assures that pipelines more likely to have undetected problems are operated at lower risk.
- Prioritizes old pipelines in seismic areas for the highest level of safety oversight. Today, regulators consider a pipeline’s proximity to homes and buildings. Other risk factors are not a defining consideration, even though pipe age and seismicity have a clear impact on the risk of a catastrophic incident.
- Directs the Department of Transportation to set standards for natural gas leak detection equipment and methods. Today there are no uniform national standards for how to detect leaks.

Finally, the legislation adopts a number of common-sense provisions proposed by Secretary L aHood to improve pipeline safety, including:

- Increasing civil penalties for safety violations;
- Expanding data collection to be included in the national pipeline mapping system;
- Closing jurisdictional loopholes to assure greater oversight of unregulated pipelines; and
- Requiring consideration of a firm's safety record when considering its request for regulatory waivers.

Senator Boxer and I introduced this legislation in order to initiate quick action to make our pipeline system safer.

We have put forward our best ideas to improve inspection, address old pipes, and advance modern safety technology. We hope to improve these ideas as new information comes forward about the San Bruno tragedy.

We look forward to working with the Senate Commerce Committee to move and improve this legislation expeditiously. Thank you Mr. Chairman.

Senator LAUTENBERG. Well, we deeply appreciate your commentary, the closeness—the proximity to where you live, apparently, and the fact that you and Senator Boxer were immediately on the site. It's a very important bit of knowledge that you gained in a very short period of time.

So, we thank you.

And if my colleagues will forego any questions for the moment, permit Senator——

Senator FEINSTEIN. May I be excused?

Senator LAUTENBERG. Certainly.

Senator FEINSTEIN. Thank you.

Senator LAUTENBERG. Thank you.

Well, we learned a good deal from the recommendations that Senator Feinstein and, obviously, Senator Boxer have in development of their response to this issue.

The issue has taken on much-added urgency in the wake of the tragic accident in San Bruno, California. Our thoughts go out to all who lost loved ones or were injured as a result of this tragedy, as well as to those whose homes were destroyed. San Bruno, a natural-gas line ruptured, as we heard, below the ground, igniting a blaze that sent fireballs into the sky and, as we also learned, residents scurrying into the streets. The blast did terrible damage—killed 7 people, injured 52 others, and destroyed 37 homes.

And the San Bruno incident followed two pipeline accidents in the Midwest this summer, including one leak that spewed more than 1 million gallons of oil into a waterway in Michigan. These incidents have raised understandable concerns about the safety of those who live near pipelines, both existing and planned for the future.

Now, in my state, New Jersey, we've been long concerned about these issues, especially since 1994, when a natural gas pipeline exploded in Edison, New Jersey, destroying 14 apartment buildings and leaving more than 100 people homeless. Now a company called Spectra Energy Corporation of Texas wants to build a natural gas pipeline through Bayonne—a city in New Jersey—and Jersey City, one of the more populated areas in my state. And we're going to watch this proposal and the project very carefully.

By and large, pipelines are a safe form of transportation. But, as we've seen, when accidents do occur, the consequences can be cata-

strophic. And it's very obvious that, though there's an improved safety record over transportation of oil and gas and other forms, the fact of the matter is that we must exercise as much in the way of safety for our communities and our families.

We made significant progress in 2006 when we passed the Pipeline Inspection, Protection, Enforcement, and Safety Act, known as the PIPES Act. This law includes a provision, that I authored, which requires service lines to single-family homes to be fitted with excess flow valves that can be automatically shut off if a sudden change in pressure is detected in a pipeline.

The PIPES Act also improved excavation safety by strengthening the One-Call system, which makes it easier for construction companies to notify utility companies about digging projects and, therefore, dramatically reduce the risk of injury.

Yet, there's more work to do, which is why I've introduced legislation to build on the improvements in the PIPES Act. This new bill, in addition to the work that has been done already, will require everyone to comply with "Call Before You Dig," the requirements under the PIPES Act, by eliminating exceptions for State and local governments and their contractors. It will also expand the use of excess flow valves to apartment buildings and small commercial facilities, as well as require the installation of automatic shut-off valves in new pipelines. Unfortunately, such a device was missing on the pipeline that ruptured in the San Bruno tragedy.

This bill will also increase the amount of information available to the public on inspection results and industry standards in high-consequence areas.

And finally, the bill that I propose will put more pipeline inspectors on the job and require the Federal Government to establish standards for leak detection on pipes.

And I look forward to working with my colleagues to pass this legislation and make our country's pipelines safer and more efficient at the same time.

So, I look forward to hearing from today's witnesses, but we're going to first turn to other members for their opening statements.

And I'll call on Senator Thune and then Senator Boxer.

**STATEMENT OF HON. JOHN THUNE,  
U.S. SENATOR FROM SOUTH DAKOTA**

Senator THUNE. Thank you, Mr. Chairman.

This is the second hearing the Subcommittee has held this year to examine pipeline safety. And today's hearing is going to focus on the devastating and just incredibly tragic accident that occurred earlier this month in San Bruno, California. The San Bruno accident, as has already been pointed out, caused extraordinary damage and devastation in the area, claiming seven lives and destroying more than three dozen homes.

I hope that the representatives from the National Transportation Safety Board and the Pipeline and Hazardous Materials Safety Administration will also update the Subcommittee on the accident that occurred in July in Marshall, Michigan. That accident caused significant environmental damage to Talmage Creek and the Kalamazoo River. We owe it to those who lost their families, friends, or

homes in San Bruno, and to those affected by the oilspill in Marshall, to find out what caused these accidents and to take steps to prevent them from ever happening again.

As you know, Mr. Chairman, the current authorization for the Pipeline Safety Program will expire on Thursday. I want to thank you and your staff for working diligently over the past week to try to develop a bipartisan reauthorization bill. Significant progress has been made. I'm particularly pleased at the interest, on both sides, in addressing the number-one cause of pipeline accidents, which is damage caused by excavation, although I hope we will carefully consider the views of the states as we move ahead.

I remain concerned, however, about the approach of the Administration's reauthorization proposal, which is the basis for the Committee's deliberations. It seems that the overriding goal of the Administration is to regulate any and every type of pipeline, even some that don't even exist today. And where the Administration does not propose to assert jurisdiction directly, it seeks authority to collect information which could then be used to justify regulation.

I'm also concerned about the level of resources requested by the Administration. It is asking for an additional 40 inspectors, even though it has yet to fill the 25 positions that were authorized by Congress in 2006.

Mr. Chairman, I hope we can continue to work together to craft a proposal we can all support without reservation. Thank you for your leadership on this important issue. And I, also, look forward to hearing from our witnesses today.

Senator LAUTENBERG. Thank you very much, Senator Thune, for your willingness to participate in developing a system that makes sure that our communities are safer and that this very efficient way of moving gas is improved.

And, with that, I call on Senator Boxer.

Senator Boxer is someone known for her tenacity and determination to make sure that, whatever we do in our society, we respect the sanctity of family and life. And she has always been there when the issues call for attention, and makes sure—I can tell you, having worked with Senator Boxer for a long time—all the time that she has been here, I've been here—and very few people will not pay very sharp attention to proposals put forward by Senator Boxer. And we're delighted to have her here with us.

Please, Senator Boxer.

**STATEMENT OF HON. BARBARA BOXER,  
U.S. SENATOR FROM CALIFORNIA**

Senator BOXER. Senator Lautenberg, thank you so much. And, Senator Thune, thank you so much, as well.

I asked for this hearing because we can't move forward until we really look at what happened here. This has implications for every one of us and every one of our communities.

And as we said, on September 9, a 30-inch transmission gas pipeline exploded beneath a densely populated neighborhood, creating a massive fireball and a crater 26 feet in diameter. So, you might say, "Well, what the heck was a 30-inch transmission gas pipeline doing so close—within reach of the homes?" Well, that original

pipeline was laid down in the 1940s. And this was not a developed area. So, I'm sure if you each go back in your communities, you'll find that this is the case. And it seems to me—and I think it's common sense—that we have to take a look at where these pipeline are, related to how close they come to our people that we are sworn to protect and defend.

And tragically, 7 people lost their lives. Another 66 were injured, according to my latest statistics. And, of course, all of our thoughts and prayers are with their families and their loved ones.

I did go to the neighborhood as soon as I could get there. It was a shocking sight. And I would ask my staff if they could come over here and, as I'm talking, hold up some photos.

Large sections, completely demolished, as if the neighborhood had been hit by a bomb, as Senator Feinstein said. More than three dozen homes completely destroyed.

And I saw cars in driveways, colleagues, that were literally melted. The fire was 2,000 degrees. And when one of the fire people started to describe what happened to the people in 2,000 degrees, I just said, "Don't go any further. I understand."

I am so grateful that San Bruno Mayor Ruane will join us later in the hearing to provide his perspective on this horrible tragedy.

I'd like to put in the record some of the family stories. And, Mr. Chairman, the reason I want to do this is, I don't want us to forget. We talk about seven people, but every story here is so important. So, I'd like to put these stories into the record, if I might.

Senator LAUTENBERG. Without objection.

[The information referred to follows:]

*USA Today*—September 28, 2010—05:29 PM

#### 8TH VICTIM OF SAN BRUNO PIPELINE BLAST DIES

(Posted by Michael Winter)

A 58-year-old man has succumbed to burns suffered when a gas pipeline exploded Sept. 9 in San Bruno, Calif., the eighth person to have died from the blast, the San Mateo County coroner reports.

James Emil Franco was in his rented room in the upstairs of a two-story home about 200 feet from where the Pacific Gas & Electric main blew up in a residential neighborhood. An autopsy is scheduled.

Federal investigators are looking into whether an electrical failure hours earlier at the origin of the 30-inch-diameter pipeline played a role in the accident, which injured more than 50 people and destroyed 37 homes.

*San Francisco Examiner*—September 25, 2010

#### FAMILY MEMBERS REMEMBERED IN AFTERMATH OF SAN BRUNO EXPLOSION

Hugh Patterson

With all investigatory accusations against PG&E, made by state regulators and consumer groups in the wake of the September 9th explosion that killed seven San Bruno residents, the media has forgotten the emotional agony suffered by those who lost a loved one to the devastation. For a little over 2 weeks, relatives of those who lost their lives in the horrible fire have had to deal with a grief only known by those who have experienced such a loss.

Among those killed in the pipeline explosion were three generations of the Bullis family, 87-year-old Lavonne Bullis, her son Greg Bullis and his son, Will Bullis. The three were remembered on Friday during a two-hour memorial and funeral at Burlingame's First Presbyterian Church. The church was packed to capacity, with overflow rooms accommodating additional members of the community who came to say farewell to the well loved Bullis family. In the wake of headlines packed with esti-

mated dollar figures regarding the cost of this terrible accident, the Burlingame service served as a sad reminder of the emotional cost paid by those left behind.

Lavonne Bullis was the matriarchal head of the family, also serving as an elder and deacon at the Burlingame church where the services were held. Her 50-year-old son Greg, while suffering from chronic back pain, put his suffering aside whenever a friend or neighbor needed a helping hand. Greg's son, 17-year-old Will, dreamed of becoming a chef. He was involved in his school's culinary arts program, loving to share recipes with his classmates. The three had been highly regarded by family and friends.

The three died in the seconds just after the ruptured pipeline exploded and were only recently identified by the San Mateo County Coroner's Office. The explosion also took the lives of mother and daughter Jacqueline and Janessa Greig, their neighbor, 81-year-old Elizabeth Torres and 20-year-old Jessica Morales. In an ironic twist of fate, Jacqueline Greig had been a member of the California Public Utilities Commission that was reviewing a PG&E plan for pipeline work in the area.

When terrible accidents befall a community, emphasis is placed on the physical devastation and destruction. However, the long and often never ending emotional pain suffered by those injured or by those who have lost a loved one goes on quietly, lost in a swirl of media headlines. While the physical rebuilding of a home takes places quickly, the emotional reconstruction of a life takes far longer and comes at a greater cost.

Those badly burned, recovering at the Saint Francis Burn Center in San Francisco; face a long and extremely painful ordeal. Third degree burns require painful skin grafts and many months of equally painful physical therapy. The emotional suffering of those burned includes living with the physical scars that can destroy self confidence. For them, the ordeal may never be over. Those who lost a loved one must face the upcoming holidays knowing that their loved one's won't be there to celebrate. The tears they shed will cost them emotionally and no financial settlement can replace those who were killed.

While Committees are formed and investigators close in on the cause of the devastating explosion, those left behind, having lost property, family or friends, have to start the long process of healing. That process continues long after the last home is rebuilt and the last lawsuit is settled.

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*Associated Press*—Fri September 17, 7:43 pm ET

#### FRIENDS, NEIGHBORS SHARE MEMORIES OF BLAST VICTIMS

By Juliana Barbassa, Associated Press Writer

SAN FRANCISCO—The five women grew up together and shared high school and college graduations, weddings, the births of their children and family vacations.

Four of them gathered to mourn the one who was missing—Jacqueline Greig, 44, who was killed with her 13-year-old daughter Janessa in a natural gas pipeline blast that tore through their house and destroyed almost 40 homes in their neighborhood.

"She had integrity, poise. She wanted to set a good example, and that is what she did," said Monica Medina-Campos, one of those friends.

Medina-Campos and Greig had met at St. John Ursuline High School for Girls and went on to attend San Francisco State University together.

The friends gathered at a Thursday night vigil that was followed Friday by a funeral Mass at Saint Cecilia Catholic Church.

The caskets of the mother and daughter were covered by a single pall and topped by a cross. Jacqueline Greig's husband James and their 16-year-old daughter Gabriela sat in the front row during the service in English and Spanish.

Children in uniform from Janessa Greig's 8th grade class at the church filled several pews.

Monsignor Michael Harriman told those in attendance that Janessa Greig, as student body president, had a role in choosing "don't stop believing" as the *school motto* for the year.

"So I say to all of you here today, as you are struggling with this horrific tragedy, don't stop believing," he said.

Friends said Jacqueline Greig's devotion to family was reflected in the achievements of her daughter Janessa, who was remembered by her classmates at the vigil as friendly, focused and dedicated to her faith.

The girl with a big smile also found time to write for the school paper, act in the drama club, play the piano, take traditional Mexican folk dancing classes and volunteer with the Society for the Prevention of Cruelty to Animals.

“She was wise beyond her years,” Medina-Campos said.

Many in the standing-room-only crowd at the vigil knew the mother and daughter, who made and kept friends easily and lived a life many said served as an example.

Like her mother, Janessa Greig was remembered for being the first to say hello to a newcomer.

“She was the only person you can say everyone liked,” said Daniela Zarich, 14, a classmate at St. Cecilia School who knew Janessa since kindergarten.

“She was always friendly, smiling. That’s how I always think of her,” said Jazmin Gonzalez, 12, who took Ballet Folklorico classes with Janessa.

In a recording of a confirmation speech played after the congregation said the rosary, Janessa Greig appeared to be a thoughtful, well-spoken teen.

“In *today’s society* there is so much wrong and so much evil, but our faith strengthens us,” she said during the speech.

Ironically, Jacqueline Greig worked as an analyst for the California Public Utilities Commission and was a member of the natural gas committee of the National Association of State Utility Consumer Advocates.

She spent time during the summer looking into a Pacific Gas and Electric proposal to replace out-of-date pipes, with no idea that one of those pipes ran through her own neighborhood, said Pearlie Sabino, one of Greig’s co-workers.

Two other women died in the explosion that occurred just behind the home of the Greigs. Three people were missing—all members of the Bullis family, who lived just yards from the source of the blast.

During a vigil for Jessica Morales, 20, nearly 300 family and friends gathered at a Daly City mortuary Friday evening to pay tribute to the woman who died in her boyfriend’s home. Family and friends described Morales as a cheerful person with a constant smile.

“She was a bubbly person, always happy no matter what she was going through,” said Pastor Mike Allen, who led the service. Eleven-year-old Isiah Morales, Jessica’s younger brother, cried and tried to choke back tears as he remembered his big sister.

“I’ll really, really miss her and I can’t believe what happened,” he said.

“She was the best sister you could have wished for.”

Morales was with her boyfriend Joseph Ruigomez when the explosion ripped his house apart. He escaped and remained in critical condition.

Elizabeth Torres, 81, lived next door to the Greigs in a house she had occupied for the past 40 years. When the pipeline exploded, Torres, a mother of nine children, was with a daughter she lived with and one who was visiting. The two daughters and a son-in-law survived and were recovering from severe burns in a hospital.

Associated Press Writer Trevor Hunnicutt contributed to this report from Daly City

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L.A. Now—September 14, 2010/11:35 am

#### 81-YEAR-OLD WIDOW IDENTIFIED AS FOURTH FATALITY IN SAN BRUNO GAS EXPLOSION

John Hoeffel and Maria L. La Ganga in San Bruno

The San Mateo County coroner Tuesday identified a fourth victim killed in the *pipeline explosion* that tore through a hilly San Bruno neighborhood.

Elizabeth Torres, 81, was among the seven killed in the blast, officials said, adding that at least three people are still missing.

Coroner Robert J. Foucrault said his office is working to determine whether additional bone fragments retrieved from the disaster site are human. He said it would probably take at least a week to complete that work.

Torres was a widow who lived at 1660 Claremont Drive with her son, daughter and son-in-law in the Crestmoor neighborhood. The gas pipeline exploded Thursday evening behind her house, and flames ripped across a street and through a wooded lot before igniting her home of decades. Her home burned to the ground.

A mother of nine children, Torres had recently returned from a gambling trip to the Napa Valley with another daughter, who also was at the house Thursday. Torres was at home watching the NFL season opener on television when the blast occurred, said a family friend. Three family members remain hospitalized with extensive burns at St. Francis Hospital in San Francisco.

Foucrault said the first three victims were identified by dental records. They are Jacquelin Greig, 44, her daughter, Janessa Greig, 13, and Jessica Morales, 20.

He said it took longer to confirm Torres was the fourth victim because his office had to wait for hospital records. He said Torres was identified by a serial number on a therapeutic device that he declined to describe.

Gregory Bullis, 50, his son William, 17, and his mother, Lavonne, 85, have been reported missing. Bullis' wife was not at home and his daughter did not live at home. The Bullis family lived at 1690 Claremont Drive, three houses from the Torres family.

Foucrault said the remains were being examined by a forensic dental expert and a forensic anthropologist and would be tested at the state DNA lab in Richmond.

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*L.A. Now*—September 10, 2010/10:08 pm

#### CORONER IDENTIFIES 3 VICTIMS IN SAN BRUNO EXPLOSION

Jill-Marie Jones

The San Mateo County coroner's office late Friday confirmed the identities of three of the four people killed in Thursday's explosion and fire in San Bruno.

They are Jacqueline Greig, 44; her daughter Janessa Greig, 13; and Jessica Morales, 20.

Jacqueline Greig was an employee of the California Public Utilities Commission. She worked for an independent branch of the commission called the Division of Ratepayer Advocates, which provides input to regulators in defense of consumers.

"She lived right at the spot where it blew," said commission President Michael Peevey. "She and a younger daughter were in the house. Her husband and the older daughter were at the daughter's school."

Relatives of Elizabeth Torres, 81, told the *San Francisco Chronicle* that she is missing and they believe she is the fourth victim.

They said her house on Claremont Drive was two doors from the site of the explosion. A body was found at the home, according to the *Chronicle*, but the coroner's office has not made a positive identification.

More than 50 people were injured in the explosion and fire. Eight remain hospitalized. A total of 37 homes were destroyed.

Senator BOXER. So, the investigation is ongoing, and it will take a while. And the NTSB is phenomenal, and I share Senator Feinstein's confidence, but it will take them up to 18 months to come up with an answer here that they can be sure of.

So, I don't think we can wait. We know, if there was an automatic shut-off valve, we wouldn't be here today. We would be mentioning, "Isn't it amazing how all these automatic shut-off valves work?" So, that's why Senator Feinstein and I got together and we built on a proposal by the Administration. It includes additional provisions that were raised by the incident. And I won't repeat what Senator Feinstein said. She did talk about the number of Federal inspectors. I'm interested in Senator Thune's comments; if we're behind in filling 20 inspectors, we ought to get that done, because we have thousands of miles of pipeline that we're responsible for in the Federal Government—interstate, rather than intrastate. And they need to be inspected, clearly. And we're looking to DOT to promulgate these regulations for the installation of automatic and remote shut-off valves in high-consequence areas, meaning areas where these pipelines are running close to where people live.

We have taken action over the past decade to improve the safety of our pipelines. But, the San Bruno tragedy makes it clear we must do more. It's critical that confidence be restored and that the utilities and the regulatory agencies responsible for pipelines are held accountable for the safety of their pipelines. And I look forward to working with all of my colleagues. This is not a partisan issue. This could happen anywhere, anytime, to anyone. And it is

our job, first and foremost, to make sure that we have regulations in place that make sense.

This isn't a battle between regulation and no regulation. It's a question of smart regulation. And that's what I'm looking for here.

So, I'm so pleased to see that both Senators Lautenberg and Thune are here, that Senator Johanns is here. Senator Feinstein and I look forward to working with all of you.

Thank you very much.

Senator LAUTENBERG. Thank you very much, Senator Boxer.

Senator Johanns, please.

**STATEMENT OF HON. MIKE JOHANNS,  
U.S. SENATOR FROM NEBRASKA**

Senator JOHANNS. Thank you, Mr. Chairman.

Let me also express my condolences to the families involved.

And, to the two Senators from the State of California, thank you for pushing for this hearing. I think it's very important. Obviously, a terrible, terrible tragedy.

And, Mr. Chairman, thank you for your leadership on this.

I was reviewing the materials that the staff prepared for this hearing. In our materials, there's a map of hazardous liquid pipelines in the United States, and a map of gas transmission pipelines. And if there's one thing that's very, very clear from those maps, it's this: pipelines are everywhere. I was studying the maps, and I don't believe any State is unaffected by what's going on in this hearing today. And that just underscores the importance, but it also brings to us the reality that pipelines are a fact of life in the United States. We can't do without them. We need them to heat our homes and to run our factories, and all of the other important uses. But, the reality is, somehow, somehow, we've got to get a handle on how best to manage the safety concerns—and, I might add, the environmental concerns—involved with the pipelines.

In my own State, we are dealing with a company from Canada that wants to put a pipeline through the State. It's the Keystone XL project. We're trying to get a better understanding of why this pipeline was sited where it was, because it is sited right through the most sensitive environmental area in the entire State. It goes right through the Ogallala Aquifer—very, very sandy soil. This pipeline will sit in water. So, literally, the day it's installed, because the water table is so high, a portion of this pipeline will literally sit in water.

I am here today to try to make the case that some how, some way, recognizing that pipelines are a fact of life, we've got to figure out how to do a better job of managing this.

You know, I look at the statistics, and it is nearly overwhelming. We have a situation where I think we have 104 inspectors today, authorized to go a bit higher than that. In 2009, there were 884 inspections. There are 400 State inspectors and about 8,000 inspections. And I'm sure people are working as hard and as smart as they can, but the reality is, with the tens of thousands of miles of pipeline, it just appears to me we're only scratching the surface. Now, we can't send a human being to inspect every foot of our Nation's pipelines every year, nor would that, probably, be necessary, but I would suspect that there's vast mileage here that is left

uninspected for years and years. And I'm anxious to hear more about that.

I raise those concerns, but I know those are concerns shared by everybody that is here, so I'll just wrap up and say again how much I appreciate the opportunity to be here.

And, Mr. Chairman, thank you for pulling this hearing together.

Senator LAUTENBERG. Thank you for your comments, Senator. And thank you for raising a concern about the material from which this oil is going to be extracted—tar sand. And that's dirty oil, and requires a lot of energy to cleanse it before it gets into the pipeline, and the consequences for the environment are really quite a matter of great concern. So, we thank you and look forward to working with you on our legislation.

Now, I'd like to call our second panel of witnesses, Ms. Cynthia Quarterman, Administrator for Pipeline and Hazardous Material Safety Administration.

And, Ms. Quarterman, welcome. We've had a chance to talk to you before and hear your comments. We look forward to that.

Mr. Hart, Vice Chairman of the National Transportation Safety Board. We look forward also to your expertise.

And we ask you to hold your comments to 5 minutes. Without any invitation to extend, there is a little bit of tolerance, but it mounts steeply into control.

So, we thank you, and ask you, Ms. Quarterman, to give your testimony.

**STATEMENT OF HON. CYNTHIA L. QUARTERMAN,  
ADMINISTRATOR, PIPELINE AND HAZARDOUS MATERIALS  
SAFETY ADMINISTRATION, U.S. DEPARTMENT OF  
TRANSPORTATION**

Ms. QUARTERMAN. Thank you. Good afternoon.

Chairman Lautenberg, Ranking Member Thune, and members of the Subcommittee, thank you for the opportunity to appear today and discuss the oversight responsibility of the United States Department of Transportation's Pipeline and Hazardous Materials Safety Administration and the Obama Administration's legislative proposal for the Department's Pipeline Safety Program.

Before I discuss these topics, I would like to once again, send my sincere condolences to the families who have been severely affected by this recent incident in San Bruno.

Following the incident, I joined PHMSA investigators on the scene in San Bruno who were supporting the NTSB's efforts and the California Public Utility Commission. I saw firsthand the devastating impact this incident is having on that community. Incidents such as this and the recent oil pipeline failure in Marshall, Michigan, must not happen.

As the sole Federal agency with regulatory oversight for the safety of pipelines, we must do our part to keep communities free of risk and exposure to pipeline failures and enhance public confidence in the safety of the Nation's energy pipelines.

To ensure that safety is not only the Department's top priority, but also the top priority of those we regulate, Secretary LaHood unveiled a legislative proposal this month that would strengthen the Department's regulatory authority and oversight capabilities

for pipelines. The proposal is designed to hold all operators accountable for operating their pipelines in a safe and environmentally sound manner.

Among other things, the proposal would raise the maximum penalty for the most serious violations from 1 million to 2 and a half million dollars. It would authorize 40 additional Federal inspection and enforcement personnel over 4 years. The legislative proposal would complement additional regulatory initiatives that are under consideration to continue to improve pipeline safety.

Specifically, PHMSA is considering: identifying additional areas along pipelines that should receive extra protection; establishing minimum requirements for point-to-point leak detection systems for all pipelines; and requiring the installation of emergency flow-restricting devices that would isolate leaking pipeline sections, minimizing the amount of product released, among other initiatives.

Mr. Chairman, ensuring the safety and reliability of the Nation's hazardous liquid and natural gas pipeline network is an enormous task. The recent pipeline failure in California and in Michigan show that prompt passage of this legislation is more important now than ever. The Department and PHMSA look forward to working closely with this subcommittee to ensure the Nation's pipeline network is safe, reliable, and subject to the most stringent oversight feasible.

Thank you. I'd be pleased to answer any questions you might have.

[The prepared statement of Ms. Quarterman follows:]

PREPARED STATEMENT OF HON. CYNTHIA L. QUARTERMAN, ADMINISTRATOR, PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION

Chairman Lautenberg, Ranking Member Thune, and members of the Subcommittee, thank you for the opportunity to discuss the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration's (PHMSA) legislative proposal, reauthorization priorities, and regulatory initiatives.

Safety is the number one priority of Secretary Ray LaHood, myself, and the employees of PHMSA. On behalf of all of us, I would like to extend condolences to the families of all those whose lives were forever changed by the Pacific Gas and Electric natural gas pipeline failure on September 9, 2010. The Department is actively working to ensure the safety and reliability of the Nation's pipeline transportation infrastructure and prevent releases on the 2.5 million miles of pipelines it oversees. Over the past 20 years, all the traditional measures of risk exposure have been rising—population, energy consumption, pipeline ton-miles. At the same time, the number of significant incidents involving pipelines has declined 50 percent.

While our safety record continues to improve with the incidence of fewer pipeline accidents, failures such as the recent pipeline incidents in San Bruno, California and Marshall, Michigan are unacceptable. Mr. Chairman, members of the Subcommittee, I assure you that PHMSA, through aggressive regulation and oversight, will use its full enforcement authority to ensure that operators meet pipeline safety standards. We respectfully request your support in this regard.

The Department's pipeline oversight program is based on three fundamental tenets:

- First, PHMSA must establish safety standards that are both prescriptive and risk-based, verify that operators perform to these standards, and take enforcement actions against operators if they are not in compliance with these standards.
- Second, PHMSA can impact safety culture and operator performance beyond minimum compliance with the regulations.

- Third, pipeline operators must understand and manage the risks associated with their pipelines, including taking actions to prevent pipeline failures and minimizing the impact of any releases should they occur.

However, as recent pipeline failures have shown, the Department needs stronger authority in several key areas of its pipeline safety program. To ensure safety is not only our top priority, but also the top priority of those we regulate, the Department submitted a legislative proposal to strengthen pipeline safety through new regulatory authority, increased penalties, and authorization levels that will strengthen our state partnerships and expand our inspection staff. In addition, the Department is working on significant rulemakings to increase regulatory oversight and improve guidance to operators as well as other efforts to increase coordination with partners and to support research and development.

### **I. Strong Legislation**

This month, Secretary LaHood presented to Congress the Administration's legislative initiative for the reauthorization of the Department's pipeline safety program entitled, "Strengthening Pipeline Safety and Enforcement Act of 2010." This legislative proposal is designed to hold all pipeline operators accountable for operating their pipelines in a safe and environmentally sound manner. It strengthens enforcement authority and increases inspection and enforcement resources, closes regulatory gaps, lays the groundwork for expanding integrity management programs beyond existing high consequence areas to additional areas, improves pipeline infrastructure data collection, and advances safety in other important ways.

The proposal provides significant updates to the inspection and enforcement program. The Administration's proposal provides for forty (40) additional inspection and enforcement personnel to allow a greater frequency of inspections. The additional inspectors will also improve oversight of new pipeline construction that is critical given the significant increase in pipeline construction that has occurred in recent years. The proposal also increases the maximum administrative civil penalties for violations of the pipeline safety regulations by 250 percent for the most serious incidents involving fatalities, injuries, or environmental harm. Finally, the proposal makes obstruction of an inspection or investigation punishable by the assessment of penalties and clarifies the Department's authority to refer pipeline enforcement cases to the Department of Justice for penalty actions.

The Administration is proposing that Congress remove the statutory exemptions in current law for gas and hazardous liquid gathering lines that operate upstream of transmission lines. While gathering lines were once considered to be low risk due to being remotely located near production areas, the ever-increasing growth of business and residential areas means that communities where people live and work are now located closer to gathering lines than ever before. Should Congress remove the statutory exemptions, the Department would then be able to review the corresponding exemptions in the regulations and remove them as necessary. The proposal also authorizes data collection on transportation-related oil flow lines. These pipelines transport product from a production facility to another pipeline and the Department needs additional data to determine the need to install its safety regulations on these pipelines, which are often located in environmentally sensitive areas. These facilities and associated piping are currently considered non-transportation-related pursuant to Executive Order 12777 and are regulated by the Environmental Protection Agency.

With respect to integrity management programs, the proposal would include a review of whether pipeline safety would be improved by expanding and revising the integrity management program requirements beyond existing high consequence areas to additional areas. The Administration believes that the time has come for pipeline operators to apply the latest in-line inspection technologies over the widest possible areas of their systems to ensure safety and environmental protection.

The proposal enhances data collection beginning with data on design specifications for new pipeline construction projects. In addition, the Department will collect pipeline infrastructure data on formerly unregulated pipelines such as the gathering and transportation-related flow lines already discussed as well as additional geospatial, mapping, and incident data on existing pipelines. The Department is committed to ensuring that strong regulatory action is taken where incident data shows it is needed. The proposal also provides a cost recovery mechanism for design and construction reviews and will facilitate better coordination with the State of Alaska and other agencies on pipeline construction and expansion projects.

## II. Reauthorization Priorities

### 1. PHMSA's Reauthorization Proposal Strengthens Its Assistance to States and First Responders

State pipeline safety agencies are PHMSA's most important asset in assuring the safety of pipelines in American communities. PHMSA's partnership with state pipeline safety agencies have always been the cornerstone of the program. States oversee the bulk of the pipeline infrastructure. Specifically, states are responsible for oversight of virtually all gas distribution pipelines, gas gathering pipelines and intrastate gas transmission, as well as 88 percent of intrastate hazardous liquid pipelines and 20 percent of the interstate gas pipelines. PHMSA maintains primary responsibility for the remaining pipelines, including all interstate hazardous liquid pipelines and 80 percent of the interstate gas pipelines. States employ approximately 63 percent of the inspector work force. The recent expansion of Federal pipeline safety initiatives, such as Distribution Integrity Management (DIMP) has increased the resource demands on both Federal and state pipeline safety agencies.

In 2006, Congress increased PHMSA's ability to provide grants to state pipeline safety agencies to offset the costs associated with the statutory requirements for their inspection and enforcement programs. In addition, Congress gave PHMSA considerable resources to expand its relationship with state pipeline safety agencies, enabling increased policy collaboration, training, information sharing, and data quality and collection. In FY 2010, PHMSA's \$40.5 million appropriation to support state programs will fund 54 percent of state pipeline safety programs. Additionally, the President's FY 2011 request includes an increase in funds to support state programs totaling approximately \$44.5 million, which would reflect a 65 percent funding of the state pipeline safety programs.

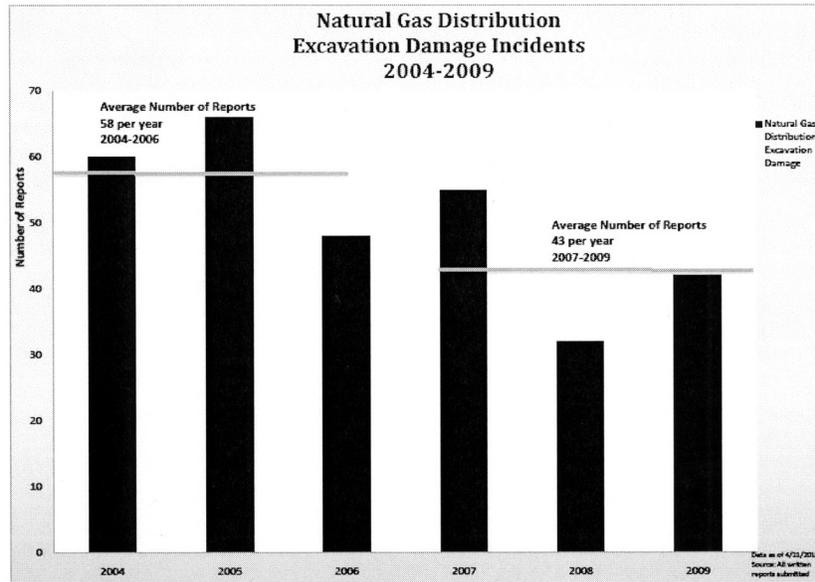
The importance of these programs was made clear on September 9, 2010 when a 30-inch transmission line, known as Line 132, that carries natural gas to San Francisco ruptured and caught fire. The San Bruno pipeline accident involved an intrastate transmission line regulated by the California Public Utilities Commission (CA PUC). The National Transportation Safety Board (NTSB) has launched an investigation into the causes of the accident, and PHMSA immediately dispatched two additional investigators to support NTSB and CA PUC efforts. The pipeline is currently shut down in the immediate area of the rupture. The remaining portions of Line 132 have been reduced in pressure by 20 percent to increase safety until the causes of the accident are identified. At that time, any additional necessary safety mandates can be ordered. The CA PUC regulates the line pursuant to an agreement with PHMSA. The pipeline safety statute allows states to regulate intrastate pipelines provided that PHMSA certifies that the states have adopted, and are enforcing, the pipeline safety regulations. PHMSA has a certification agreement with CA PUC and under this framework the state agency inspects intrastate natural gas lines that are operated by public utilities and enforces the pipeline safety regulations, and PHMSA conducts annual reviews of CA PUC's performance in this regard and provides funding for California's pipeline safety program. PHMSA provided CA PUC with \$1,405,282 (including \$516,120 of suspension funding) for its 2009 gas pipeline safety program.

PHMSA has learned that the success of its efforts to constantly improve safety is multiplied by sharing responsibility and accomplishments with pipeline safety stakeholders, both within the Federal family and with states and communities. PHMSA proposes to continue supporting strong relationships with other organizations involved in responding to pipeline incidents and emergencies. When PHMSA responds to an incident, its primary concerns are the public's safety and determining an operator's compliance with PHMSA's regulations. PHMSA is often requested to share information and support the investigations of other agencies. In addition, PHMSA has a long history of working closely with local emergency officials in response to pipeline emergencies and its staff effectively participates in incidents where there is an Integrated Command Post. Still, the Department must do more. The Department has reached out to Environmental Protection Agency and the U.S. Coast Guard suggesting a new Memorandum of Understanding to ensure coordination during oil spill response.

### 2. PHMSA's Reauthorization Proposal Strengthens Damage Prevention Efforts

The vast majority of America's pipeline network is underground making pipelines vulnerable to "dig-ins" by third-party excavators. While excavation damage is 100 percent preventable, it remains a leading cause of pipeline incidents involving fatalities and injuries. Three-quarters of all serious consequences from pipeline failures relate to distribution systems and more than one-third of these failures are caused by excavation damage. PHMSA's goal is to significantly reduce excavation damage

with strong outreach and public awareness programs. As evident in the chart below, PHMSA is making progress.



The Pipeline Inspection, Protection, Enforcement, and Safety Act of 2006 authorizes PHMSA to award State Damage Prevention (SDP) grants to fund improvements in damage prevention programs. Each state has established laws and procedures shaping its state damage prevention program. Since 2008, PHMSA provided over \$4 million in SDP grants to 30 distinct state organizations. Eligible grantees include state one call centers, state pipeline safety agencies, or any organization created by state law and designated by the Governor as the authorized recipient of the funding.

SDP grants reinforce nine specific elements that make up the components of an effective damage prevention program, under the PIPES Act:

1. Enhances communications between operators and excavators;
2. Fosters support and partnership of all stakeholders;
3. Encourages operator's use of performance measures for locators;
4. Encourages partnership in employee training;
5. Encourages partnership in public education;
6. Defines roles of enforcement agencies in resolving issues;
7. Encourages fair and consistent enforcement of the law;
8. Encourages use of technology to improve the locating process; and
9. Encourages use of data analysis to continually improve program effectiveness.

PHMSA's Technological Development Grants program makes grants to an organization or entity (not including for-profit entities) to develop technologies that will facilitate the prevention of pipeline damage caused by demolition, excavation, tunneling, or construction activities. A total of \$500,000 was appropriated for the program in 2009. Two awards have been made to date.

PHMSA also uses the authority in the PIPES Act to promote public education awareness with national programs such as, "811—Call Before You Dig Program" through the Common Ground Alliance (CGA). PHMSA has provided over \$2.2 million in funding assistance for CGA's 811 advertising campaign since 2002.

PHMSA is proud of its continued and steady leadership in supporting national and state damage prevention programs. In March 2010, we participated in the CGA's annual meeting highlighting the importance of the National "811—Call Before You Dig Program." In April 2010, Transportation Secretary LaHood acknowledged the importance of calling before you dig by establishing April as "National

Safe Digging Month.” The U.S. Senate and the House of Representatives both introduced resolutions designating April 2010 as “National Safe Digging Month.” At our urging, forty states, including those represented by the members of this committee, also followed suit. The efforts driven and supported by PHMSA, involved the CGA, many states, and damage prevention stakeholders from around the country, who are advocates for safe excavation practices.

*3. PHMSA’s Proposal Strengthens the Pipelines and Informed Planning Alliance Advances Smart Growth along Pipelines in Our Communities*

PHMSA has conducted numerous activities to inform the public and engage public interest and participation in all of its initiatives. We funded publicly accessible, Internet broadcast viewing of two pipeline events sponsored by the Pipeline Safety Trust, including a focus on safer land use planning. We have made one grant and may make others to professional associations of county and city government officials to represent the public in the Pipelines and Informed Planning Alliance (PIPA). PIPA is an initiative organized by PHMSA to encourage the development and use of risk-informed land use guidelines to protect pipelines and communities.

A companion effort is helping communities understand where pipelines are located, who owns and operates them, and what other information is available for community planning. Following the passage of the PIPES Act, PHMSA worked with the Department of Homeland Security (DHS)/Transportation Security Administration (TSA) to resolve concerns about sensitive security information. Vital information that communities need for land use, environmental, and emergency planning around pipelines is now publicly available through PHMSA’s National Pipeline Mapping System (NPMS). We continue to work with states, industry, and other stakeholders to make the NPMS information more accurate and useful.

*4. PHMSA’s Proposal Continues to Invest in Research and Development*

PHMSA proposed to continue investing in research and development, as well as community involvement. PHMSA recently announced it is awarding seventeen research contracts totaling \$5.9 million to companies and institutions for the development of new projects that provide innovative solutions to improving pipeline safety and protecting the environment. The awards will support the development of research projects targeted at addressing the associated challenges of pipeline safety with the detection, prevention, and characterization of threats and leaks, and construction quality. To date, PHMSA has invested over \$57 million for 161 projects focused on providing solutions for detecting pipeline leaks, preventing damages to pipelines, improvements in pipeline materials, and improved pipeline system controls, monitoring, and operations.

**III. Regulatory Initiatives**

Under the Obama Administration, PHMSA has begun a comprehensive review of the existing pipeline safety regime and developed initial solutions, through legislation, potential rulemaking, and other actions, to ensure that all pipelines are adequately regulated and that operators put safety first.

The Department’s legislative proposal will complement its additional planned regulatory initiatives to continue to improve pipeline safety. In addition to finalizing the DIMP, Control Room Management and Low Stress Pipeline rules, the Department intends to propose additional regulatory actions to further strengthen and improve the pipeline safety regulations in light of the lessons learned from the recent pipeline failure incidents. As a result, the Department is considering a number of important regulatory actions. Specifically, the Department will consider:

- Removing regulatory exemptions for certain unregulated pipelines;
- Identifying additional areas along pipelines that should receive extra protection or be included in the high consequence area category for integrity management protection;
- Establishing minimum requirements for point-to-point leak detection systems;
- Requiring the installation of emergency flow restricting devices in certain areas that can rapidly isolate a leaking section of pipeline and minimize the volume of product released;
- Revising valve spacing requirements on new construction or existing pipelines to specify the maximum allowable distance between valves and/or require that valves be used in certain locations;
- Strengthening criteria for repairs and establishing repair requirements and time frames for pipeline segments located in areas outside high consequence areas that are assessed as part of an operator’s integrity management program; and

- Adopting standards and procedures for improving the methods of preventing, detecting, assessing and remediating stress corrosion cracking.

PHMSA also issued a Notice of Proposed Rulemaking (NPRM) on September 10, 2010, proposing to move up the deadlines in the Control Room Management rule. This rule addresses human factors, including fatigue and other aspects of control room management for pipelines where controllers use supervisory control and data acquisition (SCADA) systems. Controllers play a key role in preventing accidents and the rule addresses controller responsibilities, training, alarm management, changing pipeline equipment or configurations, and incident response. The final rule set a program development deadline of August 1, 2011, and a subsequent program implementation deadline of February 1, 2013. The NPRM proposes to expedite the program implementation deadline for most standards to August 1, 2011.

PHMSA has also conducted a thorough review of its inspection and enforcement related regulations, procedures, and guidance, as well as its data collection and transparency efforts, and has taken the following actions:

October 2009—Provided grants and other assistance to strengthen state damage prevention programs and issued an ANPRM to solicit comment on establishing criteria for state damage prevention enforcement. This will satisfy the prerequisite for direct Federal enforcement against excavators who violate one call requirements in those states with inadequate damage prevention enforcement programs. PHMSA is working to issue a follow-up NPRM and final rule.

December 2009—Required operators of gas distribution pipelines to develop and implement integrity management programs similar to those required for gas transmission and hazardous liquid pipelines.

December 2009—Issued a Final Rule to address human factors and other aspects of control room management for pipelines where controllers use SCADA systems. This rule addressed several NTSB recommendations.

January 2010—Issued an Advisory Bulletin reminding hazardous liquid pipeline operators of the importance of prompt and effective leak detection capability in protecting public safety and the environment.

March 2010—Notified owners and operators of recently constructed large diameter natural gas pipeline and hazardous liquid pipeline systems of the potential for girth weld failures due to welding quality issues.

June 2010—Issued an Advisory Bulletin to operators of onshore hazardous liquid pipeline facilities required to prepare and submit an oil-spill response plan, requiring them to ensure full compliance.

June 2010—Issued a NPRM regarding the regulation of the remaining population of unregulated rural hazardous liquid low stress pipelines as required by the Pipeline Inspection, Protection, Enforcement, and Safety Act of 2006.

Summer/Fall 2010—Reviewed its regulatory oversight of offshore transportation platforms.

We are confident that these enhancements to PHMSA's safety regulations will improve safety and reduce the likelihood of significant spills.

#### **IV. Conclusion**

Mr. Chairman, safety is the Department's highest priority. I assure you that the Department will remain vigilant in ensuring the safety and integrity of all pipelines under its jurisdiction.

Thank you and I am happy to respond to your questions.

Senator LAUTENBERG. Thank you very much, Ms. Quarterman.  
Now, Mr. Hart, thank you.

#### **STATEMENT OF HON. CHRISTOPHER A. HART, VICE CHAIRMAN, NATIONAL TRANSPORTATION SAFETY BOARD**

Mr. HART. Thank you very much.

Chairman Lautenberg, Ranking Member Thune, members of the Subcommittee, thank you very much for the opportunity to address you regarding the pipeline explosion in San Bruno. I also want to start by thanking Senators Boxer and Feinstein, for their very kind compliments about the National Transportation Safety Board. I am honored to be at the NTSB, because it's an agency with a lot of

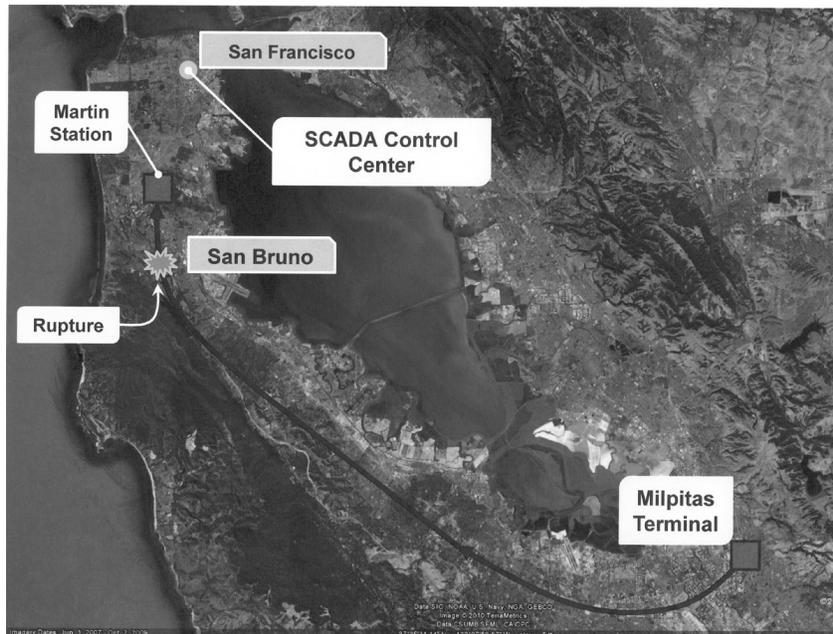
smart people who are vigorous detectives. They don't stop until they find the answer; and they're not going to stop until they find the cause of this accident.

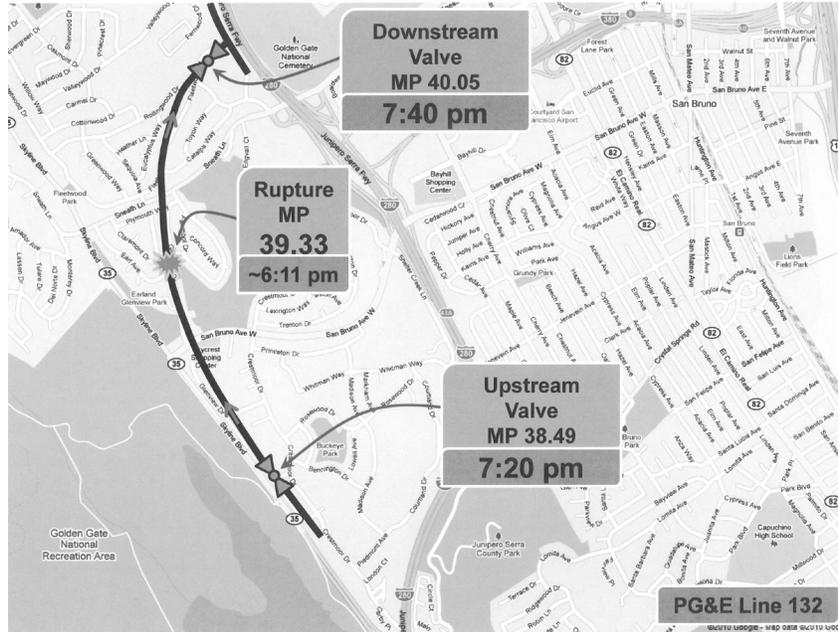
On behalf of the NTSB, I offer my condolences, to the family and friends of the victims, and a speedy recovery for those who were injured. I extend my thoughts to those who have suffered loss or damage to their homes or property.

As we've heard, on September 9, at about 6:11 p.m., a 30-inch Pacific Gas and Electric natural gas transmission line in San Bruno, California, operating at just under 400 psi, ruptured. The NTSB launched to that accident the next day. The reason the Committee asked me to be here today is because I was the Board Member on-scene.

The rupture was along line 132, and as you see on the slide, it runs from Milpitas to Martin, and the rupture occurred just south of San Francisco. The explosion blew a 28-foot section of the pipe from under the ground 100 feet away. As you've already heard, the explosion and fire resulted in eight fatalities, and some 55 homes were destroyed or damaged.

[The information referred to follows:]





We're still developing the timeline on the response to this event. Our latest information is that a few minutes after 6 p.m., PG&E received a high-pressure alarm at the Martin station, the station that's shown on the north side of the slide, followed a few minutes later by a low-pressure alarm at the Milpitas Station. So, after PG&E received calls about a fire, they dispatched technicians, who closed the upstream valve, which is .84 pipeline miles from the rupture, at 7:20 p.m.; and they closed the downstream valve, which is .72 pipeline miles from the rupture, at 7:40 p.m.

Our team arrived the next day. We began by documenting information, talking with first responders, taking pictures and measurements, taking 28-foot section of pipe and the adjacent sections back to D.C., where they are now, for further metallurgical examination. We were trying to do the on-site work first, in order to release the site back, to help enable the return of families to their houses.

The crater from which the 28-foot section of pipe was blown is shown in this slide. The next slide shows the 28-foot section of pipe on the street, where it landed. The next slide shows the 28-foot section of pipe in our D.C. facility, where it will undergo a very detailed metallurgical examination. We will be looking at all the possible causes of this mishap, including corrosion, and whether there was damage from a nearby excavation. We'll be looking at all the potential causes to determine exactly what caused this burst.

[The information referred to follows:]

## San Bruno, California



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September 9, 2010

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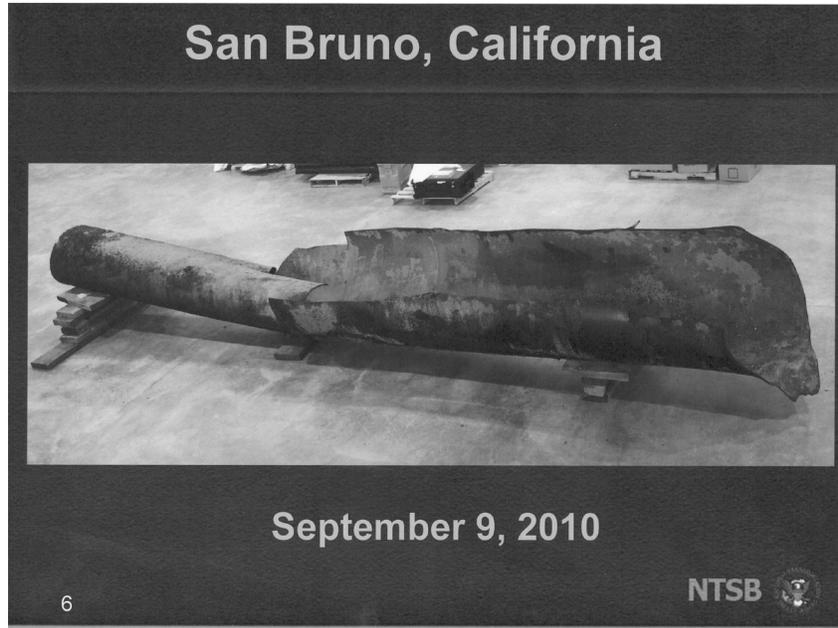
## San Bruno, California



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September 9, 2010

NTSB 



We aim to produce a final report in 12 months, and that's because it's a very detailed, exhaustive investigation. Meanwhile, let me emphasize if we see anything that needs immediate attention before the final report comes out, we will, and have done so in the past, issue urgent recommendations without waiting for the completion of the report.

The reason it's going to be a challenge for us to complete the report in 12 months is because, as you've heard, we've had three other pipeline mishaps since June. In July, there was the 30-inch Enbridge Energy Partners oil pipeline, in Marshall, Michigan, that spilled nearly 100 million gallons of oil into the Talmage Creek and the Kalamazoo River. In addition to that accident, this month, another Enbridge oil pipeline, in Romeoville, Illinois, ruptured. And then, in addition to that, there was a gas pipeline struck by a contractor in Cleburne, Texas, that resulted in a fatality. As a result, our pipeline folks are busy.

The typical issues that we look into in these investigations start with monitoring and control through the supervisory, control, and data acquisition operations—the acronym for that is SCADA, that you've seen. We will be looking at pipeline controller performance—the specifics regarding the individuals who were involved in operating the pipeline; the operator's notification and spill response—how quickly people were notified, and how quickly they responded, as well as the response by the nearby local emergency responders, including the San Francisco Airport. We will be looking at the inspection, maintenance, and history of this pipeline, to determine if there were historical problems that could have led to this rupture. We will also be looking at how well the system, the operator, and its integrity management plan were overseen by the regulator; and

we will be looking, generally, at aging pipelines, because several of the pipeline explosions we've investigated in the last several years have involved pipelines more than 30 years old.

We will also be looking at the issue of urban development around already existing pipelines, because I agree with what we've heard before, that there's probably a lot more of that around. We need to consider the fact that these pipelines were installed in times when they were not in densely populated areas, but today they are.

Thank you for the opportunity to appear before you. I will be happy to respond to any questions you may have.

[The prepared statement of Mr. Hart follows:]

PREPARED STATEMENT OF HON. CHRISTOPHER A. HART, VICE CHAIRMAN,  
NATIONAL TRANSPORTATION SAFETY BOARD

Chairman Lautenberg, Ranking Member Thune, members of the Subcommittee, thank you for the opportunity to address you today on the pipeline rupture in San Bruno, California. This accident is truly a tragedy, and I would like to begin by expressing condolences on behalf of the National Transportation Safety Board (NTSB) to the families and friends who lost loved ones in this accident. For those who were injured, we offer our hopes for a speedy recovery, and we extend our thoughts to those whose suffered loss or damage to their homes and property.

**San Bruno**

At approximately 6:11 p.m. Pacific Daylight Time on September 9, a pipeline rupture occurred in a residential area in San Bruno, California. On September 10, the NTSB launched a team to California to investigate this tragedy. I was the NTSB Board Member on scene in San Bruno.

Pacific Gas and Electric Company's (PG&E) 30-inch diameter pipeline (Line 132), with 0.375 inch steel thick wall, ruptured at the intersection of Earl Avenue and Glenview Drive in the City of San Bruno, CA. This line is regulated by the California Public Utilities Commission (CPUC). Approximately, 115 million cubic feet of natural gas were released. The released natural gas was ignited sometime afterwards with the resultant explosion and fire destroying or damaging nearby homes. The rupture created a crater approximately 72 feet long by 26 feet wide, and a pipe segment approximately 28 feet long was blown about 100 feet away from the crater.

Seven people were fatally injured in this tragedy. Additionally, numerous people were injured, and many more were evacuated. Ultimately, 37 homes were destroyed and 18 more were damaged. The immediate response by local emergency responders, as well as three strategic drops of fire retardant and water by airplane and helicopter before dark, assisted in stopping the spread of the fire.

PG&E personnel responded to the scene and isolated the ruptured pipe section by closing the nearest mainline valves. The upstream valve was closed at about 7:20 p.m. and the downstream valve at Healy Station was closed at about 7:40 p.m. The distance between these two valves is approximately 2½ miles. Once the ruptured section was isolated, the gas flow stopped, and the resulting fire from the ruptured line self extinguished. Later that evening, PG&E isolated the natural gas distribution system serving residences in the area, and within a minute of stopping the gas flow in the distribution system (about 11:30 p.m.), fires from escaping natural gas at damaged houses went out.

At about the same time as the rupture, in the Control Center in San Francisco, controllers observed an increase in pressure on Line 132. This increase was observed to occur at the Martin Station, which is downstream of the rupture location. A "Hi-Hi" pressure alarm indicating 386 pounds per square inch (psig) was received on line 132 at Martin Station.

Subsequently, at 6:15 p.m. a "Lo" pressure alarm was received on line 132 at Martin Station indicating 186 psig and within the same minute, a "Lo-Lo" alarm was received indicating 144 psig. At approximately the same time that the pressure drop was noticed, calls came in to the Control Center with reports on television and radio of a potential plane crash in the City of San Bruno. Within minutes, people realized that there was no plane crash but that the fire was due to a large release of gas.

PG&E dispatched their crew at 6:45 p.m. to isolate the transmission line. Some PG&E personnel arrived at the site before they were requested to respond, and they offered their services to the Incident Commander at the Incident Command trailer,

set up by the local fire department. The CPUC engineer arrived at the Incident Command by 9:00 p.m. on September 9.

When the NTSB arrived on scene, the investigation began immediately with visual examination of the pipe and the surrounding area and through discussions with first responders, PG&E and CPUC personnel, and others. The investigators measured, photographed, and secured the 28-foot ruptured pipe segment. On Monday, September 13, the ruptured pipeline and two 10-foot sections of pipe from either side of the rupture were crated for transport to an NTSB facility in Ashburn, VA. An initial examination of the ruptured pipe started at the Ashburn facility on September 23, and will continue with a detailed laboratory examination this week.

As data analysis begins, if investigators identify a systemic problem that should require immediate attention, the NTSB is prepared to issue urgent safety recommendations. Regardless, our goal is to produce the final report in 12 months.

There are several recommendations the NTSB has issued previously regarding gas pipelines which I will outline for the Subcommittee.

#### **Integrity Management Programs for Distribution Systems and the Use of Excess Flow Valves**

The Pipeline, Inspection, Protection and Enforcement and Safety (PIPES) Act of 2006 mandates that the Department of Transportation (DOT) prescribe minimum standards for integrity management programs for distribution pipeline systems. On June 25, 2008, the Pipeline Hazardous Materials and Safety Administration (PHMSA) published a notice of proposed rulemaking (NPRM) entitled, "Integrity Management Program for Gas Distribution Pipelines," with proposed regulations that would require operators of gas distribution pipelines to develop and implement integrity management programs with the same objectives as the existing integrity management programs for hazardous liquid and gas transmission pipelines.

Integrity management programs for hazardous liquid and gas transmission pipelines typically require operators to assess the condition of their pipelines by using "in-line" inspection tools that travel through the pipeline to determine the nature and extent of any defects, or pressure testing that yields information about the integrity of the pipeline. Such techniques are not feasible for typical distribution pipeline systems because of the differences in the design and operating parameters between distribution pipeline systems and hazardous liquid and gas transmission pipelines.

Further, the failure of a distribution pipeline is often initially detected from reports of a gas leak. As a result, development and implementation of an effective leak management program is an important element of an integrity management program for a distribution pipeline.

PHMSA acknowledged these differences in the NPRM and properly emphasized the importance of various leak detection methods as essential elements of an integrity management program for distribution pipeline systems.

In its comments on the NPRM, the NTSB emphasized that while an effective leak detection program is a crucial element of the overall leak management program, the use of equipment that prevents or mitigates leaks is equally important. One such device that mitigates a gas pipeline leak is an "excess flow valve." An excess flow valve is a device installed on the distribution line that detects an abnormally high flow rate on a line usually serving a user residence or facility. When an excess flow is detected, the valve automatically closes, thus shutting off the flow of gas through the distribution line. The NPRM did not adequately address this aspect of leak management, other than incorporating the mandate for PHMSA to require excess flow valves on new or replacement distribution lines serving single family residences. PHMSA complied with this provision of the PIPES Act on December 4, 2009, when it published the final rule on integrity management programs for distribution pipeline systems.

The NTSB has long advocated the use of excess flow valves in gas distribution pipeline systems as an effective means of preventing explosions caused by natural gas leaking from distribution systems. On July 7, 1998, a natural gas explosion and fire destroyed a newly constructed residence in South Riding, Virginia. The accident caused one fatality and one serious injury. The NTSB determined that the gas service line to the home had failed and that an uncontrolled release of gas had accumulated in the basement and subsequently ignited. The NTSB concluded from its investigation that had an excess flow valve been installed in the service line, the valve would have closed shortly after the hole in the service line developed and the explosion likely would not have occurred. The NTSB recommended that PHMSA require excess flow valves be installed in all new and renewed gas service lines, regardless of a customer's classification, when the operating conditions are compatible with readily available valves. The NTSB believes that apartment buildings, other multi-

family dwellings, and commercial properties are susceptible to the same risks from leaking gas lines as single-family residences, and we believe this gap in the law and the regulations should be eliminated.

#### **Oversight of Integrity Management and Other Risk-Based Pipeline Safety Programs**

Over the past decade or more, PHMSA has adopted a risk-based assessment approach for regulating the DOT pipeline safety program. PHMSA has successfully built a partnership with various facets of the pipeline industry to develop, implement and execute a multi-part pipeline safety program. All stakeholders, including PHMSA, have, in the NTSB's view, come to rely heavily upon this approach. The NTSB believes that a risk-based approach can be an effective method to develop and execute the pipeline safety program, and there are many positive elements to PHMSA's approach.

The DOT pipeline safety regulations based on risk assessment principles provide the structure, content, and scope for many aspects of the overall pipeline safety program. Within this regulatory framework, pipeline operators have the flexibility and responsibility to develop their individual programs and plans, determine the specific performance standards, implement their plans and programs, and conduct periodic self-evaluations that best fit their particular pipeline systems. PHMSA likewise has the responsibility to review pipeline operators' plans and programs for regulatory compliance and effectiveness.

The NTSB believes that along with the risk-based assessment there should be increased responsibilities on both the individual pipeline operators and PHMSA. Operators must diligently and objectively scrutinize the effectiveness of their programs, identify areas for improvement, and implement corrective measures. Likewise, PHMSA, as the regulator, must also do the same in its audits of the operators' programs and in self-assessments of its own programs. In short, both operator and regulator need to verify whether risk-based assessments are being executed as planned, and more importantly, whether these programs are effective.

In its recent pipeline investigations in Kingman, Kansas, Carmichael, Mississippi, and Palm City, Florida, the NTSB discovered indications that PHMSA and operator oversight of risk-based assessment programs, specifically integrity management programs and public education programs, has been lacking and has failed to detect flaws and weaknesses in such programs. As a result of these investigations, the NTSB is concerned that the level of self-evaluation and oversight currently being exercised is not adequately applied by some pipeline operators and PHMSA to ensure that the risk-based safety programs are effective. The NTSB believes that to ensure effective risk-based integrity management programs are employed throughout the pipeline industry, PHMSA must establish an aggressive oversight program that thoroughly examines each operator's decision-making process for each element of its integrity management program.

#### **Recent Pipeline Accidents**

In addition to the accident in San Bruno, the NTSB has been investigating three other pipeline accidents that occurred this summer. In Cleburne, Texas, a 36-inch natural gas pipeline was struck by a contractor excavating the area. One person was killed and 6 others were hospitalized.

In July, a 30-inch diameter crude oil pipeline operated by Enbridge Energy Partners ruptured in Marshall, Michigan, spilling between 800,000 to 1,000,000 gallons of oil into Talmadge Creek and the Kalamazoo River. The NTSB dispatched a team of more than 10 investigators to the scene. This investigation is continuing and we are examining the pipe segment in our Materials Laboratory.

In September, another Enbridge crude oil pipeline ruptured in Romeoville, Illinois. A segment of this pipeline was recently transported to our facilities in Ashburn, Virginia for testing and further study.

The NTSB is in the early stages of our investigations in each of these accidents. We have much information to collect and analyze, but areas of interest to investigators may include:

- *Supervisory Control and Data Acquisition (SCADA) operations.* As a result of the NTSB's 2005 Safety Study, *Supervisory Control and Data Acquisition (SCADA) in Liquid Pipelines*, the NTSB issued Safety Recommendations P-05-1 through -3 which called on PHMSA to: (1) require hazardous liquid pipeline operators to follow the American Petroleum Institute's recommended practice for the use of graphics on SCADA computer screens, (2) require pipeline companies to have a policy for the review and audit of SCADA alarms, and (3) require training for pipeline controllers to include simulator or non-computerized simulations for controller recognition of abnormal operating conditions, particularly

leak events. These three recommendations were also incorporated directly into the PIPES Act. PHMSA published a final rule on December 4, 2009, that included the recommended requirements and applied them to all pipeline systems.

- *Pipeline controller performance.* NTSB investigators are examining the work experience, health, work/rest schedule, qualification, training, and activities of each control room operator involved in the accidents.
- *Operator notification and spill response.* The NTSB is gathering and evaluating information from interviews and electronic sources to further determine the timeline of events. This information will accurately reflect when the spill occurred, when notification was made, and how the operator responded.
- *Emergency response and oil spill response.* The team will review the notifications and actions of emergency responders and the pipeline operators to the release of natural gas in San Bruno and the oil spill in Marshall.
- *Inspection and Maintenance History.* The NTSB will review and evaluate the pipeline inspection and maintenance history of the operators, including but not limited to integrity management plans, risk-based programs, and inspection history.
- *Oversight Activities and Actions.* Federal and state regulators have a role in overseeing the integrity of the pipeline system and ensuring the safety of our national pipeline system. The NTSB will evaluate the oversight exercised by state regulators and PHMSA of the pipeline operators in the San Bruno and Marshall accidents.
- *Aging Pipelines.* The NTSB has noted that the many of the major pipeline accident investigations it has conducted in recent years have involved pipeline systems that exceed 30 years or more of age. The NTSB is uncertain whether this is a trend, but will examine the issue in on-going investigations and pursue this issue with PHMSA.
- *Urban Development.* Hand-in-hand with aging pipelines is urban development. At the time of pipeline installation, an area may not have been developed. Today, however, many areas have realized population growth. The NTSB will evaluate notification, location, integrity management, and other factors impacted by urban development.

#### **Closing**

The accident in San Bruno is a tragic event, and the NTSB dedicates itself to determining the cause of the accident and proposing recommendations to prevent these types of accidents from happening in the future.

This concludes my testimony and I would be happy to answer any questions you may have.

Senator LAUTENBERG. Thanks very much, Mr. Hart.

You know, when we look back, it always raises questions on what might have been done, what would effects have been if the equipment was equipped with an automatic or remote-control shut-off valve. If this pipeline had been equipped with such a device, what effect would it have had on the consequences of the explosion?

Mr. Hart?

Mr. HART. That is certainly one of the issues we will be looking at, because the integrity management plans say that pipelines that run through high-consequence areas need to determine whether it's appropriate to have automatic or remote shut-off valves. That is ultimately the decision of the operator, that's then approved or disapproved by the regulator. We'll be looking at that entire process of overseeing the integrity management plan, because that's a part of our investigative process.

Senator LAUTENBERG. Well, let me ask you this. You know, the study may continue, but the fact of the matter is, that there had to be some judgment as to what the effectiveness of these basic tools for pipeline safety might have been. Is there not enough in the evidence that we see in front of us—the loss of life, the destruc-

tion of facility—would there not have been an effect? Does it require study to say, “Well, we’re still looking at what there might have been?” Because implicit in your response, Mr. Hart, is the fact that, “Well, we’re not sure it’s going to do so much good, or that much good.” Is that the way you see it?

Mr. HART. It took an hour and a half to turn off the valves—there’s no question that turning them off sooner would have resulted in less damage. What we will be looking at in this investigation is, what factors were used by the operator in deciding not to have automatic or remote valves? What factors were considered by the regulator in approving that decision? And the reason we’re looking at that closely is because there have been several other recent accidents where we’ve seen that the process of overseeing the integrity management plans hasn’t worked as well as it should, and we are looking at whether that’s a—

Senator LAUTENBERG. Yes.

Mr. HART.—systemic issue that we need to address—

Senator LAUTENBERG. OK.

Mr. HART.—systemically.

Senator LAUTENBERG. Because the cut-off valves—they’re kind of basic things. The absence of these things is what I believe presents us with the prospect of the kind of damage that occurred here and in other places—in my State, New Jersey. And it’s a fairly basic piece of equipment, and hopefully—that I thought we would even accept that as being a necessity. But, other technological improvements might have come along the same time.

Mr. HART. We made a recommendation for such valves back in 1995, and we closed that recommendation as “acceptable,” on the grounds that the regulator at the time—RSPA—agreed to incorporate this into the Integrity Management Program. We’re looking at whether the integrity management process is working.

Senator LAUTENBERG. Ms. Quarterman, the pipeline that ruptured in San Bruno was an intrastate pipeline, not under the jurisdiction of PHMSA. And while PHMSA sets the minimum Federal safety standards for such pipeline, it is the responsibility of State agencies—the California Public Utilities Commission, in this case—to conduct oversight of intrastate pipeline. In the light of the tragedy at San Bruno, is this division of responsibility providing enough oversight, do you think, of pipeline safety?

Ms. QUARTERMAN. Well, let me just say that I think the provision in the legislation that Congress has put forward in the Pipeline Safety Act, to have States involved in oversight of pipeline safety is an important one. Because of that, rather than having 113 inspectors, we have an additional 300 inspectors throughout the States, many of whom are very close to pipeline facilities.

Having said that, I think it is always an opportune time to take a closer look at regulatory authorities and how we might improve the State and Federal programs and the oversight of those programs. It is certainly, in the first instance, the responsibility of the States. With respect to the California Public Utility Commission, they have been overseeing these pipelines for at least two decades, perhaps even before there was a Federal Pipeline Safety Act, and that they are doing a good job of that. But, we are there as the

backstop. In my view, even though this authority has been delegated to the States, the buck stops here.

Senator LAUTENBERG. Thank you.

Mr. HART, third-party excavation activities are the leading cause of injuries and fatalities involving pipeline. Congress mandated the One-Call system so that companies, individuals, call to have underground lines and pipes marked before they start digging. However, some States exempt certain agencies and contractors from using a One-Call system. How would removing all exemptions from the One-Call safety system improve pipeline reliability?

Mr. HART. We will be looking at the issue of nearby excavation. We know, that there was no contemporaneous excavation. We will be looking at the history of this pipeline to make sure that that—to see if there was any damage, over the history of the pipeline, resulting from excavation. Once we determine that, then we'll be in a better position to look at whether that system is working.

Senator LAUTENBERG. Are you satisfied with the examination of the tragedy in San Bruno has been reviewed quickly, and appropriately done?

Mr. HART. I'm very satisfied with what we've done. We tried to move as quickly as possible, consistent with doing a thorough investigation, because we wanted to return the infrastructure to normalcy as quickly as possible. We're also very pleased with the efforts of the first responders. They obviously did all of the work at the outset, before we arrived, and they've been very helpful every step of the way since we arrived.

Senator LAUTENBERG. Yes. OK. I thought that there were conclusions drawn, not just from this particular devastating accident, but experienced over the years. And I would urge that we get moving as quickly as possible, because these things came about without warning, and the result was, again, so giant that we can't afford to lose any time to get things changed.

Senator Boxer?

Senator BOXER. You can go first this time—

Senator LAUTENBERG. Oh, I appreciate it. OK.

Senator BOXER. Thank you.

Senator THUNE. Thank you, Mr. Chairman.

Ms. Quarterman, when you testified in front of this committee in June, I asked you about the fact that PHMSA does not require emergency response plans for natural gas pipelines. And you responded, at the time, that PHMSA was looking into the issue. How will the San Bruno incident impact your decision?

Ms. QUARTERMAN. We, in fact, do require emergency response plans for both oil and gas. And if I testified to that effect, I misspoke. I think we were talking, at the time, about oilspill response plans, which is something, required under the Oil Pollution Act of 1990, that only applies to oil pipelines. But, there are emergency response plans required for both oil and gas operators.

Senator THUNE. I want to come back to the point I made earlier about the positions authorized by the PIPES Act, because the Administration's reauthorization proposal requests an additional 40 positions, yet it is my understanding that there are still 25 authorized positions not filled. Could you speak to that issue?

Ms. QUARTERMAN. There are currently 113 inspection positions authorized. There are currently 96 inspectors on board. We have hired 4 people, who should arrive within the next 2 months; and there are 13 positions being advertised. This is something that, when I came into this position, was a huge problem for the agency. We had, essentially, 72 vacancies, almost a quarter of the PHMSA staff. I have made it a high priority within PHMSA, meeting on a monthly basis with my managers, and including this as one of their performance measures, that they fulfill the requirement and fill these positions. We received additional positions in Fiscal Year 2010. We have hired, since I've been there, close to 80 people, I believe. The goal was to get to 10-percent vacancy rate. I think we were about 10.1 by the end of the fiscal year, 10-point-something at the end of the fiscal year. I will ratchet that up, for the next fiscal year, to get as close to 100 percent as possible. Should the Committee or the Congress add additional positions, we will be all over them.

We just hired a new head of administration. That position had been empty for several years. That person is young and is dedicated to getting those positions filled as quickly as possible.

The ability to short-circuit some of the hiring requirements would be nice, if we could hire people directly. We don't have that authority at the moment, but we're looking into the possibility of doing that.

Senator THUNE. Do you need the additional 40 positions?

Ms. QUARTERMAN. Yes, we do.

Senator THUNE. The Pipeline Safety Program is funded through user fees. The pipeline operators oppose the Administration's proposal to charge separate fees for the review of design plans and special permit applications, arguing that they already pay for those services. Now, given that the existing user fee covers the cost of the pipeline safety program, why do you propose adding an additional type of fee?

Ms. QUARTERMAN. This fee, in my view, would offset the user fees and would decrease the amount that companies have to pay in user fees.

Currently, within the past 4 years, or, at least in the mid-2000s, there was a huge increase in the number of new pipelines constructed. And the number of inspections that were done from new construction went up from a few hundred days, at the beginning of the 2000s, up to close to 2,000 days our inspectors were spending going on construction sites. Those people were not doing regular inspections on the rest of the pipeline system. In my view, the people who are proposing new construction projects should bear the cost associated with having inspectors out there to do that, so that we still have the same number of inspectors available to look at the rest of the pipeline system. Right now, the new construction is bleeding off oversight of the existing infrastructure.

Senator THUNE. Well, you said those fees would offset existing fees. There would not be additional—

Ms. QUARTERMAN. They would be an offset, to the extent we're all capped by the number of people that we have. To the extent that the cost of new design or construction is taken out of the exist-

ing pool of inspections, it would decrease the amount of the user fee.

Senator THUNE. Time is up. Thank you, Mr. Chairman.

Senator LAUTENBERG. Thanks very much.

Senator Boxer?

Senator BOXER. Thank you, Mr. Chairman.

Mr. Hart, I again want to compliment you. You were out on the scene, you were there, you were out there asking all the questions. You're looking at the response plan of the utility?

Mr. HART. That's correct.

Senator BOXER. OK. It's my understanding—correct me if I'm wrong—this was an intrastate problem.

Mr. HART. That's correct.

Senator BOXER. This was not interstate. So, we're dealing with the California PUC and the operator, PG&E.

Mr. HART. And PHMSA, as well. There's a Federal oversight layer.

Senator BOXER. And the oversight of PHMSA.

Mr. HART. Yes.

Senator BOXER. So, my understanding is—and I'm reading from the Mayor's testimony—he says, "More than 400 first responders gallantly battled the six-alarm inferno by dragging 3,000 feet of fire lines from an adjoining neighborhood where our water department was able to locate water. The heat was so intense, it cracked the windshield of one firetruck, with the wall of fire stopping veteran responders in their tracks. As the fire spread rapidly into the adjacent Crestmoor Canyon, airstrike teams sprayed fire retardant foam to prevent the fire from engulfing the canyon and the neighborhoods on the other side. Citizen responders drove those with second-degree burns to nearby hospitals so that emergency crews could focus on the most severely burned and on preventing more lives from being lost." That is straight from the Mayor and straight from the ground.

Now, my understanding is, it took PG&E about a half hour to get to the site. Is that your understanding?

Mr. HART. The timeline that I have is that from the time of the pressure disruption at the Martin Station until the time of the first valve shutoff was about an hour and 30 minutes.

Senator BOXER. An hour and 30 minutes. But, my understanding is, they arrived on the scene in about 30 minutes. That is not your understanding?

Mr. HART. I don't remember that event on the timeline.

Senator BOXER. OK. Well, if you're right—

Mr. HART. We'll find that out.

Senator BOXER. We'll find out from PG&E.

Mr. HART. OK.

Senator BOXER. But, the point is, if the operator, PG&E, is responsible for a response plan—and I'm not picking on them—or, I don't know what their response plan was, or whether it worked or it didn't work; we'll find out. But, in a crisis like this, where there are no shut-off valves, where there's no way to get this under control, is it acceptable for it to take 30 minutes, an hour, an hour and a half, while the local people are taking over this and stealing water from neighboring jurisdictions? I mean, it just doesn't sound

to me that there was a response plan in place that actually functioned.

Mr. HART. We will certainly be looking at the response plan, both of the operator and of the emergency responders. We know that gas fires are difficult to fight. They can't be fought effectively with water, and that's why they brought the airport fire personnel, because they know how to fight gas fires.

Senator BOXER. Well, they did everything right.

Mr. HART. Right.

Senator BOXER. But, if PG&E is responsible—and the PUC and PHMSA, for approving the response plan—I don't know—if it wasn't for the local people, I don't even want to think about—now, maybe the local people are part of the response plan, and maybe it was part of the effort. I don't know all the answers. But, it just seems like, if it took PG&E a half hour to an hour and a half to get there—it worries me. But, you are looking at that.

Mr. HART. That's affirmative.

Senator BOXER. OK. And I would like to ask PHMSA this question: In your response—and I appreciate your response to a letter I sent you on September 13—you stated that all interstate pipelines within high-consequence areas in California had been inspected since 2008, with the exception of two areas scheduled to be inspected this fall. Where are those two locations? And when do you expect to complete those inspections?

Ms. QUARTERMAN. I don't recall the two particular pipelines that are scheduled for inspections in the fall. I will have to get that for you for the record.

[The information referred to follows:]

Answer. The first location is operated by Plains Exploration and Production Company (XP) The system is a jurisdictional gas gathering system in Los Angeles County used to transport produced gas from two production sites to the Inglewood Plant where the natural gas is sold.

The second location is operated by Rosetta Resources, Known as the Rio Vista Gas line. This unit is an intrastate gas transmission line and consists of a 4.33 mile long natural gas transmission line near Rio Vista, CA in Sacramento County. Gas is collected in a gas field east of Rio Vista and sent to a processing plant. The line begins at the processing plant and connects to the CPN Pipeline.

Senator BOXER. I need that information.

Ms. QUARTERMAN. OK.

Senator BOXER. How soon can you get it to me?

Ms. QUARTERMAN. I believe it was in the letter that was sent to you yesterday.

Senator BOXER. You didn't specify.

Ms. QUARTERMAN. No? OK.

Senator BOXER. You just said that there were two areas, but you didn't say where they were. So, I need to know where they were.

Is that correct?

So, can you get me that information ASAP, please?

Ms. QUARTERMAN. Certainly.

Senator BOXER. OK.

You stated that PHMSA is developing plans for interstate inspections for Fiscal Year 2011, and that only two inspections had tentatively been scheduled. What percentage of high-consequence pipelines in California will be inspected in 2011, according to your plan?

Ms. QUARTERMAN. I don't think the plan is fully developed at this point. This is the time of year when we begin to develop a plan for Fiscal Year 2011.

Senator BOXER. OK.

Ms. QUARTERMAN. The two that are indicated there are the only two, so far, on the plan.

Senator BOXER. OK, when will you have your final inspections set? It's almost the end of 2010, so, at what point would you have it? Before the end of the year, I assume?

Ms. QUARTERMAN. I assume so. I know the regional directors were in a meeting a week ago to discuss the—

Senator BOXER. Well, I would ask that you please get that answer to me, as well, as soon as possible.

[The information referred to follows:]

Answer. The PXP pipeline was recently inspected in October 2010. The Rio Vista line will be inspected in December 2010.

Senator BOXER. Mr. Chairman, can I ask one more question at this point?

Senator LAUTENBERG. Sure.

Senator BOXER. Your letter also stated that more than 3,600 miles of interstate and intrastate gas transmission lines in California are located in densely populated areas. What immediate steps are you taking, along with your State partner, the CPUC, to ensure the safety of all 3,600 miles of transmission lines?

Ms. QUARTERMAN. Well, it's our job, along with CPUC, to ensure that those lines are inspected, and we work with them on a regular basis to ensure that inspections are being done appropriately, and review those that have been—

Senator BOXER. I know. But, that's an answer that I appreciate, but look what happened. And we don't know yet when all that was inspected, but we've got lines that were laid in the 1940s and the 1950s. I need to know more than just a general answer.

So, would you get back to me on what immediate steps you're taking, along with your State partner on intrastate lines, the PUC in California, to ensure the safety of all 3,600 miles of transmission lines?

Those are the high-consequence lines. Those are the ones where the people are living very close by. And we just can't wait. We don't—it's on our collective shoulders now, after this happened. We have been warned. So, I need to have more specificity from you. And I would appreciate it if you could—I will give you another letter, in writing, asking for all these three answers. But, I need to have the answers. If, you know, this is not—this can't be guesswork. We have 3,600 miles of transmission lines in densely populated areas. What are your plans to make them safe—specifically? Not, "We will do this or that." What's your schedule? What's your timeline? We need to know that.

[The information referred to follows:]

Answer. All federally-regulated gas operators with high consequence area (HCA) mileage will have Integrity Management Plan inspections in 2011 followed by standard inspections on all units in 2012, except one idle line which will only have a standard inspection in 2011. For operators without HCA mileage, standard inspections will be performed on all units in either 2011 or 2012 (prioritized by date of

last inspection). federally regulated gas lines in CA include gas transmission, jurisdictional gathering, offshore, and municipal distribution.

For state-regulated gas pipelines, total and HCA mileage as well as inspection history was provided by the CA-PUC. Inspection history includes both standard and integrity management inspections. Inspected HCA mileage for PG&E and Standard Pacific standard inspections was estimated based on CA-PUC's inspection cycle. At this time, the state office plans to continue with their current inspection cycle, but may be able to increase inspection frequency if regulation to allocate additional funding is approved.

The following tables summarize pipeline mileage and inspections in California:

Federally Regulated Gas (CA)	2008	2009	2010	2011*	2012*
<i>Inspected In HCA (mi)</i>	47	40	79	169	166
<i>Inspected Outside HCA (mi)</i>	723	898	1,438	1,717	2,429
Total OPS Inspected	770	938	1,517	1,886	2,595

\* Planned inspections including both I01 and O07.

Federally Regulated Gas Pipeline in California	
<i>Total Mileage In HCA (mi)</i>	169
<i>Total Mileage Outside HCA (mi)</i>	3,023
Regulated Mileage	3,192

State Regulated Gas (CA)	2008	2009	2010	2011
<i>Inspected In HCA (mi)</i>	1,624	1,624	2,321	1,622
<i>Inspected Outside HCA (mi)</i>	6,778	4,890	8,614	4,558
Total CA-PUC Inspected	8,402	6,514	10,935	6,180

State Regulated Gas Pipelines in California	
<i>Total Mileage In HCA (ml)</i>	2,323
<i>Total Mileage Outside HCA (ml)</i>	8,679
Regulated Mileage	11,002

Ms. QUARTERMAN. As a result of this accident, we will certainly be working closely with the NTSB to find out what the cause is so that we can put into effect, as soon as possible, any regulations that may be appropriate if the transmission lines are not adequately covered by the existing regulations, including looking at one thing the Chairman mentioned, which is the notion of remote shut-off valves.

Senator BOXER. I believe that the NTSB is going to take a year to 18 months. Meanwhile, we know we have 3,600 miles of transmission lines in California, close to where people live. So, we can't wait for more regulations. You already have the authority to inspect. If you need more help doing that, please let us know. But, we cannot wait. We need to act on these—I mean, I'm just speaking for my State. Senator Lautenberg will speak for his. And each of us can speak for ours. But the fact is, we now know, because of your cooperation with us, which we greatly appreciate, how many lines we have that are of consequence. So, we can't wait for a year or 18 months to figure out what NTSB is recommending. We need to have inspections. So, we need PHMSA to take the lead.

Now, I've talked to PG&E and off the record, we chatted; and I think they're ready and willing to do more inspections. But, I think you need to be proactive on this one, and not wait for new legislation. You have the authority. That's your job. And I think we want to help you get it done.

Ms. QUARTERMAN. Right.

Senator BOXER. So, I need to know the answers to my questions: What are your plans? Where are those two areas, you wrote to me, and are they going to be inspected right away? What are your plans for the 3,600 miles? I just need to have some answers, because I can't go home when people ask me, "Well, what's going to happen? Where is all the—where are these pipelines?"—I can say, "I now know that there are 3,600 miles that are close to people, and that's a priority." I can tell them that Senator Feinstein and I, with the help of the Chairman, and hopefully Senator Thune and Johanns and others, are writing some new regulations.

But, in the meantime, we need inspections. We have to have inspections. And we need to know whether there's corrosion. We need to know whether there was any excavation. We need to know how old these pipelines are. And we need to move forward together.

So, I'm looking forward to your response, very much, because I want to help you. I'm not challenging you because I don't trust that you do the right thing. I want to tell you that you need to tell me what your plans are and what you need to do to get this job done now, not waiting until there's a report, because we just can't wait. Something else could happen.

We know, from the NTSB, they're looking at other problems. And now this happened. So, we can't wait for another accident. This one cut deep into a community. You were there. It stops your heart. So, we don't want this to happen to any community in the country. So, we need you to work with us now and understand that it's going to be a while until we get the legislation. Let's use your authority now. That's just my message.

Ms. QUARTERMAN. I absolutely agree with you, Senator. I assure you that we are taking the incident very seriously. It was a sobering experience to go out to San Bruno, and one that pulls at the heart of all the folks at PHMSA and particularly, inspectors who have to go on these scenes on a daily basis and have lost colleagues, in the California Public Utility Commission, as well.

Senator BOXER. Yes.

Ms. QUARTERMAN. And we will be working on inspections, in California and throughout the country, I assure you.

Senator BOXER. Thank you. I look forward to your response.

Thank you.

Senator LAUTENBERG. I want to say that we'll keep the record open and expect prompt responses to questions that will be submitted to you in writing.

We thank you for your testimony, and call the next panel to the table.

That's Mr. Paul Clanon, Executive Director of the California Public Utilities Commission; Mr. Christopher Johns, President, Pacific Gas and Electric; Mr. Jim Ruane, Mayor of San Bruno; and Mr. Rick Kessler, Vice President of the Pipeline Safety Trust.

And I'm called to another meeting, and Senator Boxer will continue with the witnesses—and it will be up to her as to when we finish the questions and listen to the testimony.

So, thank you.

Senator BOXER [presiding]. Thank you so much, Mr. Chairman. I'm delighted to take the gavel from you, just as you've done it for me in the PW Committee. Thank you very much.

Panel three, we welcome you here. It's a very, very important panel.

I would like to start off with the Mayor, if you don't mind, because I think the Mayor needs to bring us back to the picture of the moment.

And so, Mayor Ruane, please proceed.

**STATEMENT OF HON. JIM RUANE, MAYOR,  
SAN BRUNO, CALIFORNIA**

Mr. RUANE. Thank you. Thank you, Chairman Lautenberg—  
Senator BOXER. Make sure your microphone is turned on.

Mr. RUANE. All right. That's better.

Thank you, Chairman Lautenberg, Ranking Member Thune, and, in particular, Senators Boxer and Feinstein, for inviting me to testify.

My name is Jim Ruane, and I am the very proud Mayor of the wonderful City of San Bruno. I'm here today to give you—voice to the residents of San Bruno, whose hearts were broken on the awful evening of September 9, 2010, but whose spirit remains strong and resilient.

Let me tell you just a little bit about San Bruno. We're a solid working-class community of nearly 44,000, located in the sophisticated urban environment of the San Francisco Peninsula, immediately adjacent to San Francisco International Airport. We have a unique identity in the region as a somewhat old-fashioned, unassuming community with a positive, can-do attitude about life. I often tell people that San Bruno is the closest thing to a slice of American pie you could ever experience.

The Glenview area where the explosion occurred is a hillside neighborhood of nearly 400 homes, built around the Crestmoor Canyon open space.

The explosion occurred at dinnertime on a Thursday evening, just as residents were settling in for another typical night at home, and perhaps to watch the first NFL game of the season. The neighborhood was shaken out of its routine with a thunderous disturbance that some mistook, at first, as an earthquake or an airline crash, the deafening sound of a fireball roaring 100 feet overhead, and 2,000-degree flames overtook their homes.

Our residents ran for their lives with just the clothes on their back. What we now know is that a 30-inch high-pressure natural gas transmission line running through the Glenview neighborhood exploded. Police and fire first responders from all over our region converged on the area, only to discover that the explosion had knocked out the main water line.

I immediately drove to the scene and then helplessly watched from afar as the gas line spewed unabated for over an hour until it could be capped. One observer later said, "It looked like Hell on Earth."

More than 400 first responders gallantly battled the six-alarm inferno by dragging 3,000 feet of lines from an adjoining neighborhood, where our Water Department was able to locate water. As

the fire spread rapidly into the adjacent Crestmoor Canyon, air-strike teams sprayed fire-retardant foam to prevent the fire from engulfing the canyon and the neighborhoods on the other side.

Citizen responders drove those with second-degree burns to nearby hospitals so that emergency crews could focus on the most severely burned and on preventing more lives from being lost.

Within the first hour of the explosion being reported, we had set up an Incident Command Center at the site, evacuated nearly 1,000 residences, and activated our Emergency Operations Center at City Hall. Fortunately, we received a flood of assistance, not only from our own city workers, but our residents, San Mateo County and State emergency officials, dozens of surrounding police and fire agencies and relief agencies.

We opened an Evacuation Center for displaced residents that night, had a one-stop Local Assistance Center set up and running by the next day, and soon were inspecting the impacted homes in the Glenview neighborhood for damage.

Some have said our response was a textbook example of how to handle a crisis of epic size like this. I want to say that it was a team effort involving the tremendous expertise and passion of so many people and agencies coming together to support San Bruno.

We now know that the most devastating outcome of the explosion and fire was the loss of eight lives that night. And yes, I said "eight." The last fatality was just confirmed to us within the last hour.

There were other awful consequences, as well. Sixty-six persons were reported burned and injured, including four firefighters who suffered smoke inhalation. At least four residents remain in critical condition today from their burns, and they all face long and difficult recoveries. Thirty-seven homes were destroyed, 18 remain uninhabitable, and another 32 suffered less serious damage.

A large crater and dirt road now cut through Glenview, with a fence surrounding the exposed pipeline. The sad rubble of a children's playground and the dozens of charred homes and their barren chimneys sitting as a grim reminder of the tragedy we experienced.

Within 48 hours, teams of building inspectors had completed inspection of the 377 evacuated homes in the blast zone. That Saturday, we convened a Town Hall meeting that drew over 600 residents. By Sunday morning, less than 72 hours from the explosion, we had coordinated a neighborhood re-entry program that allowed 299 families to return home.

Over the next few days, those who lost their homes were allowed to return and sift through the rubble for any personal items they could find.

The following days were surreal for our community: funerals and vigils, potlucks, fundraising events, press conferences, and a nationwide offering of condolences. People from across the world contacted us to lend their support. While this became an international news story about pipeline safety, for us it was always about getting our hometown, San Bruno, back on its feet.

Today, crews are clearing the debris so that the rebuilding process can begin. This week, we are beginning a new program to give even more targeted one-on-one assistance to those 55 families who

will be displaced from their homes and their neighborhood for some time to come.

We will leave it to the experts, including investigators from the National Transportation Safety Board, to determine how and why this happened. These investigations will be vital to ensuring that this type of tragedy never occurs again and that no other community will be subjected to the horror that we continue to experience.

For now, we know that this incident cost precious lives, incinerated a neighborhood, caused over \$50 million in physical damage—and counting—and forever changed San Bruno. I can also say that it has made a determined and resilient town even more determined and resilient. As one retired firefighter who lost his home in the blaze said, “I’m going to be the first person to move back in—with the city’s help, of course. The faster I can move forward, the less I think of the past.”

You may be asking yourself, what can the Federal Government do to help San Bruno? First and foremost, the Federal Government should take all necessary actions to assure that this never happens again. The City of San Bruno, already struggling, does not have the resources to cover the cost of the response and the long-term consequences of this disaster. I am very disappointed with the recent determination by FEMA to deny Federal resources. Your support for our appeal is vital to San Bruno’s future.

Thank you for your time today, and thank you for your continued prayers for the City of San Bruno.

[The prepared statement of Mr. Ruane follows:]

PREPARED STATEMENT OF HON. JIM RUANE, MAYOR,  
CITY OF SAN BRUNO, CALIFORNIA

Thank you, Chairman Lautenberg, Ranking Member Thune, our esteemed U.S. Senator Barbara Boxer and members of the Subcommittee for inviting me to testify on the matter of “Pipeline Safety: Assessing the San Bruno Explosion.” My name is Jim Ruane, and I am the proud Mayor of the wonderful City of San Bruno, California.

I am here today to give voice to the residents of San Bruno whose hearts were broken on the awful evening of September 9, 2010, but whose spirit remains strong and resilient. We are a determined town that will triumph over this tragedy because of the special sense of family, neighborhood and community that San Bruno was known for long before this tragic incident. I can tell you with great certainty that the explosion did not tear San Bruno apart but has brought us closer together than ever.

**A Place Called San Bruno**

Let me tell you a little bit about San Bruno. We are a solid working-class community of nearly 44,000 located, as one newspaper article said, “between the glitz of San Francisco and the wealth of Silicon Valley.” While we are located in the sophisticated urban environment of the San Francisco Peninsula, immediately adjacent to the San Francisco International Airport, we have a unique identity in the region as a somewhat old-fashioned, unassuming community with a positive, can-do attitude about life.

Most of our homes were built post-World War II, with one-car garages and well-kept yards. We have many beautiful parks in our town, and a community event almost every weekend. We have decorum at our City Council meetings, pride in the American flag and a legacy of civility in an increasingly uncivil world.

I often tell people that San Bruno is the closest to a slice of “American pie” that you could ever experience.

The Glenview area where the explosion occurred is a hillside neighborhood of nearly 400 homes built around the Crestmoor Canyon Open Space and the little Glenview Tot Lot popular with local families with small children.

### **The Night of September 9, 2010**

The explosion occurred at dinnertime on a Thursday evening, just as residents were settling in for another typical night at home and perhaps to watch the first NFL game of the season. The neighborhood was shaken out of its routine with a thunderous disturbance that some mistook at first for an earthquake or an airplane crash. The deafening sound of a fireball roaring 100-feet overhead and 2,000-degree flames overtook the homes. Our residents ran for their lives with just the clothes on their back.

As one resident said, “My wife and children ran screaming barefoot from the house . . . with a ball of fire behind them.”

What we now know is that a 30-inch Pacific Gas & Electric Co. high-pressure natural gas transmission line running through the Glenview neighborhood exploded. Police and fire first-responders from all over our region converged on the area, only to discover that the explosion had knocked out the main water line. I myself, who saw the first plumes of smoke as I was driving home from a city reception, immediately drove to the scene and then helplessly watched from afar as the gas line spewed unabated for over an hour until it could be capped.

One observer later said, “It looked like hell on Earth.”

### **The Response**

More than 400 first-responders gallantly battled the six-alarm inferno by dragging 3,000 feet of fire lines from an adjoining neighborhood where our water department was able to locate water. The heat was so intense it cracked the windshield of one fire truck, with the wall of fire stopping veteran responders in their tracks. As the fire spread rapidly into the adjacent Crestmoor Canyon, air strike teams sprayed fire retardant foam to prevent the fire from engulfing the canyon and the neighborhoods on the other side. Citizen-responders drove those with second-degree burns to nearby hospitals so that emergency crews could focus on the most severely burned and on preventing more lives from being lost.

Within the first hour of the explosion being reported, we had set up an incident command center at the site, evacuated nearly 1,000 residences and activated our emergency operations center at City Hall. Our city has a staff of only about 75 police and fire officers. Fortunately, we received a flood of assistance not only from our own city workers, but our residents, San Mateo County and state emergency officials, dozens of surrounding police and fire agencies, and relief agencies.

We opened an evacuation center for displaced residents that night, had a one-stop local assistance center up and running by the next day and soon were inspecting the 377 impacted homes in the Glenview neighborhood for damage. Some have said our response was a “textbook” example of how to handle a crisis of epic size like this—and I just want to say that it was a team effort involving the tremendous expertise and passion of so many people and agencies coming together to support San Bruno.

We now know that the most devastating outcome of the explosion and fire was the loss of seven lives that night:

- A 44-year-old mother and her 13-year-old daughter, leaving behind a father and another daughter;
- An 81-year-old woman who was a long-time resident of the Glenview neighborhood;
- A 20-year-old woman who was visiting her boyfriend during her short break from work and whose boyfriend remains hospitalized with critical burn injuries;
- And nearly an entire household with an 82-year-old grandmother, a 50-year-old husband and 17-year-old son survived by the mother and daughter of the household.

There were other awful consequences as well:

- Sixty-six persons were reported burned and injured including four firefighters who suffered smoke inhalation. At least 4 residents remain in critical condition today from their burns, and they face long and difficult recoveries.
- Thirty-seven homes were destroyed, 18 remain uninhabitable and another 33 suffered less serious damage.
- A large crater and dirt road now cut through Glenview, with a fence surrounding the exposed pipeline. The sad rubble of a children’s playground and the dozens of charred homes and their barren chimneys sit as a grim reminder of the tragedy we experienced.

### **The Aftermath**

The City moved quickly to help our displaced and frightened residents, staffing a special 24-hour hotline and reaching out with one-on-one assistance. Within 48 hours of the explosion, teams of building inspectors had completed inspection of the 377 evacuated homes in the 10-acre blast zone. That Saturday we convened a Town Hall meeting that drew over 600 residents.

By Sunday morning, less than 72 hours from the explosion, we had coordinated a neighborhood re-entry program that allowed 299 families to return home. Over the next few days those who lost their homes were allowed to return and sift through the rubble for any personal items they could find. We dealt with the deluge of national and international interest by setting up a 24-hour public information line and posting daily updates on the city website.

The following days were surreal for our community—funerals and vigils, church potlucks, fundraising events, press conferences and a nationwide offering of condolences. People from as far away as Kansas and Arkansas, Japan and Australia and others across the world contacted us to lend their support. While this became an international news story about pipeline safety, for us it always was about getting our hometown, San Bruno, back on its feet.

Today our recovery efforts continue, with crews now clearing the site of debris so that the rebuilding process can begin. We are having regular meetings with those still displaced, and this week we are beginning a new program to give even more targeted, one-on-one assistance to those 55 families who will be displaced from their homes and their neighborhood for some time to come.

We will leave it to the experts, including investigators from the National Transportation Safety Board, to determine how and why this happened. These investigations will be vital to ensuring that this type of tragedy never occurs again and that no other community will be subjected to the horror that we continue to experience.

For now we only know that this incident cost precious lives, incinerated a neighborhood, caused over \$50 million in physical damages and counting, and forever changed San Bruno.

I have been asked countless times what the impact has been, and I can only say that it has made a determined and resilient town even more determined and more resilient. San Bruno will honor those who have lost their lives, lost their homes and lost their way by rebuilding Glenview. That's just how it is in San Bruno, California.

As one retired firefighter who lost his home in the blaze said, "I'm going to be the first person to move back in, with the city help, of course. The faster I can move forward, the less I think of the past."

And as our City Manager said, "This incident will not define San Bruno. San Bruno will define the incident and our future."

Thank you for your time today, and thank you for your prayers for San Bruno.

Senator BOXER. Mr. Mayor, I want to thank you very much. You have my full support, as you have Senator Feinstein's, to help you though this, meaning helping with that appeal and also making sure this never happens again.

Mr. RUANE. Thank you, Senator.

Senator BOXER. And you have been an amazing leader, and you are a great representative of San Bruno.

Mr. RUANE. Thank you.

Senator BOXER. All the qualities that that town has, you have.

Mr. RUANE. As I said, it's a team effort.

Senator BOXER. Yes, but you exemplify it, and I thank you very much.

Mr. Paul Clanon, Executive Director, California Public Utilities Commission. Welcome, sir.

### **STATEMENT OF PAUL CLANON, EXECUTIVE DIRECTOR, CALIFORNIA PUBLIC UTILITIES COMMISSION**

Mr. CLANON. Thank you, Senator Boxer.

The now eight stories—the now eight people who died—two of those were members of the PUC family, and I want to just begin—as you know, Senator Boxer—

Senator BOXER. Yes.

Mr. CLANON.—you know their names—I just want to begin by putting them in the record and saying a word about them.

Jacki Greig worked with us at the Commission. I've known her for 21 years. She worked in natural gas issues. Jacki lived with her two daughters, Janessa and Gaby, and her husband, James. Right about in the center-left of the photo that you have up there, I can see the spot where Jacki's house was. At the time of the accident, at the time of the explosion, Jacki and her youngest daughter, Janessa, were at home. Fortunately, her husband, James, and their older daughter, Gaby, were at a school event. Jacki and Janessa were killed. We got the news during the morning of the day after, began our mourning process and our grieving process at the same time as we were getting our investigation into full swing.

That investigation had started, the night before. We had a PUC—a Public Utilities Commission—engineer onsite within a couple of hours of the explosion. Our function really at that time is to start the preservation of evidence, to make contact with the first responders, and to do the job that the National Transportation Safety Board needs us to do until they can arrive on scene.

Once the NTSB folks arrived on scene, very shortly after—the next day—we joined in with their investigation. We are the enforcement arm for the Federal regs at the State level. We actually have incorporated those into the regs at the State level, and we enforce them.

And, of course, we regulate Pacific Gas and Electric, in the broadest sense, and are the ones who can help implement the changes, Senator Boxer, that we, as a community—San Bruno and the larger community in California—decide are the right ones to do.

We didn't wait for the results of that investigation. Beginning on Sunday, a directive—from the PUC president, Michael Peevey, to me—began a process whereby I ordered PG&E, the next day, to take several significant efforts. The first one was to reduce the pressure in the pipeline system there by 80 percent. I give PG&E credit. PG&E had already lowered the pressure. We directed them to lower it more. That made people on the peninsula safer, until we could find out what happened.

We ordered them to assess all their facilities in the immediate area. You know that it took until almost midnight to turn off the distribution lines. I know we're going to talk about automatic valves and remote valves. We ordered an immediate assessment of the whole area around San Bruno, around the accident site, to make sure that when people moved back into that neighborhood, it was safe for them to be there. And PG&E had already begun that assessment.

Look, nobody can be satisfied with the efforts that had happened before September 9. We're all going to talk about the inspections that occurred, and the State oversight that occurred, and the stringent Federal regulations. Something went wrong, and we were all doing our jobs, and the explosion happened anyway. That means that something else has to happen.

Starting on Monday, we directed PG&E—and PG&E has now begun this—an accelerated leak survey of its whole transmission

network, not waiting for the schedule that had been laid out, which is a good schedule, and had always seemed adequate until September 9—but an accelerated leak survey and a plan, that’s due in to the Commission soon now, for them to do an indepth safety survey of their entire natural gas system—not just transmission, but also distribution. We’re not waiting for the results of anything. We’re getting PG&E, the good folks at PG&E who know how to operate that system, out there to do a full safety survey of the system. And not just PG&E; we’ve also started discussions with the other two large natural gas utilities in California, as you well know, Senator Boxer.

We also immediately understood the role of the manual valves in continuing the damage that happened after the explosion. I don’t think we’re going to know, until the National Transportation Safety Board’s investigation is complete, exactly how much extra damage the fact that it took so long for the gas to be fully turned off caused. But, clearly, it caused more damage. So, also, on the Monday after the Thursday accident, we directed PG&E to do an assessment of its system—of its transmission system—and tell us where automatic valves, where remote valves—remotely operable valves by their controllers—makes sense. We’re not waiting for the results of the investigation for things that seem clearly within the realm of things that we’re going to want to order.

I said that the explosion’s happening means that all the work that we did leading up to September 9 was inadequate. I include the PUC in that. The Public Utilities Commission needs to look at itself, at its oversight of PG&E and the other gas utilities—in the design and maintenance, in the siting, in the inspections, in the renovations of the natural gas pipeline systems—to make sure that our regulation is doing what we’re supposed to do for the people of California, which is: keep them safe. It’s hard to look at yourself in the mirror, but that’s what we’re going to do. And to help us do that, the PUC, last Thursday, now 2 weeks after the accident, established an independent review panel. It’s going to be made up of people from outside the PUC world, looking hard at what happened, why it happened, making recommendations so that it doesn’t happen again, both within the realm of PG&E actions and management and systems, and Public Utilities Commission regulation. We’re going to look at ourselves hard in the mirror, because what we’re about is preventing pictures like that from going up in Senate hearing rooms ever again.

I’m just going to close. I know we’ll get to discussions. I want to say that you’ve got written testimony from the PUC. It’s actually in the name of Rich Clark, who’s here with me. Rich is the Director of the Relevant Division at the PUC that oversees safety, and he has been on the front lines of the investigation from right near the beginning. I want to acknowledge that he’s here, and he may help us with the discussion later.

I’ll just close, Senator, by saying, we need to make some changes together at the State level, possibly at the Federal level. We need to do that based on good information. We need not to rush into things that don’t make sense. But, we clearly need to make some changes.

And I look forward to your questions and to the discussion.

[The prepared statement of Mr. Clanon follows:]

PREPARED STATEMENT OF PAUL CLANON, EXECUTIVE DIRECTOR,  
CALIFORNIA PUBLIC UTILITIES COMMISSION

Thank you, Chairman Lautenberg and Ranking Member Thune, for the opportunity to testify before you and the other Committee Members about the investigation of the September 9, 2010 explosion and fire that occurred on Pacific Gas and Electric's (PG&E) natural gas transmission pipeline explosion in San Bruno, California, the implications of that explosion and fire, current pipeline safety legislative efforts and how improvements to pipeline safety can be made to decrease the risk of accidents. You've asked that I focus my testimony on these issues, highlighting matters in which I have particular expertise and bringing before the Committee any other related matters that the California Public Utilities Commission (CPUC) and I wish to bring to your attention.

Lastly, I'd like to thank all of the members of the Committee, the staff and the members of the public who have expressed their condolences to the families and friends of all of the victims of the San Bruno tragedy, including CPUC employee, Jacki Greig and her 13-year-old daughter, Janessa—both of whom perished in the September 9th conflagration.

Along with me today is Richard Clark, the Director of the Consumer Protection and Safety Division of the California Public Utilities Commission, who has the responsibility of influencing and implementing the Commission's consumer protection and safety policies relative to California's electric system, natural gas system, communications system, freight rail system, inter-city passenger rail system, commuter rail system, rail transit systems, plus household goods carriers and passenger carriers. He has also been appointed to Secretary LaHood's Transit Rail Advisory Committee on Safety (TRACS).

**The Investigation**

As you know, the NTSB has asserted primacy in this investigation and, as a Party to that investigation, I am limited in what I can discuss about that investigation. What I can say is as follows: The explosion happened at approximately 6:15 p.m. at milepost 39.33 on PG&E's intrastate natural gas transmission Line 132, a line which is mostly constructed of 30-inch steel pipe that was installed in 1948. Line 132 is one of three intrastate transmission lines that run from Milpitas, California north along the Peninsula and terminate in San Francisco. Line 132 transitions to 24-inch diameter pipe just north of the section that failed in San Bruno. The section of the 30-inch pipe that failed was installed in 1956. The explosion that occurred ripped a 28-foot section from the 1956 vintage pipe and propelled it some 100 feet away from the location where it was previously buried approximately 4 feet beneath an asphalt paved street. A huge fire ensued, and it took PG&E approximately 1 hour and 48 minutes to close the manual valves located approximately one mile and one and one-half miles to the north and south of the ruptured section of pipe. It has not yet been determined how long it took for the fire to burn all of the residual gas left in the then closed off sections of Line 132. The explosion and fire killed 7 people, injured 66 people, destroyed 34 homes, caused major damages to 3 homes, moderate damage to 16 homes and minor damage to 32 homes. The failed section of pipe has been transported to the NTSB lab here in Washington, D.C., where it will undergo metallurgical testing later this week. A CPUC utility safety engineer was on-site the evening of the explosion, and an investigative team was present throughout, and integrally involved in the NTSB's week-long on-site investigation. We continue to participate fully in the NTSB's investigation, and will be present during the metallurgical testing. We are also conducting a separate and parallel investigation, and will issue our own report after the NTSB issues its report in approximately 12–15 months.

On Monday, September 12, 2010 and Tuesday, September 13, 2010, CPUC President Michael Peevey, acting through me, the CPUC's Executive Director, Paul Clanon, called for the creation of an expert independent review panel and directed Pacific Gas and Electric to:

1. Reduce the operating pressure on PG&E's Line 132 to a pressure level of 20 percent below the operating pressure at the time of the failure and retain that lower pressure level until such time as the Commission allows PG&E to return to Line 132's normal operating pressure;
2. Ensure that there are no additional risks to the residents of San Bruno by conducting an integrity assessment of all gas facilities in the impacted area;

3. Conduct an accelerated leak survey of all transmission lines in PG&E's service territory, giving priority to segments in class 3 and class 4 locations, and take corrective action as required and report the results to the CPUC on or before October 12, 2010;
4. Evaluate records of customer leak-complaint response times and response effectiveness system-wide, take immediate mitigation measures if deficiencies are found, and report the results to the CPUC;
5. Prepare a plan for a complete safety inspection of PG&E's entire natural gas transmission pipeline system and provide the plan to CPUC no later than September 23, 2010;
6. Make all employees and contractors available for interviews with Federal and state investigators, including if requested, examinations under oath;
7. Preserve all records related to the incident, including work at the Milpitas Terminal during the month of September 2010;
8. Preserve all records related to the maintenance or modification of Line 132 by PG&E and/or its contractors performed within the City of San Bruno over the past ten (10) years;
9. Review the classification of natural gas transmission lines and determine if the classification has changed since the initial designation and report the results to the Executive Director;
10. Investigate and report to the Executive Director PG&E's forecasted versus actual levels of spending on pipeline safety and pipeline replacements from 2005 to the present; and
11. Conduct a review of all gas transmission line valve locations in order to determine locations where it would be prudent to replace manually operated valves with automated valves and report the results to the CPUC.

On September 23, 2010, in Resolution Number L-403 (copy attached) the Commission voted unanimously to open a fact-finding investigation, to establish an independent review panel of experts to assist in the fact-finding investigation, and to ratify and approve the September 13th mandates of the Executive Director.

The charter for the Independent Review Panel is as follows:

The investigation shall include a technical assessment of the events and their root causes, and recommendations for action by the Commission to best ensure such an accident is not repeated elsewhere. The recommendations may include changes to design, construction, operation, maintenance, and replacement of natural gas facilities, management practices at PG&E in the areas of pipeline integrity and public safety, regulatory changes by the Commission itself, statutory changes to be recommended by the Commission, and other recommendations deemed appropriate by the Panel. The latter shall include examining whether there may be systemic management problems at the utility and whether greater resources are needed to achieve fundamental infrastructure improvements.

Specific Questions to Guide the Fact-Finding Investigation:

- What happened on September 9, 2010?
- What are the root causes of the incident?
- Was the accident indicative of broader management challenges and problems at PG&E in discharging its obligations in the area of public safety?
- Are the Commission's current permitting, inspection, ratemaking, and enforcement procedures as applied to natural gas transmission lines adequate?
- What corrective actions should the Commission take immediately?
- What additional corrective actions should the Commission take?
- What is the public's right to information concerning the location of natural gas transmission and distribution facilities in populated areas?

**The Implications of the Pipeline Failure, Explosion and Fire and How Improvements to Pipeline Safety Can Be Made to Decrease the Risk of Accidents**

While all of the implications of the explosion and fire will not be known until the investigation is completed, the CPUC and the public cannot wait until then to begin improving the safety of the state's 122,217 miles of hazardous liquid, natural gas transmission and natural gas distribution pipelines.

The PG&E/ San Bruno explosion and fire, may be the largest transmission explosion in an urban/suburban setting in U.S. history. It is certainly the most cata-

strophic in California history. The CPUC, working independently, with its Independent Panel of Experts, with the NTSB, and with the Pipeline and Hazardous Materials Safety Administration (PHMSA), will examine the physics of the September 9th pipeline failure. Among other things, we will also examine, make recommendations, issue directives and take enforcement actions when necessary with respect to:

1. The safety culture of PG&E and the other utilities operating natural gas transmission and distribution pipelines in California;
2. The natural gas utilities' plans for the replacement of manual shut off valves with automatic and/or remotely controlled valves;
3. The natural gas utilities' use of "smart pigs" and other methods of in-line corrosion and damage assessment, the use of ultrasonic testing and other methods of external corrosion and damage assessment, and the development of new technologies that will improve the ability of pipeline owners to identify internal and external corrosion and other pipeline integrity issues before they result in failures;
4. Strengthening the requirements of the natural gas transmission and distribution pipeline integrity management programs required by state and Federal laws, and developing an oversight program which more thoroughly examines the utilities' risk management decisionmaking processes;
5. Requiring more regular reporting of utilities' planned and actual expenditures on pipeline maintenance and replacement projects.

The CPUC views this event as a system accident (an accident that has had serious consequences and has caused a major system disruption for natural gas transmission operators, legislators, regulators and the general public). Obviously, a system accident in an industry with a significantly safe operating record is cause for us taking a new look at the elements of the safety system and fixing those elements which failed. This is why the CPUC has convened an independent panel of experts to review all elements of the natural gas safety system that exists at the Federal level and in California and make recommendations for improvements to that system. I personally believe that all those who seek an improvement in pipeline safety would do well to pay close attention to the significant body of work developed by numerous scholars and practitioners in developing a systems approach to safety and that done in developing high reliability operations.

I want to thank the Committee for inviting me to testify today. I look forward to answering your questions.

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PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA—LEGAL DIVISION  
*San Francisco, CA, September 23, 2010*

### **Resolution No. L-403**

#### **Resolution**

Directives of the California Public Utilities Commission pursuant to California Constitution, Article 12, Sections 1-6, Public Utilities Code Sections 315, 451, 701, and 702, to investigate the facts surrounding the explosion and fire of Pacific Gas and Electric Company's natural gas transmission line no. 132, to make an immediate assessment of the safety of PG&E's other gas transmission lines, to establish an independent review panel to assist in the fact-finding investigation of the San Bruno explosion and the overall safety of PG&E's gas transmission lines in California, to ratify the mandatory instructions of the executive director's previous emergency mandates to investigate the San Bruno incident (including, reduction of pressure in line 132, required inspections and, surveys, and the preparation of plans), to make all of the utility's employees and contractors available for fact-finding investigatory interviews, and to preserve accident records and general records regarding the safety and integrity of line 132.

#### **Summary**

This Resolution is issued to ensure the immediate safety of the residents of the City of San Bruno and the people of California in connection with the operation of the Pacific Gas and Electric Company ("PG&E") natural gas transmission system. The orders within this Resolution provide, among other things, for an investigation into the explosion of PG&E's natural gas transmission line 132 in the City of San Bruno on the evening of September 9, 2010 ("San Bruno explosion"), and into the general safety risks associated with PG&E's other gas transmission lines in the

State. This investigation will be limited to fact-finding only. Adjudicatory or rule-making proceedings may follow but are not part of the ordered investigation in this Resolution. The Resolution also creates an Independent Review Panel of experts (“Independent Review Panel” or “Panel”) to gather facts, review these facts and make recommendations to the Commission for the improvement of the safe management of PG&E’s natural gas transmission lines. The costs of the Panel will be funded by PG&E. A memorandum account is authorized to track the costs of the Panel for cost recovery purposes, but the Commission defers any decision on the allocation of such costs between PG&E’s shareholders and customers. The President of the Commission is authorized to select the members of the Panel, subject to confirmation by a vote of the Commission.

### **Background**

At approximately 6:15 in the evening of September 9, 2010, a portion of PG&E’s natural gas pipeline 132 ruptured and exploded in the City of San Bruno near Skyline Boulevard, killing seven residents and injuring numerous others, some of them severely. The San Bruno explosion resulted in a large fireball which ultimately destroyed 37 homes. It took PG&E approximately one and a half hours to shut off the gas flow on the ruptured line, by closing two manually operated pipeline valves—one of them a mile away from the rupture, and the other one and a half miles away. The San Bruno explosion may be the largest transmission pipeline explosion in an urban/suburban setting in U.S. history, certainly the most catastrophic in California history.

### **Jurisdiction and Authority**

The Commission issues the directives in this Resolution pursuant to its plenary and broad powers under, *inter alia*, the California Constitution and the Public Utilities Code section 451, which mandates the following: “Every public utility shall furnish and maintain such adequate, efficient, just, and reasonable service, instrumentalities, equipment, and facilities . . . as are necessary to promote the safety, health, comfort, and convenience of its patrons, employees, and the public.” (Pub. Util. Code, §§ 451.) In our broad grant of jurisdiction over public utilities in California, we are authorized to “do all things, whether specifically designated in . . . [the Public Utilities Code] or in addition thereto, which are necessary and convenient” to our regulation of public utilities, including, though not limited to, adopting necessary rules and requirements in furtherance of our constitutional and statutory duties to regulate and oversee public utilities operating in California. (Pub. Util. Code, § 701.) This Commission has comprehensive jurisdiction over questions of public health and safety arising from utility operations. (*San Diego Gas & Electric v. Superior Court (“Covalt”)* (1996) 13 Cal.4th 893, 923–924.) Our jurisdiction to regulate these entities is set forth in the California Constitution and in the Public Utilities Code. (Cal. Const., art. XII, §§ 1–6; see generally, Pub. Util. Code, §§ 216, 701, 768, 1001.) Public utilities are required to “obey and comply with every order, decision, direction, or rule made or prescribed by the Commission. . . .” (Pub. Util. Code, § 702; see also, Pub. Util. Code, §§ 761, 762, 767.5, 768, 770.)

Under Federal statutes, the Commission is certificated by the Pipeline and Hazardous Materials Safety Administration (“PHMSA”) in the U.S. Department of Transportation to adopt the Federal pipeline safety standards, to enforce those standards, order the preservation and maintenance of records, and enforce these powers through injunctive relief. (See 49 U.S.C. § 60105, subds. (b)(1) through (b)(7)).

### **Ratification and Approval of the Mandates of the Executive Director**

Because of this unforeseen emergency, the Commission’s Executive Director ordered PG&E to perform certain duties in a letter dated September 13, 2010. By this Resolution, the Commission hereby approves those mandates. Specifically, those mandates included the following:

1. Reduce the operating pressure on PG&E’s Line 132 to a pressure level of 20 percent below the operating pressure at the time of the failure and retain that lower pressure level until such time as the Commission allows PG&E to return to Line 132’s normal operating pressure;
2. Ensure that there are no additional risks to the residents of San Bruno by conducting an integrity assessment of all gas facilities in the impacted area;
3. Conduct an accelerated leak survey of all transmission lines in PG&E’s service territory, giving priority to segments in class 3 and class 4 locations, within one month of the date of this letter and take corrective action as required and report the results to the Executive Director on or before October 12, 2010;

4. Evaluate records of customer leak-complaint response times and response effectiveness system-wide, take immediate mitigation measures if deficiencies are found, and report the results to the Executive Director;
5. Prepare a plan for a complete safety inspection of PG&E's entire natural gas transmission pipeline system and provide the plan to me no later than September 23, 2010;
6. Make all employees and contractors available for interviews with Federal and state investigators, including if requested, examinations under oath;
7. Preserve all records related to the incident, including work at the Milpitas Terminal during the month of September 2010;
8. Preserve all records related to the maintenance or modification of Line 132 by PG&E and/or its contractors performed within the City of San Bruno over the past ten (10) years;
9. Review the classification of natural gas transmission lines and determine if the classification has changed since the initial designation and report the results to the Executive Director;
10. Investigate and report to the Executive Director PG&E's forecasted versus actual levels of spending on pipeline safety and pipeline replacements from 2005 to the present; and
11. Conduct a review of all gas transmission line valve locations in order to determine locations where it would be prudent to replace manually operated valves with automated valves and report the results to the Executive Director.

Mandate #1, above, which required PG&E to reduce the operating pressure on PG&E's Line 132 to a pressure level of 20 percent below the operating pressure at the time of the pipeline rupture and to retain that lower pressure level until such time as the Commission allows PG&E to return Line 132 to a higher operating pressure, is consistent with PHMSA's Corrective Action Orders in similar emergency situations, including the following recent example:

"Pursuant to 49 U.S.C. § 60112, I hereby order BP to take the following corrective actions . . . The terms of the restart plan must include provisions for . . . Reducing the MOP of the Affected Pipeline Facility to 80 percent of the highest operating pressure experienced at the White Oak Station (MP 0) and Crete Station (MP 19.95) in the 60 days prior to August 17, 2010."

*In the Matter of BP Pipelines (North America), Inc., Respondent*, (Aug. 26, 2010) CPF No. 3-2010-5010H, at p. 4; see also *Evaluation of the Effectiveness of a 20% Pressure Reduction After a Pipeline Failure* (May 1997) Report No. DTRS56-96-C-0002-001, U.S. Department of Transportation.

With respect to mandates #7 and #8, PG&E is required to maintain its gas transmission pipeline records and make them available for review under 49 CFR Part 192.947.

In this Resolution, the Commission approves the foregoing mandates of the Executive Director in his letter to PG&E of September 13, 2010, and adopt these mandates in this Resolution, but with minor modifications as set forth in the Ordering Paragraphs below.

#### **Waiver of Comment Period**

The tragic San Bruno explosion is an unforeseen emergency of local and statewide importance requiring immediate action by the Commission. The normal 30-day comment period for the issuance of an order or resolution may be waived in circumstances such as these. (Pub. Util. Code §§ 311, subs. (d) and (g)(2); see also Resolution E-3731, Pacific Gas and Electric Company (April 3, 2001) 2001 Cal. PUC LEXIS 659.) The Commission's Rules of Practice and Procedure also permit such a waiver.<sup>1</sup>

<sup>1</sup>"In an unforeseen emergency situation, the Commission may reduce or waive the period for public review and comment on proposed decision, draft resolutions, and alternates." "Unforeseen emergency situation" means a matter that requires action or a decision by the Commission more quickly than would be permitted if advance publication were, made on the regular meeting agenda. Examples include, but "are not limited to . . . [a]ctivities that severely impair or threaten to severely impair[,] public health or safety[,] . . . [c]rippling disasters that severely impair public health or safety[,] . . . [u]nusual matters that cannot be disposed of by normal procedures if the duties of the Commission are to be fulfilled." (Cal. Code of Regs., tit. 20, § 14.6 subs. (1), (2) and (8).)

**Establishment of an Independent Review Panel to Assist in the Fact-Finding Investigation**

The Commission will establish, within 60 days of the date of this Resolution, an Independent Review Panel of experts to gather facts and make recommendations based on the facts to the Commission as to whether there is a need for the general improvement of the safety of PG&E's natural gas transmission lines, and if so, how these improvements should be made. The Panel will be retained by the Commission and funded by PG&E. The President of the Commission will select the experts on the Panel. The Commission establishes this Panel pursuant to its powers under Public Utilities Code sections 451, 701 and 702. The Charter of the Panel is appended to this Resolution and incorporated herein by reference.

PG&E shall provide full cooperation to Commission staff and the Panel during the investigation into the cause of the San Bruno explosion and the safety of PG&E's gas transmission pipelines in general. In this regard, upon request, PG&E shall provide Commission staff and/or the Panel: (i) any factual or physical evidence under the utility or utility agent's physical control, custody, or possession related to the San Bruno explosion; (ii) the name and contact information of any known percipient witness; (iii) any employee or agent of PG&E, who is a percipient witness or expert witness; the name and contact information of any person or entity that has taken possession of any physical evidence removed from the site of the San Bruno explosion; (iv) any and all documents under the utility's control that contain facts related to the San Bruno explosion; any additional information deemed relevant and necessary by Commission staff and/or the Panel to the investigation of the San Bruno explosion; and (v) any and all information related to the safety and integrity of PG&E's gas transmission pipelines. In obtaining information from PG&E and other sources, the Panel shall coordinate as necessary with Commission staff as their respective investigations proceed.

The Commission observes that Public Utilities Code sections 311, 313, and 314, authorize each of the Commissioners, the Executive Director, the Assistant Executive Directors and the Administrative Law Judges to issue subpoenas requiring the attendance of witnesses and production of documents for examinations under oath even prior to the initiation of formal proceedings, which is similar to the investigatory authority, prior to hearings under Government Code sections 11180-11191. In this regard, even without the compulsion of a subpoena, the Commission hereby confirms that under Public Utilities Code §§ 313, 314, 314.5, 315, 581, 582, 584, 701, 702, 771, 1794, and 1795, the Commission staff may obtain information from utilities and is already deemed to have the general investigatory authority of the Commission. Because the Commission staff already has the authority, there is no need to grant this authority to Commission staff. However, inasmuch as the Panel is newly established, it is necessary that the Commission confer the same investigatory authority as the Commission staff already possesses to the Panel, for purposes of the fact-finding investigation of the San Bruno explosion and the safety of PG&E's natural gas transmission pipelines.

The Panel, like the Commission staff, may review documents that are marked "Confidential under §583" subject to the provisions of Public Utilities Code section 583. This statute requires such documents to be kept confidential (unless the utility waives the confidentiality requirement, the Commission orders the release, or a Commissioner orders release in the course of a proceeding). However, in order to ensure that documents are not withheld from the public without legally valid justification, we will require that in order for PG&E to maintain the confidentiality of documents produced to the Commission in this pre-adjudicatory investigation, PG&E must comply with the following procedures: (1) each page of the confidential documents must be marked "Confidential under §583"; (2) for each document marked "Confidential under §583," the utility must provide a justification for treating it confidentially; and (3) any document designated for protection as confidential must not already be available to the public. In addition, unless or until a formal proceeding is initiated, the Commission authorizes the Commission's President to act on behalf of the Commission to release for public inspection documents marked by PG&E as "Confidential under §583," if he finds that PG&E has not sufficiently justified its confidentiality or that the public interest warrants its release to the public.

Since we are in a fact-finding stage and are not interested in the thoughts, opinions or communications of PG&E's attorneys, we expect that PG&E will not withhold facts or expert opinions under the guise of attorney-client privilege or the work product doctrine. Indeed, public utilities in California are statutorily required to report any facts or expert opinions as to the cause of accidents to the Commission

under the Public Utilities Code section 315.<sup>2</sup> Similarly, we put PG&E on notice that it must promptly make available its employees and independent contractors for interviews requested by Federal investigators (*e.g.*, the National Transportation Safety Board (“NTSB”)) and state investigators (*e.g.*, Commission staff or the Panel), including examinations under oath pursuant to Public Utilities Code section 314. Under analogous statutory provisions, such as Government Code sections 11180–11191, courts have recognized the differences between examinations under oath, which are conducted prior to formal hearings, and depositions. (*See, e.g., People v. West Coast Shows, Inc.* (1970) 10 Cal. App. 3d 462, 470.) Moreover, as the U.S. Supreme Court explained in *Hannah v. Larche* (1960) 363 U.S. 420, 446, “[w]hen agencies are conducting nonadjudicative, fact-finding investigations, rights such as appraisal, confrontation, and cross-examination generally do not obtain. While the person summoned may have the advice of counsel, counsel may not, as a matter of right, otherwise participate in the investigation.” The Supreme Court further recognized that the lack of counsel participation or other parties was necessary for agencies to conduct efficient investigations, and that this would not violate the due process rights of a party, because the party, if ultimately charged, would be accorded all of the traditional judicial safeguards at a subsequent adjudicative hearing. (*Id.*) For all of these reasons, the Commission interprets very broadly the investigatory authority of Commission staff, and the investigatory authority granted to the Panel.

### Findings of Fact

1. The Commission finds that the San Bruno explosion of September 9, 2010, is an “unforeseen emergency” under Public Utilities Code sections 311(d) and 311(g)(2).
2. The mandates issued by the Commission’s Executive Director set forth in his letter to PG&E dated September 13, 2010, were necessary to immediately address the unforeseen emergency of the San Bruno explosion.
3. The Commission finds that the normal 30-day comment period for the issuance of an order or resolution should be waived. (Pub. Util. Code § 311(d) and 311(g)(2).)
4. The Commission finds that the establishment of an Independent Review Panel is reasonable and necessary under these emergency circumstances, and that the authority to select the members of such Panel shall be exercised by the President of the Commission, subject to confirmation by a vote of the Commission.
5. The Commission finds that it is reasonable and necessary for the expenses of the Panel to be paid by PG&E. Issues regarding the allocation of the costs and expenses of the Panel between shareholders and customers shall be determined in a later proceeding. PG&E is instructed to pay the costs and expenses, and record those costs and expenses in a memorandum account.
6. The Commission finds that the Charter of the Panel, appended hereto, is reasonable and appropriate.
7. The Commission finds that it is necessary for the Panel to have access to information involving the investigation of the San Bruno explosion and the safety and integrity of PG&E’s natural gas transmission pipelines, and such access should be pursuant to Public Utilities Code sections 313, 314, 314.5, 315, 581, 582, 584, 701, 702, 771, and 1795.
8. In order to ensure that documents are not withheld from the public without legally valid justification during this pre-adjudicatory investigation, PG&E must comply with the following procedures: (1) each page of the confidential documents must be marked “Confidential under § 583”; (2) for each document marked “Confidential under § 583,” the utility must provide a justification for treating it confidentially; and (3) any document designated for protection as confidential must not already be available to the public.
9. The Commission finds that it is reasonable and necessary under these emergency circumstances that the Commission authorize the Commission’s President to

<sup>2</sup>It is also the Commission’s understanding that although the utilities have an attorney-client privilege, that privilege does not extend to the underlying facts as they have been communicated to the attorney. (*See, e.g., Wells Fargo Bank v. Superior Court* (2000) 22 Cal.4th 201, 210; *see also Martin v. Workers Compensation Appeals Board* (1997) 59 Cal. App. 4th 333,345.) Moreover, it is not clear that the work product doctrine, Code of Civil Procedure section 2018.030, is applicable to pre-adjudicatory administrative fact-finding. However to the extent it does apply, except for the attorney’s own thoughts and mental impressions, the work product doctrine is considered a qualified privilege. We find that the public interest in ensuring the safety of California citizens from potential disasters, such as the San Bruno Explosion, clearly outweighs PG&E’s need for its experts’ opinion to be withheld from the Commission. (*See Kizer v. Sulnick* (1988) 202 Cal.App.3d 437, 441 [“Appellant cannot fulfill his statutory duty to investigate the possible health hazards posed by the waste facility without access to all relevant information. . . .”].)

act on behalf of the Commission to release for public inspection documents marked “Confidential under § 583” if he finds that PG&E has not sufficiently justified its assertion of confidentiality or that the public release of such documents is in the public interest.

#### **Conclusions of Law**

1. The San Bruno explosion is an “unforeseen emergency” under Public Utilities Code sections 311(d) and 311(g)(2).

2. The mandates issued by the Commission’s Executive Director in his letter to PG&E dated September 13, 2010, were reasonable and necessary to immediately address the unforeseen emergency of the San Bruno explosion.

3. The Commission’s ratification of the mandates set forth in the Executive Director’s letter to PG&E of September 13, 2010, is a reasonable, necessary and appropriate means of immediately addressing the unforeseen emergency of the San Bruno explosion.

4. It is reasonable and necessary to waive the normal 30-day comment period for the issuance of this Resolution pursuant to Public Utilities Code sections 311(d) and 311(g)(2).

5. It is reasonable and necessary to establish an Independent Review Panel of experts to gather facts regarding the San Bruno explosion and PG&E’s natural gas transmission pipeline system, and to evaluate these facts and make recommendations regarding the overall safety of PG&E’s transmission pipelines in order to address this unforeseen emergency.

6. It is reasonable and necessary that the President of the Commission select the members of the Panel, under these emergency circumstances, subject to confirmation by a vote of the Commission.

7. It is reasonable and necessary that PG&E fund the costs and expenses of the Panel because of these emergency circumstances. PG&E is instructed to pay the costs and expenses and to record those costs and expenses in a memorandum account. Issues regarding the allocation of costs and expenses of the Panel between shareholders and customers shall be determined later.

8. The Charter of the Panel, appended hereto, is reasonable and appropriate under these emergency circumstances.

9. The Panel is given the same investigatory authority as the Commission staff has under the Public Utilities Code. Access by the Panel to information shall be limited to the investigation of the San Bruno explosion and the safety and integrity of PG&E’s natural gas transmission pipelines.

10. In this fact-finding and investigatory process, in order for PG&E to maintain the confidentiality of documents produced to the Commission in this pre-adjudicatory investigation, PG&E must comply with the following procedures: (1) each page of the confidential documents must be marked “Confidential under § 583;” (2) for each document marked “Confidential under § 583,” the utility must provide a justification for such confidential treatment; and (3) any document designated by PG&E for protection as confidential must not already be available to the public.

11. It is reasonable and necessary under these emergency circumstances to authorize the Commission’s President to act on behalf of the Commission and to release to the public documents PG&E has marked “Confidential under § 583” if he finds that PG&E has not sufficiently justified its assertion of confidentiality or that the public release of such documents is in the public interest. This authorization will remain in effect until a formal proceeding is initiated.

12. It is in the best interests of this investigation that PG&E make PG&E employees or independent contractors available for examinations under oath by the Commission staff or by the Panel.

13. Examination under oath prior to adjudicatory hearings are different from depositions and, for purposes of efficiency in conducting the Commission’s investigation, the participation of counsel for the witness or other parties shall not be allowed at this early stage of investigation.

#### **Order**

1. The normal 30-day comment period for the issuance of the Executive Director’s letter to PG&E of September 13, 2010, and this Resolution shall be waived pursuant to Public Utilities Code sections 311(d) and 311(g)(2), *Resolution E-3731, Pacific Gas and Electric Company* (April 3, 2001) 2001 Cal. PUC LEXIS 659, and Cal. Code of Regs., tit. 20, §§ 14.6 subd. (1), (2) and (8).

2. In response to this unforeseen emergency, an Independent Review Panel shall be established to gather information regarding the San Bruno explosion and the overall safety of PG&E’s natural gas transmission pipelines, and to review and evaluate such information, as well as make recommendations to the Commission.

3. The President of the Commission shall select the members of the Panel, subject to confirmation by a vote of the Commission. The Panel shall operate under the Charter appended to this Resolution.

4. PG&E shall pay for the costs and expenses of the Panel and shall establish a memorandum account to record those costs and expenses.

5. PG&E shall provide cooperation to Commission staff and the Panel during the investigation into the cause of the San Bruno Explosion and safety of PG&E's transmission lines in general. In this regard, upon request, PG&E shall provide Commission staff and/or the Panel: (i) any factual or physical evidence under the utility or utility agent's physical control, custody, or possession related to the San Bruno Explosion; (ii) the name and contact information of any known percipient witness; (iii) the name and contact information of any employee or agent of PG&E who is a percipient witness or an expert witness; (iv) the name and contact information of any person or entity that has taken possession of any physical evidence removed from the site of the San Bruno explosion; (v) any and all documents under the utility's control that contain facts related to the San Bruno explosion, and (vi) any and all information related to the safety and integrity of PG&E's gas transmission pipelines.

6. For the limited purpose of this investigation in the San Bruno explosion and the general safety and integrity of PG&E's natural gas transmission pipelines, the Commission authorizes the Panel to have the same investigatory authority and access to information as the Commission staff possesses under Public Utilities Code sections 313, 314, 314.5, 315, 581, 582, 584, 701, 702, 771, 1794, and 1795.

7. In order to maintain the confidentiality of documents produced to the Commission in this pre-adjudicatory investigation, PG&E shall comply with the following procedures: (1) each page of the confidential documents must be marked "Confidential under § 583"; (2) for each document marked "Confidential under § 583," the utility must provide a justification for its confidential treatment; and (3) any document designated by PG&E for protection as confidential must not already be available to the public.

8. The Commission authorizes the Commission's President to act on behalf of the Commission to determine whether documents that PG&E has marked "Confidential under § 583" shall be released to the public. The President may release such a document if he finds that PG&E has not sufficiently justified its assertion of confidentiality or that its public release is in the public interest.

9. PG&E shall make available for examinations under oath by the Commission staff or by the Panel, PG&E employees or independent contractors. Neither PG&E's counsel, nor any other person other than the person being examined, may "participate" in the examination under oath.

10. PG&E shall reduce the operating pressure on PG&E's Line 132 to a pressure level of 20 percent below the operating pressure at the time of the failure and retain that lower pressure level until such time as the Commission allows PG&E to increase the pressure in Line 132.

11. PG&E shall ensure that there are no additional risks to the residents of the City of San Bruno by conducting an integrity assessment of all gas facilities in the impacted area.

12. PG&E shall conduct an accelerated leak survey of all natural gas transmission pipelines, giving priority to segments in class 3 and class 4 locations, within one month of the date of this letter and take corrective action as required and report the results to the Commission's Executive Director on or before October 12, 2010.

13. PG&E shall evaluate records of customer natural gas leak-complaint response times and response effectiveness system-wide, take immediate mitigation measures if deficiencies are found, and report the results to the Executive Director within ten (10) days of the date of this Resolution.

14. PG&E shall prepare a plan for a complete safety inspection of PG&E's entire natural gas transmission pipeline system and provide the plan to the Executive Director immediately.

15. PG&E shall make all employees and independent contractors who performed work on Line 132 prior to the San Bruno explosion available for interviews with Federal and state investigators, including if requested, examinations under oath.

16. PG&E shall preserve all records related to the San Bruno explosion, including work at the Milpitas Terminal during the months of August and September 2010.

17. PG&E shall preserve all records related to the inspection, maintenance or modification of Line 132 by PG&E and/or its contractors performed within the City of San Bruno over the past ten (10) years.

18. PG&E shall review the classification of its natural gas transmission pipelines and determine if those classifications have changed since the initial designation.

19. PG&E shall report the results of its review of the classification of its natural gas transmission lines and any subsequent changes to those classifications since PG&E's initial designation to the Executive Director within ten (10) days of the date of this Resolution.

20. PG&E shall investigate and report to the Commission PG&E's forecasted versus actual levels of spending on pipeline safety and pipeline replacements from 2003 to the present within ten (10) days of the date of this Resolution.

21. PG&E shall conduct a review of all natural gas transmission line valve locations in order to determine locations where it would be prudent to replace manually operated valves with remotely operated or automated valves and shall report its results to the Commission within thirty (30) days of the issuance date of this Resolution.

22. In all other respects, PG&E shall fully cooperate with the Commission's investigation into the San Bruno explosion, including a general investigation into the safety and integrity of PG&E's gas transmission lines, and respond expeditiously to the Commission's request for information.

This Order is effective today.

I certify that this Resolution was adopted by the Public Utilities Commission at its regular meeting of September 23, 2010. The following Commissioners approved it:

PAUL CLANON,  
*Executive Director.*

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CHARTER OF THE INDEPENDENT REVIEW PANEL

**Independent Review Panel—September 9, 2010**

**San Bruno Explosion**

**Charter**

On behalf of the California Public Utilities Commission, an Independent Review Panel of experts shall be retained for the purpose of conducting a comprehensive study and investigation of the September 9, 2010, explosion and fire along a Pacific Gas and Electric Company ("PG&E") natural gas transmission pipeline in San Bruno, CA. The investigation shall include a technical assessment of the events and their root causes, and recommendations for action by the Commission to best ensure such an accident is not repeated elsewhere. The recommendations may include changes to design, construction, operation, maintenance, and replacement of natural gas facilities, management practices at PG&E in the areas of pipeline integrity and public safety, regulatory changes by the Commission itself, statutory changes to be recommended by the Commission, and other recommendations deemed appropriate by the Panel. The latter shall include examining whether there may be systemic management problems at the utility and whether greater resources are needed to achieve fundamental infrastructure improvements.

**Specific Questions to Guide the Fact-Finding Investigation**

- What happened on September 9, 2010?
- What are the root causes of the incident?
- Was the accident indicative of broader management challenges and problems at PG&E in discharging its obligations in the area of public safety?
- Are the Commission's current permitting, inspection, ratemaking, and enforcement procedures as applied to natural gas transmission lines adequate?
- What corrective actions should the Commission take immediately?
- What additional corrective actions should the Commission take?
- What is the public's right to information concerning the location of natural gas transmission and distribution facilities in populated areas?

**Membership and Support**

The membership of the Panel shall consist of no fewer than three experts, and no more than five, selected by the President of the Commission, and confirmed by a vote of the Commission. The President of the Commission shall select a leader for the Panel. The Panel shall exercise investigatory powers as granted by the Commission. Commission staff shall provide administrative support to members of the Panel. The Panel also shall be free to seek opinions and recommendations from expert consultants.

**Compensation and Expenses**

Members of the Panel shall be paid a nominal sum. Reasonable expenses incurred by members will be paid. Expert consultants to the Panel shall be paid reasonable compensation.

Senator BOXER. Thank you very much. Very helpful.

Mr. Johns, we welcome you, President of Pacific Gas and Electric. We saw each other on the scene, and you were right there, and I'm glad to see you here again.

**STATEMENT OF CHRISTOPHER JOHNS, PRESIDENT,  
PACIFIC GAS AND ELECTRIC COMPANY**

Mr. JOHNS. Well, thank you, Senator.

I'd like to thank Chairman Lautenberg, Ranking Member Thune, you, Senator Boxer, and the members of the Subcommittee, for giving us the opportunity to be here today. And thank you for your focus on safety of our Nation's natural gas infrastructure.

For Americans who live or work around our industry's pipelines and facilities, the potential stakes around this issue could not be higher. We were forcefully reminded of this fact again on the evening of September 9, when tragedy struck in San Bruno. The explosion there claimed eight lives. It resulted in many others being injured and hospitalized for burns. It left many families homeless, and it seriously damaged the homes of many more.

Those of us who have been to the scene in San Bruno, as I have on several occasions, including the night of the fire, and who have spoken with the residents, won't ever forget what they saw in these experiences. It's absolutely heart-wrenching. And yet, it can't begin to compare with what the residents, themselves, experienced that night and in the difficult days that followed. My heart and prayers goes out to all the families and all the members of the community of San Bruno.

Since that night, our thoughts and our focus at PG&E have been on doing the right thing in three critical areas:

First, above all, getting immediate support and assistance to the people affected by this tragedy.

Second, taking responsible action to assure everyone that our gas system is safe.

And finally, learning that—what led to this tragedy, so that no other community in the United States has to experience this kind of ordeal.

These priorities have guided everything we've done for the past several weeks. Even before the first responders had finished their heroic work in the hours after the explosion, we said clearly that PG&E would step up and do what's right for the families and the City of San Bruno. We gave Mayor Ruane and all the residents of San Bruno PG&E's commitment to stand with them, to rebuild the community and help people rebuild their lives.

Mr. Mayor, I am reaffirming that commitment again today to you. Your leadership has been phenomenal throughout this. You and your entire team have just exemplified what leadership should be in America.

Mr. RUANE. Thank you.

Mr. JOHNS. To date, PG&E's assistance has taken several forms, from providing basic food, shelter, and clothing to establishing a re-

lief fund of up to \$100 million to help the folks in San Bruno. Through the Rebuild San Bruno Fund, we provide direct financial assistance to hundreds of households; we've covered costs of losses not covered by people's insurance; and we're reimbursing the city for certain costs it incurs to respond to this accident and to rebuild.

In parallel with assisting the community, we've also taken steps to assure everyone that our gas system is safe. Individually and collectively, as an industry, every company that operates national—natural gas facilities shares a profound responsibility to protect public safety. It is, bar none, the highest duty that we are entrusted with.

When a tragedy shakes the foundations of that trust, it is critical that we reach out and assure everyone that our system is sound. We've begun that process, and I know the industry is committed to doing that, as well.

PG&E has met with public officials in dozens of cities and counties throughout our service territory over the past few weeks. We're keeping them apprised of the work we are now doing to reinspect our entire pipeline system. We're making sure they have the latest information about the location of any of PG&E's gas facilities in their communities. We're sharing detailed information about the maintenance standards and practices that we and the industry follow. And when we ultimately learn what led to this tragedy, we will be sharing with them whatever actions we need to take in response. While no one yet knows how this accident occurred, we know for certain that a tragedy like this should never happen.

Finally, we recognize that, as an industry, we have a responsibility to make sure we are operating in accordance with the highest standards when it comes to pipeline safety. Moreover, we know these standards must be continually evaluated and updated to reflect any lessons learned.

In this regard, I'd like to acknowledge, Senator Boxer, you've worked with Senator Feinstein to introduce new legislation on pipeline safety, and we look forward to working with you and your staffs to move that forward.

Learning what happened at San Bruno will be an important part of that process, and PG&E is fully committed to cooperating with the various investigations that are now going on. We will continue to do so until all the questions are answered. And at that point, I know that PG&E and every company in our industry will focus on those findings and move swiftly to take whatever action is necessary to prevent another tragedy like this from ever happening again.

Thank you for having me.

[The prepared statement of Mr. Johns follows:]

PREPARED STATEMENT OF CHRISTOPHER JOHNS, PRESIDENT,  
PACIFIC GAS AND ELECTRIC COMPANY

Chairman Lautenberg, Ranking Member Thune and members of the Subcommittee. My name is Chris Johns and I am President of Pacific Gas and Electric Company or PG&E. PG&E is one of the largest combined natural gas and electric utilities in the United States. Based in San Francisco, with nearly 20,000 employees, the company delivers electricity and natural gas to approximately 15 million people in Northern and Central California. PG&E's extensive natural gas system in-

tegrates more than 42,000 miles of natural gas distribution lines and more than 6,700 miles of natural gas transportation (or transmission) pipelines.

I first want to thank you for providing me with the opportunity to be here today to participate in a hearing on the safety of our Nation's natural gas infrastructure.

For Americans who live or work around natural gas pipelines and facilities, the potential stakes around this issue could not be higher.

The events of the evening of September 9th are a stark reminder of that. On that evening, a rupture occurred on PG&E's natural gas transmission line running through the Crestmoor Canyon neighborhood of San Bruno, California resulting in an explosion. The results of that explosion were tragic. Seven people lost their lives. According to reports, dozens of people were taken to local hospitals and treated for serious burns and injuries. Fifteen acres burned. A large crater was created. Thirty-seven homes were destroyed and many more experienced damage. In total, 376 households were forced to evacuate. The days since have been an ordeal for the community; most of us cannot truly comprehend what the people of San Bruno went through that night, and continue to go through today. We are working with the National Transportation Safety Board (NTSB) to learn the cause of this tragic explosion.

Those of us who have been to the scene of the accident, as I have on several occasions including the night of the fire, and who have spoken with a number of families from the neighborhood, will not ever forget these experiences.

They are heart-wrenching. And yet, they can not begin to approach what the residents in that neighborhood witnessed and felt the evening of the disaster—and in the difficult days that have followed.

My heart goes out to all the families and people affected by this tragedy.

We know there is a long road to recovery ahead. We want to reiterate PG&E's commitment to stand by the people and community of San Bruno. We will do what's right to help rebuild the community—and to help people rebuild their lives.

PG&E's attention and resources have been focused on three priorities:

1. Getting help to the families and individuals affected.
2. Assuring everyone that our system is safe.
3. Cooperating fully with any and all investigations into the causes of this terrible accident.

### **Helping the Community**

In the weeks since the tragedy, PG&E has been focused on helping the families affected by this accident and the City of San Bruno. On behalf of PG&E, I want to extend our personal appreciation to San Bruno City Mayor Jim Ruane and all of the city officials whose heroic efforts and tremendous leadership are helping San Bruno to begin to recover from this tragedy.

Some of the steps we have taken include:

- Providing affected residents with immediate support in the form of housing, clothing and financial assistance, such as \$1,000 pre-paid debit cards to help meet immediate needs;
- Establishing the Rebuild San Bruno Fund, which is making up to \$100 million available to:
  - Provide direct emergency assistance, in the form of cash disbursements for immediate expenses not covered by insurance.
  - Ensure that residents are reimbursed for costs or losses that may not be covered by insurance.
  - Provide financial assistance to the City of San Bruno for certain costs it incurs as it responds to this accident and to rebuild or repair public infrastructure and facilities.
- Restoring power and gas service to the neighborhood and conducting in-home safety checks.

With regard to the Rebuild San Bruno Fund, PG&E has already provided San Bruno officials with an initial \$3 million to help compensate the city for certain of its estimated expenses incurred to date.

We have also now distributed checks to hundreds of households, in the amounts of \$15,000, \$25,000, or \$50,000 each, depending on the extent of damage incurred. Residents have not been asked to waive any potential claims in order to receive this assistance. Also, these funds are being provided in addition to the company's ongoing provision of funds to ensure affected residents continue to have access to temporary housing and other basic necessities.

### Restoring Public Confidence

We recognize that the accident has shaken customers' confidence in the safety and integrity of our system both in the areas surrounding San Bruno and across PG&E's service area. We take these concerns very seriously and have taken steps to help restore that confidence. First, we re-inspected the three major pipelines that serve the San Francisco Peninsula. We also reduced the operating pressure of the transmission lines serving the area by 20 percent.

In addition to these efforts we are conducting aerial inspections of our entire natural gas transmission system. In addition, we have begun the ground leak survey of the entire gas transmission system beginning with the high consequence areas.

And, this past week we publicly released detailed information about PG&E's gas pipeline safety and maintenance practices, including some of the tools that we use in our engineering analyses and planning for future preventative maintenance work on transmission pipelines.

In those communities throughout Northern and Central California where PG&E's gas transmission facilities are located, we have been meeting—and will continue to meet—face to face with public officials. These meetings give officials the opportunity to ask questions about our pipeline system and understand the steps we are taking to ensure its integrity and safety. We are also reviewing safety procedures concerning our natural gas system with first responders in those communities, and we are leaving behind detailed maps to ensure they know where our facilities are located.

We are doing the same for our individual customers. In fact, customers can now go online and log in to their individual account to see whether or not any of PG&E's gas transmission lines run near their homes, and if so where the lines are located.

As noted previously, we operate approximately 6,700 miles of natural gas transmission pipeline. We divide these pipelines into about 20,000 pipeline segments. A segment is a length of contiguous pipe with the same specifications, *e.g.*, class location, wall thickness, diameter, material. As part of normal operations, we regularly assess our pipelines. Among other steps, this work includes ongoing inspections, leak surveys, pipeline patrols, preventative, corrective and condition-based maintenance and 24-hour monitoring of system conditions.

In the course of these efforts, any time we identify a threat to public safety, whether because of a customer's report or through our own ongoing assessments, we take action to address it. This includes priority dispatch of our first responders and crews. If there is an imminent hazard, we will not leave the site in question until proper safety conditions have been established.

We also continue to invest significantly in our system, with the majority of these investments aimed at enhancing safety and reliability. In fact, over the past 5 years we have spent \$30 million more on our gas transmission system than the amount authorized by the California Public Utilities Commission (CPUC).

These investment decisions are informed and guided, in part, through PG&E's ongoing assessment and consideration of a number of factors for each of the approximately 20,000 segments of pipeline. Our engineers consider such criteria as the potential for third-party damage to the line, like what may occur if there is digging or construction in the area; the condition of the pipe, corrosion risk, and its specific design and physical characteristics; how close the particular segment is to areas that may be prone to ground movement; and how close it is to densely populated or environmentally sensitive areas. The data used in this assessment are updated regularly throughout the year to reflect the latest engineering evaluations, field tests, hands-on inspections and maintenance work.

This procedure, which is part of our overall integrity management program, is followed in some form by almost every gas transmission pipeline operator in the United States.

Nationwide, the natural gas industry operates 2.4 million miles of distribution and transmission pipelines. In total, companies in the industry spend an estimated \$7 billion each year in safety-related activities. Moreover, the design, construction, operation, inspection and maintenance of all operating pipelines are subject to rigorous oversight by Federal and state regulators.

Federal pipeline safety regulations apply to natural gas transmission and distribution pipelines in the United States and through annual certifications and agreements, nearly all individual states have enforcement responsibility for pipelines within their own state, including California. These agreements with Pipeline and Hazardous Materials Safety Administration (PHMSA) require that each state adopt and enforce the Federal regulations.

This includes the adoption and implementation of a pipeline integrity management rule that adds a layer of protection for pipelines in certain areas that, for example, have 20 or more dwellings or a site such as a playground or religious facility

in a specified area, which are referred to as high consequence areas, in addition to the multitude of periodic inspections and repairs performed on all pipelines throughout the system.

Additionally, states may establish and enforce their own regulations in addition to the Federal regulations, provided they are consistent with, and at least as strict as, the Federal regulations. For example, the CPUC has adopted rules for natural gas distribution systems that require annual leak surveys for facilities in the vicinity of schools, hospitals and churches, which are not specifically required in Federal regulations. The CPUC also performs audits of our pipeline policies and practices.

In an effort to summarize the industry's safety practices and information on current regulatory oversight, the American Gas Association (AGA), a trade association that represents natural gas distribution companies, has gathered relevant data in one place on its website and has also developed a Frequently Asked Questions document, which is included as an attachment to this written testimony.

We will continue to work with our regulators, AGA, the Interstate Natural Gas Association of America, which represents natural gas transmission companies, and others to assess and update industry best practices. We recognize that, as an industry, we have a responsibility to make sure we are operating in accordance with the highest standards when it comes to pipeline safety and integrity. Moreover, we know these standards must be continually evaluated and updated to reflect any lessons learned as a result of tragedies like the San Bruno accident and those that have occurred around the country over the past years.

#### **Cooperating with the Investigation**

We are all committed to identifying and learning from the root cause or causes of the tragic events in San Bruno. Once the causes are understood, Congress, the CPUC, our industry and others can take what has been learned to improve policies, procedures and best practices. However, this can only happen if the NTSB, the CPUC and other agencies have the information they need to conduct their investigations.

During the past weeks we have, therefore, been making every effort to be fully responsive to all requests connected with the ongoing investigation. The information provided by the NTSB as a result of their investigation will allow us and others to understand whether the accident was isolated or has broader implications for policies surrounding pipeline safety. Until the NTSB has concluded its investigation, however, we cannot speculate about the causes of the accident and possible changes going forward. Once the results of the investigation are known, we will act on its findings to take the appropriate action.

#### **Supporting Efforts to Improve National Pipeline Safety Regulations**

We also recognize that Congress and the Administration are focused on making our Nation's natural gas system the safest it can be. As Congress moves to reauthorize the Pipeline Safety Improvement Act of 2006, we know that improvements will be made to pipeline safety that will bring about a safer national pipeline system. Toward that end, Senators Boxer and Feinstein have introduced legislation to enhance public safety, strengthen oversight and improve accountability. We support this effort and look forward to working with the Senators and other Members of Congress on legislation that achieves these important and necessary goals.

Among the areas we believe warrant additional discussion in addition to those proposed in current legislative packages are providing for formalized benchmarking of safety practices among pipeline operators, reassessing the adequacy of current inline and external testing methodologies and technologies, creating a national standard for set-backs of high-pressure pipes from residential areas, and conducting a broader review of the impacts of urbanization on the safe operation of the Nation's gas transmission system.

#### **Conclusion**

Again, thank you for the opportunity to participate in today's hearing. We want to reiterate PG&E's firm commitment to stand by the people and community of San Bruno. We are committed to help rebuild the community—and to help the people of San Bruno rebuild their lives. We also want to acknowledge the importance of restoring the confidence of all the communities we serve in the safety and integrity of our pipeline system. We owe it to the public to ensure that they can feel confident in the gas and electric service we provide. And, we understand that in order to take action to prevent future tragedies, answers are needed as to what caused this horrible accident. We will continue to work cooperatively with those investigating the accident so that we, policymakers and others have the information needed to improve pipeline safety.

Thank you and I look forward to your questions.

Senator BOXER. Thank you very much, Mr. Johns.  
Now we will hear from Mr. Rick Kessler, Vice President of the Pipeline Safety Trust.

**STATEMENT OF RICK KESSLER, VICE PRESIDENT,  
PIPELINE SAFETY TRUST**

Mr. KESSLER. Thank you, Senator Boxer. And I also want to thank Chairman Lautenberg, Ranking Member Thune, and the members of the Subcommittee.

My name is Rick Kessler, and I'm testifying today in my purely voluntary and uncompensated role as Vice President of the Pipeline Safety Trust.

The Trust was born from a tragedy in Bellingham, Washington. And riding on the facts of other tragedies in places like Edison, New Jersey; Carlsbad, New Mexico; Walnut Creek, California; and Carmichael, Mississippi, we've testified to Congress for years about the improvements needed in Federal regulations to help prevent further tragedies. We've also long talked about the need for more miles of pipeline to be inspected by "smart pigs." We've pleaded for clear standards for leak detection, requirements for the placement of automatic and remotely controlled valves, closing the loopholes that allow some pipelines to remain unregulated, and for better information to be available so innocent people will know that if they live near a large pipeline—and whether that pipeline is safe.

Yet, here we are again, after the most recent tragedies, in Michigan and California, asking again for the same things we've asked for in previous hearings, following previous tragedies. Clearly, little of our message has been heard, particularly by the Obama Administration, which has put out a proposal for reauthorization that didn't address any of the issues raised by San Bruno, and which we can only refer to as "too little, too late."

We were pleased, however, to see some of our recommendations included as part of the legislation that you recently introduced with Senator Feinstein, and have been working with Chairman Lautenberg to include some of these pro-safety provisions in his bill. We commend all of you for your efforts.

But, we also caution that none of these bills are a panacea, and we hope that, this time, Congress and the Administration will pay close attention and provide a strong, comprehensive solution to pipeline safety, instead of offering a bandaid for a broken bone. It's our sincere desire not to be back here again in the future, saying the same things, after another tragedy.

Sixteen years ago, when I first began working on pipeline safety, we were debating a requirement for remote shut-off valves on natural gas pipelines, in the wake of the Edison, New Jersey, incident and the 2-and-a-half-hours it took to shut off the flow of gas that fed the fireball, due to a lack of a remote-controlled shut-off valve. In San Bruno, in 2010, it's unacceptable that the only way to shut off a large pipeline spewing fire into a populated neighborhood, is to find someone with a key to a locked valve, have them drive to the valve, and shut it down by hand. Please, require remote valves in law for high-consequence areas this time.

In San Bruno, we also learned that, because of old construction practices, this more-than-half-century-old pipeline couldn't accom-

modate an internal inspection device, known as a “smart pig.” Clearly, “smart pigs” are the best-available technology for assessing the true condition of a pipeline. Again, this is another debate that should have been settled years ago. I know Chairman Lautenberg made a big push for this, back in the mid 1990s, in our home State. But, in consideration to the pipeline industry, lesser and cheaper forms of technology were allowed to be substituted. That was penny wise and pound foolish, in terms of the loss of life and property that ensued. Please require companies to upgrade their pipelines in populated areas to accommodate this in-line inspection technology.

Now, just this Summer, over 800,000 gallons of crude oil spilled into the Kalamazoo River, and over 30,000 gallons spilled into a stream near Salt Lake City. Both spills showed that current leak detection system requirements for liquid pipelines aren’t up to the task. This is another long-standing debate with the industry that needs to be put to rest by adopting a clear standard for leak detection systems along the lines of the one Alaska already has.

People shouldn’t be in the dark about whether they live near a high-pressure pipeline and what condition that pipeline is in. They have a right to know, and they should have access to that information. It will save lives, injuries, and property.

Please mandate a complete review of the effectiveness of the industry-written, PHMSA-adopted program for public awareness, and require that basic information, such as the location of a high-consequence area, when pipelines were last inspected, what was found, and the content of spill response plans is easily available to the public.

Also, please ensure the continued funding of the community technical assistance grants so local governments, like San Bruno and community organizations, can take a more active role in the oversight of pipelines that traverse their communities.

These are just a few of the areas that we believe must be addressed forcefully in any reauthorization effort. In all, there are seven areas we believe Congress and the Administration must improve for the benefit of the American people: require remote or automatic shut-off valves for gas transmission pipelines and emergency flow-restriction devices on hazardous liquid pipelines; enhance requirements for accommodating internal inspection devices, or “smart pigs,” for inspection—and for inspection generally, including on currently unregulated lines; develop and implement enhanced standards and requirements for leak detection on hazardous liquid lines—we also support enhanced reporting of leaks on all lines, as required by H.R. 6008, the bipartisan CLEAN Act, sponsored by reps Schauer and Upton in the House—make more pipeline safety information publicly available; continue implementing funding and enhancing the technical assistance grants; make public awareness programs meaningful and measurable; and finally, ensure adequate distribution and promotion of the Pipelines and Informed Planning Alliances Report. This contains recommended practices for local government to adopt for greater safety when development is proposed near pipelines.

Thank you again, Senator Boxer, for the opportunity to testify today. Our hearts go out to the citizens of San Bruno. The Pipeline Safety Trust stands ready to work with all or you, on both sides

of the aisle, to ensure that such a tragedy never happens again and that our Nation's pipeline safety transport—or, pipeline transport system is as safe as it could and should be.

[The prepared statement of Mr. Kessler follows:]

PREPARED STATEMENT OF RICK KESSLER, VICE PRESIDENT,  
PIPELINE SAFETY TRUST

Good afternoon, Chairman Lautenberg, Ranking Member Thune and members of the Subcommittee. Thank you for inviting me to speak today on the important subject of pipeline safety. My name is Rick Kessler and I am testifying today in my purely voluntary role as the Vice President of the Pipeline Safety Trust. My involvement and experience with pipeline safety stems from my years as staff for the House Energy and Commerce Committee on such issues, starting in 1994 after a natural gas explosion in Edison, New Jersey—all too similar to what just occurred in San Bruno, California—destroyed a whole apartment complex and left 1 person dead and many, many people homeless.

The Pipeline Safety Trust came into being after another pipeline disaster—the 1999 Olympic Pipeline tragedy in Bellingham, Washington that left three young people dead, wiped out every living thing in a beautiful salmon stream, and caused millions of dollars of economic disruption. While prosecuting that incident the U.S. Justice Department was so aghast at the way the pipeline company had operated and maintained their pipeline, and equally aghast at the lack of oversight from Federal regulators, that they asked the Federal courts to set aside money from the settlement of that case to create the Pipeline Safety Trust as an independent national watchdog organization over both the industry and the regulators. We have been trying to fulfill that vision ever since, but the spate of recent disasters makes us question whether our message is being heard.

Born from a tragedy in Bellingham, but also riding on the emotion and facts of other tragedies in places like Edison, New Jersey; Carlsbad, New Mexico; Walnut Creek, California; and Carmichael, Mississippi; we have testified to Congress for years in response to such tragedies about the improvements needed in Federal regulations to help prevent more such tragedies. For years we have talked about the need for more miles of pipelines to be inspected by smart pigs. We have pleaded for clear standards for leak detection, requirements for the placement of automatic and remotely controlled valves, closing the loopholes that allow some pipelines to remain unregulated, and for better information to be available so innocent people will know if they live near a large pipeline and whether that pipeline is maintained and inspected in a way to ensure their safety.

So here we are again after the most recent tragedies in Marshall, Michigan, and San Bruno California asking again for the same things we have asked for in previous hearings following previous tragedies. While we were pleased to see some of our recommendations included as part of legislation recently introduced by Senators Boxer and Feinstein, we hope this time Congress and the Administration will pay close attention and provide a strong, comprehensive solution to pipeline safety instead of offering a Band-Aid for a broken bone. It is our sincere desire not to be back here again in the future saying the same things after another tragedy.

### Overview

The availability of natural gas, oil and other fuels are vital to our economic well being and transporting those fuels through pipelines is without a doubt the safest way to move these highly dangerous substances. So the question isn't whether pipelines are a safe mode of transportation compared to other ways to move fuel, the real question is whether they are as safe as they could and should be and the secondary question is whether they are being regulated in the most efficient, effective and protective manner they could or should be.

Unfortunately, the answer to both questions is: no.

Today we will keep our testimony to the lessons that should be learned from the Marshall, Michigan and the San Bruno, California disasters. While bills have already been introduced to address some of the issues coming out from these most recent incidents Congress should not lose sight of the fact that there are other issues not related to these incidents that can have significant effects on those in more rural areas from Alaska to the Dakotas, and from New Mexico to Nebraska. We have provided information about these other issues in previous testimony to this committee this past summer, and we hope all that testimony will be reviewed to ensure a comprehensive pipeline safety bill emerges.

Today we would like to focus on seven areas. They are:

- *Requiring remote or automatic shut off valves for gas transmission pipelines and emergency flow restricting devices on hazardous liquid pipelines.*
- Enhancing requirements for accommodating internal inspection devices or “smart pigs.”
- Developing and implementing enhanced standards and requirements for leak detection on hazardous liquid lines.
- Making more pipeline safety information publicly available.
- Continuing implementation and funding of Technical Assistance Grants to Communities and boosting the Pipeline Safety Information Grant Program.
- Making public awareness programs meaningful and measurable.
- Ensuring adequate distribution and promotion of the Pipelines and Informed Planning Alliances report on recommended practices that local government can adopt to provide greater safety when development is proposed near transmission pipelines.

### **Requiring Remote or Automatic Shut-Off Valves for Gas Transmission Pipelines**

Sixteen years ago, when I first began working on pipeline safety, we were debating a requirement for remote or automatic shutoff valves on natural gas pipelines in the wake of the Edison, NJ accident and the two and a half hours it took to shut off the flow of gas that fed the fireball due to the lack of a remote controlled shut off valve. It is both puzzling and sad that we have to again debate the benefits of requiring remote or automatic shut off valves after another tragedy, this time in San Bruno, California.

In 2010, it is unacceptable that the only way to shut off a large pipeline spewing fire into a populated neighborhood is to find someone with a key to a locked valve, have him or her drive to the valve and operate it manually. In good weather in San Bruno that method took an hour and a half to shut off the flow of fuel. How long would that method take after an earthquake? We ask that you direct the Secretary of Transportation to immediately begin a study to determine the type, placement, feasibility and phase in period for installation of more up-to-date valves, and that a rule-making for such installation is accomplished by December 31, 2012.

For liquid pipelines in 1992, 1996, 2002, and 2006, Congress required OPS to “survey and assess the effectiveness of emergency flow restricting devices . . . to detect and locate hazardous liquid pipeline ruptures and minimize product releases”<sup>1</sup> with the first such requirement having a deadline in 1994 (16 years ago!). Following this analysis, Congress required OPS to “prescribe regulations on the circumstances under which an operator of a hazardous liquid pipeline facility *must* use an emergency flow restricting device.”<sup>2</sup> (emphasis added)

OPS/PHMSA never issued a formal analysis on emergency flow restricting device (EFRD) effectiveness. Instead, in its hazardous liquid pipeline integrity management rule,<sup>3</sup> OPS rejected the comments of the NTSB, the U.S. Environmental Protection Agency, the Lower Colorado River Authority, the City of Austin, and the Environmental Defense Fund and chose to leave EFRD decisions up to pipeline operators after listing in the rule various criteria for operators to consider. Such an approach to EFRD use does not appear to meet Congressional intent, partly because the approach is essentially unenforceable and not protective of important environmental assets such as rivers and lakes including those not considered High Consequence Areas.

Congress needs to reiterate its previous mandates to PHMSA on EFRD use on liquid pipelines and ensure they are followed to mitigate the extent of future pipeline releases.

### **Enhanced Requirements for Accommodating Internal Inspection Devices or “Smart Pigs”**

In San Bruno, we’ve learned that because of the old construction practices, this more than half a century old pipeline could not accommodate internal inspection devices, known as “smart pigs.” Clearly, smart pigs represent the best available technology for assessing the true condition of a pipeline. Again, this is another debate that should have been settled years ago, but in consideration to much lobbying by the pipeline industry, lesser and cheaper forms of technology were allowed to be substituted for the best available technology. While the cause of the San Bruno failure is still unknown, it is clear that problems on pipelines like the one in San Bruno

<sup>1</sup> See 49 U.S.C. 60102(j)(1).

<sup>2</sup> See 49 U.S.C. 60102(j)(2).

<sup>3</sup> See 49 CFR 195.452(i)(4).

would have a far better chance of being identified early enough to prevent tragedies if in-line inspection was required. Isn't it finally time to require operators to present the Secretary with plans by a date certain for upgrading, at a minimum, the segments of their lines in High Consequence Areas to be able to accommodate these devices to help prevent future disasters like San Bruno?

**Developing and Implementing Enhanced Standards and Requirements for Leak Detection on Hazardous Liquid Lines**

In its hazardous liquid transmission pipeline integrity management rule, PHMSA requires that operators have a means to detect leaks, but there are no performance standards for such a system.<sup>4</sup> This is in contrast to the State of Alaska, for example, which requires that all crude oil transmission pipelines have a leak detection system capable of promptly detecting a leak of no more than 1 percent of daily throughput.<sup>5</sup> PHMSA listed in the integrity management rule various criteria for operators to consider when selecting such a device. Again, such an approach is virtually unenforceable and not protective of important environmental assets such as rivers and lakes including those not considered High Consequence Areas.

The recent Enbridge spill in Michigan and the Chevron pipeline release near Salt Lake City are examples of what can go wrong when a pipeline with a leak detection system has no performance standards for operations. In both those incidents the pipelines had leak detection systems as required by regulations, but neither system was capable of detecting and halting significant spills.

The Trust's position is that Congress needs to direct PHMSA to issue performance standards for leak detection systems used by hazardous liquid pipeline operators by a date certain to prevent damage from future pipeline releases.

**Continuing to Make More Pipeline Safety Information Publicly Available**

Perhaps the key issue regarding increasing public awareness and education is to ensure that the information in which the public already has an interest is easily available.

Over the past two reauthorization cycles, PH MSA has done a good job of providing increased transparency for many aspects of pipeline safety. In the Trust's opinion, one of the true successes of the 2006 PIPES Act has been the rapid implementation by PHMSA of the enforcement transparency section of the Act. It is now possible for affected communities to log onto the PHMSA website (<http://primis.phmsa.dot.gov/comm/reports/enforce/Enforcement.html>) and review enforcement actions regarding local pipelines. This transparency should increase the public's trust that our system of enforcement of pipeline safety regulations is working adequately or will provide the information necessary for the public to push for improvements in that system. PHMSA has also significantly upgraded its incident data availability and accuracy, and continues to improve its already excellent "stakeholder communication" website.

One area where PHMSA could go even further in transparency would be to create a web-based system providing public access to basic inspection information about specific pipelines. An inspection transparency system would allow the affected public to review when PHMSA and its state partners inspected particular pipelines, what types of inspections were performed, what was found, and how any concerns were rectified. Inspection transparency should increase the public's trust in the checks and balances in place to make pipelines safe, and make clear inadequacies that need to be addressed. Just as Congress required PHMSA to institute Enforcement Transparency in PIPES, The Trust hopes you will require similar Inspection Transparency this year.

There is also a need to make other information more readily available. This includes information about:

- *High Consequence Areas (HCAs)*. These are defined in Federal regulations and are used to determine what pipelines fall under more stringent integrity management safety regulations. Unfortunately, this information is not made available to local government and citizens so they know if they are included in such improved safety regimes. Local government and citizens also would have a much better day-to-day grasp of their local areas and be able to point out inaccuracies or changes in HCA designations.
- *State Agency Partners*. States are provided with millions of dollars of operating funds each year by the Federal Government to help in the oversight of our Nation's pipelines. While there is no doubt that such involvement from the states

<sup>4</sup> See 49 CFR 195.452(i)(3).

<sup>5</sup> See 18 AAC 75.055(a)(1).

increases pipeline safety, different states have different authority, and states put different emphasis in different program areas. For example just this past weekend the New York Times reported that *“the California Public Utilities Commission, which oversees most of the state’s gas pipelines, told Federal regulators several years ago, in documents, that it “rarely” fines any gas pipeline operation for violations.”* The story<sup>6</sup> went on to say *“Records show that Michigan, Illinois, Arizona, Colorado, New Jersey and Missouri rarely issue fines. And even when other states issue fines, collections are uneven. In places like Ohio, Georgia and Kentucky, records show, half or less of all fines are paid.”*

Each year PHMSA audits each participating state program, yet the results of those program audits are not easily available. We believe that these yearly audits should be available on PHMSA’s website and that some basic comparable metrics for states should be developed. Citizens have a right to know what the priorities of their state pipeline safety agencies are, and how well they are using that inspection and enforcement authority.

- *Emergency Response Plans.* The recent Gulf of Mexico tragedy shows that it is crucial that these types of spill response plans are well designed, adequately meet worst-case scenarios, and use the most up-to-date technologies. While 49 CFR §194 requires onshore oil pipeline operators to prepare spill response plans, including worst case scenarios, those plans are difficult for the public to access. As has been made clear by the huge Marshall, Michigan spill, those Federal plans are not public documents, and they certainly were not created with involvement and expertise of local government and interested citizens.

The review and adoption of such response plans also misses a great opportunity to educate and increase awareness among the public. Currently the process is closed to the public. In fact, PHMSA has argued that it is not required to follow any public processes, such as NEPA, for the review of these plans. If the Gulf tragedy has taught us nothing else, it should be that the industry and agencies could use all the help they can get to ensure such response plans will work in the case of a real emergency.

It is always our belief that greater transparency in all aspects of pipeline safety will lead to increased awareness, involvement, review and ultimately safety. That is why we believe Congress should make citizen right to know provisions a priority for inclusion in this pipeline reauthorization. There are many organizations, local and state government agencies, and academic institutions that have expertise and an interest in preventing the release of fuels to the environment. Greater transparency would help involve these entities and provide ideas from outside of the industry. The State of Washington has passed rules that when complete spill plans are submitted for approval the plans are required to be made publicly available, interested parties are notified, and there is a 30-day period for interested parties to comment on the contents of the proposed plan. We urge Congress to require PHMSA to develop similar requirements for the adoption of spill response plans across the country, and that such plans for new pipelines be integrated into the environmental reviews required as part of the pipeline siting process.

#### **Increasing Awareness and Education by Continuing Implementation and Funding of Technical Assistance Grants to Communities**

Over the past year and a half, PHMSA has finally started the implementation of the Community Technical Assistance Grant program authorized as part of the Pipeline Safety Improvement Act of 2002 and clarified in the PIPES Act. Under this program, more than a million dollars of grant money has been awarded to communities across the country that wanted to hire independent technical advisors so they could learn more about the pipelines running through and surrounding them, or be valid participants in various pipeline safety processes. After the rash of pipeline tragedies from Texas to Michigan to California this year we suspect that many communities may be more interested than ever in finding out more about the pipelines in their midst.

In the first round of grants, PHMSA funded projects in communities in seventeen states from California to Florida. Local governments gained assistance so they could better consider risks when residential and commercial developments are planned near existing pipelines. Neighborhood associations gained the ability to hire experts so they could better understand the “real” versus the imagined issues with pipelines in their neighborhoods. And farm groups learned first-hand about the impacts of already-built pipelines on other farming communities so they could be better informed

<sup>6</sup>[http://www.nytimes.com/2010/09/25/us/25pipeline.html?pagewanted=2&\\_r=1&hp](http://www.nytimes.com/2010/09/25/us/25pipeline.html?pagewanted=2&_r=1&hp).

as they participate in the processes involving the proposed routing of a pipeline through the lands where they have lived and labored for generations. All of the examples of local government implanting the PIPA recommendation we mentioned earlier were funded through these technical assistance grants. Overall—despite the unacceptably long delay in implementation—we view the first round of this new grant program as a huge success.

However, ongoing funding for these grants is not clear, so the Trust asks that you ensure the reauthorization of these grants to continue to help involve those most at risk if something goes wrong with a pipeline. We further ask that you consider doubling the cap on the amount of an individual grant to \$100,000, removing the limitation on funding sources for the grants, ensuring funds do not go to pipeline operators, and—most importantly—do whatever is necessary to ensure that the authorized funds are actually appropriated.

### **Making Public Awareness Programs Meaningful and Measurable**

Since the San Bruno disaster people in that neighborhood have asked why they had no idea they had such a pipeline in their midst. That is a good question since Federal regulations require pipeline operators to have a program that includes “*activities to advise affected municipalities, school districts, businesses, and residents of pipeline facility locations.*” Similarly in Marshall, Michigan it appears that emergency response personnel had little knowledge of a large oil pipeline in their community. It is becoming increasingly clear that the implementation of these required programs has not been effective.

The Pipeline Safety Improvement Act of 2002 required pipeline operators to provide people living and working near pipelines basic pipeline safety information, and gave PHMSA the authority to set public awareness program standards and design program materials. In response to this Congressional mandate, PHMSA set rules that incorporated by reference the American Petroleum Institute’s (API) recommended practice (RP) 1162 as the standard for these public awareness programs. According to RP 1162’s Foreword (page iii) of API recommended practice, the intended audiences were not represented in the development of RP 1162, though they were allowed to provide “feedback.” The omission of representatives from these audiences from the voting committee reduces the depth of understanding the RP could have had regarding the barriers and incentives for such programs, and undercuts the credibility of the recommended actions. The public awareness program regulations—49 CFR § 192.616 and 49 CFR § 195.440—mandate that operators comply with RP 1162. In essence, this amounts to the drafting of Federal regulations without the equal participation of the stakeholders the regulations are meant to involve. With non-technical subject matter, such as this recommended practice deals with, it is difficult to justify excluding the intended audiences from the process and allowing the regulated industries to write their own rules.

This public awareness effort represented a huge and important undertaking for the pipeline industry, and as such the effectiveness of it will evolve over time. We were happy that the rules included a clause that set evaluation requirements that require verifiable continuous improvements. While we understand that the initial years of this program have been difficult, we have been disappointed in some of these efforts as they were clearly farmed out to contractors to meet the letter of the requirement instead of the intent of the requirement. Recently, the National Transportation Safety Board cited the failure of these programs in the investigation report of a deadly pipeline explosion in Mississippi that killed a girl and her grandmother. And again, the recent disasters in California and Michigan have well publicized the failure of the current industry developed system to adequately inform those it was meant to.

An evaluation of the first 5 years of this program is due this year, and API has been working on an update of this recommended practice for some time now. One of the draft proposals from API is to remove the requirement to measure whether the programs have led to actual changes in behavior. We hope that Congress will make clear that the intent of this program is to change the behavior of the intended audiences to make pipelines safer, not to count how many innocuous brochures can be mailed. After tragedies like the one in San Bruno we should not have people asking why they didn’t know about the pipelines in their neighborhoods, and we should not have emergency response professionals surprised to find out they have large dangerous pipelines in the jurisdictions.

**Ensuring Adequate Distribution and Promotion of the Pipelines and Informed Planning Alliances Report on Recommended Practices That Local Government Can Adopt to Provide Greater Safety When Development Is Proposed near Transmission Pipelines**

Section 11 of the Pipeline Safety Improvement Act of 2002 included a requirement that PHMSA and FERC provide a study of population encroachment on and near pipeline rights-of-way. That requirement led to the Transportation Research Board's (TRB) October 2004 report *Transmission Pipelines and Land Use*, which recommended that PHMSA "develop risk-informed land use guidance for application by stakeholders." PHMSA formed the Pipelines and Informed Planning Alliance (PIPA) in late 2007 with the intent of drafting a report that would include specific recommended practices that local governments, land developers, and others could use to increase safety when development was to occur near transmission pipelines.

Most large pipelines were placed in rural areas years ago, but as the populated areas around our cities expand it has led to a growing encroachment of residential and commercial development near large high-pressure pipelines. This increases the risk to the pipelines from related construction activities, as well as to the people who ultimately live and work nearby if something should go wrong with the pipeline.

After more than 2 years of work by more than 150 representatives of a wide range of stakeholders, the draft report and the associated 46 recommendations are finally due to be released any minute. This will be the first time information of this nature has been made widely available to local planners, planning commissions, and elected officials when considering the approval of land uses near transmission pipelines. We fully agree with the sentiment of Congress in the Pipeline Safety Improvement Act of 2002 that,

*"The Secretary shall encourage Federal agencies and State and local governments to adopt and implement appropriate practices, laws, and ordinances, as identified in the report, to address the risks and hazards associated with encroachment upon pipeline rights-of-way . . ."*

A recent statewide survey of local government planning directors conducted by the Pipeline Safety Trust showed that to successfully implement these needed "practices, laws, and ordinances" will take a good deal of well targeted education and promotion by a wide range of stakeholders outside of the pipeline industry and PHMSA. In order to make this effort successful, the Trust asks that this year Congress authorize, just as was authorized in PIPES for the successful promotion of the 8-1-1 "One Call" number, \$500,000/year to promote, disseminate, and provide technical assistance regarding the PIPA recommendations.

Across the Nation neighborhoods are being built closer and closer to dangerous pipelines just like the recently impacted neighborhood in San Bruno was. Only if Congress gives PHMSA the resources it needs, along with a clear mandate, will the information local governments need to start considering these best land use practices near pipelines start to be instituted in time to prevent future San Brunos.

**Conclusion**

Thank you again for this opportunity to testify today. The Pipeline Safety Trust hopes you will closely consider the ideas and concerns we have raised today and move a comprehensive pipeline safety reform and reauthorization bill forward soon. If you have any questions about our testimony, the Trust would be pleased to answer them and, of course, we stand ready to work with you and your colleagues on reauthorizing the pipeline safety laws that are so important to ensuring the well-being of millions of Americans and the environment that is their birthright.

For any bill to be comprehensive we hope you will also review of testimony to you from June of this year and include the important fixes necessary to address these other outstanding issues:

- *Expanding the miles of pipelines that fall under the Integrity Management rules.*
- *Moving forward to address unregulated pipelines and clarifying regulations of gathering and production pipelines.*
- *Continuing to push state agencies on damage prevention.*
- *Implementing expansion of Excess Flow Valve requirements.*
- *Correcting the pipeline siting vs. safety disconnect, and ensuring PHMSA's ability to provide adequate inspections when pipelines are being constructed.*

Senator BOXER. Thank you, Mr. Kessler.

I'm going to start with you. Did you say that your group has already suggested and recommended that there be remote shut-off valves in high-consequence areas?

Mr. KESSLER. Yes, Senator.

Senator BOXER. Do you know when that was?

Mr. KESSLER. I don't, offhand, but it—I believe it was—we started recommending that—the group formed in 1999—I believe we started recommending it not long after.

Senator BOXER. OK. So, it could be as many as 10 years ago.

Mr. KESSLER. Absolutely. And I know, from my work with the New Jersey delegation—I started with Senator Lautenberg—that he has been pushing for these since the Edison accident.

Senator BOXER. I'm going to ask some tough questions to the PUC and to PG&E. So—I'm just saying they're hard questions, but I think they're important.

According—this is to the CPUC—according to the *New York Times*, the CPUC reported, several years ago, that it, quote/unquote, “rarely fines gas pipeline operators for violations.” Is this still the case? Can you provide, for the record, the annual total of fines levied over the past 5 years?

Mr. CLANON. I don't know that off the top of my head, Senator, but I can get to the underlying point. And that is, how effective is the Public Utilities Commission's oversight of PG&E and of the other utilities? Just a couple of facts. The first—

Senator BOXER. Well, I'm asking specifically about the fines. Is it true that you rarely fine the people you oversee? Is that still the case?

Mr. CLANON. No, ma'am. That's not true at all. In fact—

Senator BOXER. OK.

Mr. CLANON.—since 1999, the PUC has levied about half a billion—\$500 million in fines and restitution against the people that we regulate, including some tens of millions of dollars in fines and restitution from PG&E.

Senator BOXER. OK. So, that article—

Mr. CLANON. That's not even—

Senator BOXER.—in the—

Mr. CLANON.—close to—

Senator BOXER.—*New York Times* is no longer true. That's good.

Mr. CLANON.—hasn't been true since forever at the PUC, and certainly not since 1999.

Senator BOXER. “Forever at the PUC.” Well, what year was that story? Well, the quote is in the story that was just printed, that several years ago they said they rarely fine any gas pipeline operator for a violation—but, you'll get me the details, will you not, for that?

[The information referred to is contained in the appendix.]

Mr. CLANON. I will. And I just want to lay this to rest right now, Senator. The PUC is a vigorous enforcer on the people that we regulate, to the tune of half a billion dollars—

Senator BOXER. Yes.

Mr. CLANON.—in fines and—

Senator BOXER. That's why I—

Mr. CLANON.—restitution.

Senator BOXER.—was asking the question.

Mr. CLANON. Yes.

Senator BOXER. Because the *New York Times* said something other than that. It said, "The CPUC, which oversees most of the State's pipelines, told Federal regulators several years ago, in documents, that it rarely fines any gas pipeline." So, that's why I'm just asking you, for the record, the fines on these gas pipelines.

And for the CPUC, according to the PHMSA, the CPUC only conducted inspections on 787 out of 935 inspection days for Fiscal Year 2010, which makes California rank just above Arkansas and Puerto Rico on its certification scores. These certification scores help determine grant funding for California. Are you aware of this low score, and can you explain it?

Mr. CLANON. I don't know about that particular year. I know that, over the course of the last several years, we've actually been rated high by PHMSA. I don't know about that particular year.

Senator BOXER. Well, this is this year.

Mr. CLANON. Yes. So, I don't know the specifics of this year. But, I do know that, over the last several years, we've actually been rated very high, in terms of our PHMSA-certified—

Senator BOXER. OK.

Mr. CLANON.—oversight.

Senator BOXER. But, I'm asking you about Fiscal Year 2010, because this is getting to the current time. So, if you could respond to that in writing, as to why you think that was the case—maybe it's an aberration in Fiscal Year 2010—we'd like to know that.

Mr. CLANON. I'd be happy to do that.

[The information referred to is contained in the appendix.]

Senator BOXER. Thank you very much.

And, to Mr. Johns of PG&E, the *Contra Costa Times* recently reported that PG&E has failed to spend millions of dollars it designated for pipeline safety repairs over the past two decades—and this is a quote from the paper—"collecting \$80 million more than it spent for its gas pipeline replacement program." Is that accurate?

Mr. JOHNS. I don't believe that that is accurate. In fact, we have spent \$30 million more on the gas transportation side of our business than what we've been authorized to spend by the California Public Utilities Commission over the last 5 years.

Senator BOXER. OK. So, you disagree with the *Contra Costa Times*?

Mr. JOHNS. I didn't do any work to validate what their numbers were, but I do know that what we've spent over the last 5 years is what I acknowledged.

Senator BOXER. OK. They're talking about the past two decades. And we'll put that article in the record.

[The information referred to follows:]

#### PG&E COLLECTED MILLIONS MORE FOR PIPELINE REPAIR THAN IT SPENT

Saturday, September 18, 2010—*Contra Costa Times*, Walnut Creek, Calif. By Mike Taugher

For the past 20 years, PG&E has failed to spend tens of millions of dollars it told regulators it would use to replace aging gas pipelines, documents show.

Between 1993 and 1995 alone, the company collected \$80 million more than it spent for its gas pipeline replacement program.

That sum easily would have been enough to replace gas transmission segments in Livermore and Fremont that the utility identified as the two highest risk pipelines in the Bay Area—with enough left over to fix a pipeline segment near the site

of the San Bruno pipe identified as being an “unacceptably high” risk, according to regulatory documents.

Those three projects would cost a total of \$53.5 million, according to PG&E estimates.

Regulators expressed concern about underspending on pipeline replacement as recently as 2007, when the California Public Utilities Commission required—possibly for the first time—that PG&E spend money collected for its pipeline replacement program for the originally stated purpose.

Regulators said Friday that PG&E continued in recent years to spend less than forecast on pipeline replacement.

“It’s the whole regulatory game. You come up with these very appealing things to spend on and it becomes a slush fund to spend on other purposes,” said Mike Florio, a senior attorney for the consumer advocacy group TURN: The Utility Reform Network.

In an e-mailed statement, PG&E said it has the flexibility to use the pipeline replacement money for other priorities.

“When we file our rate cases, we forecast to the best of our ability at the time what work we think will need to be done, and ask the Commission for funding to do that work,” according to the statement from spokesman Paul Moreno. “The Commission then gives us a budget and gives us the flexibility to spend that budget based on our assessment of priorities.”

“Because it is a forecast, things often change (emergencies, different pipes become priorities, etc.), so we redirect our allowed spending based on assessment of priorities.”

Moreno said that between 1985 and 2009, the replacement program installed 2,111 miles of distribution and transmission pipelines at a cost of \$1.5 billion. He said all of the pipeline replacement money spent elsewhere went to capital projects.

In the aftermath of the Sept. 9 explosion in San Bruno, regulators are focusing again on PG&E’s pipeline replacement spending.

Earlier this week, the utilities commission asked the power company to compare how much it told regulators it would spend on pipeline safety since 2005 and how much it actually spent.

Then on Friday it asked for information about any repairs scheduled on Line 132, which included the segment that exploded in San Bruno, and “a detailed explanation as to why any replacements or upgrades have not been completed.”

But the concern about how PG&E spends money it collects to replace gas pipelines goes back to at least 1995, when regulators admonished the utility for collecting more than it needed during the previous 5 years.

“Despite consistent underspending in previous years, we granted PG&E’s full funding request . . . on the basis that PG&E should continue replacing old pipelines ‘as quickly as possible’ in the interest of safety,” utility commission members wrote in a 1995 decision on PG&E’s gas and electric rates.

“We stated our expectation that PG&E should use the authorized funds for their intended purpose and even accelerate the pace of the program,” the decision continued. “Between the time we issued the last general rate case decision and the filing of this one, PG&E has fallen short of our stated expectations.”

In that decision, Commissioners noted that despite underspending, the pipeline replacement program appeared to be on schedule, and suggested they were awarding PG&E more than it needed.

But regulators continued to grant the company’s spending requests in hopes it would speed up pipe replacement, according to the 1995 decision.

The 1995 rate requests referred specifically to replacing neighborhood gas distribution lines, not the larger transmission lines like the one that exploded in San Bruno.

But the funds were intended for a program that was used to replace both distribution and transmission lines.

According to PG&E, that program was split at the end of 2009 so that transmission line replacements are now funded from a different program.

Regulators said it is the utility’s job, not theirs, to make decisions about specific projects, but they are likely to scrutinize more closely PG&E’s spending.

“What you’re identifying is a pattern,” said Julie Fitch, Energy Division Director for the utilities commission, in response to a Bay Area News Group query. “It’s likely we’re going to be asking them for more detail on what they are spending on and why.”

Florio, the TURN attorney, said it is difficult to track how program money is spent.

“They collect money and they spend money, but there aren’t any tags on the dollars to say it’s earmarked for one thing or another,” he said.

Assemblyman Jerry Hill, D-San Mateo, said he was angered to hear earlier this week that PG&E had charged the public \$5 million in rate increases several years to upgrade the transmission line 2.8 miles north of the line that exploded in San Bruno, yet still has not done the repairs.

That section of line is in Hill's district, he said, just like the part that blew up. "I'm not happy at all about that, and now I'm hearing there are other cases like that," Hill said. "What it shows is a lack of proper oversight."

Amid demands by lawmakers that PG&E release its list of 100 high-risk gas-line segments because of the disastrous San Bruno explosion, state regulators on Friday asked the utility for that list and other information about how the company compiled it and what it has or hasn't done to upgrade those risky pipelines.

The letter from utilities commission Executive Director Paul Clanon to PG&E President Christopher Johns, seeks "maps showing the location of each pipeline segment" on the list as well as "detailed description of the criteria PG&E uses in deciding which pipeline segments to characterize as high-priority projects."

The agency, which regulates PG&E, particularly sought information about high-risk pipes along gas-Line 132, where the explosion occurred. The Commission asked the company for "a detailed explanation of the factors PG&E took into account in deciding to include such segment(s) on the list, and a detailed explanation to why any replacement or upgrades have not yet been completed."

The agency also asked the company to explain how long it would take to prepare a list of where on its gas transmission lines manual shut-off valves can be replaced with remotely operated or automatic shut-off valves. Many experts believe automatic or remote valves allow utilities to more quickly halt the flow of gas after explosions.

Utilities commission spokeswoman Terrie Prosper said investigators with the agency and the National Transportation Safety Board, who are looking into the explosion, probably had asked for and received all of the information sought in the letter. However, she added, "By Mr. Clanon asking for it, he can obtain the information as well and make it available to the public."

Bay Area News Group reporters Steve Johnson and Paul Rogers contributed to this story. Mike Taugher covers the environment. Contact him at 925-943-8257.

Senator BOXER. So, if you could just answer that, specifically, "over the past two decades," if they're right or wrong on \$80 million being left on the table on its gas pipeline replacement program.

Mr. JOHNS. I will have to get you the last—

Senator BOXER. Oh, yes.

Mr. JOHNS.—two decades. I can—

Senator BOXER. I understand.

Mr. JOHNS.—I can provide you with that.

[The information referred to is contained in the appendix.]

Senator BOXER. Yes. That's what we're asking. Thank you.

Now, the *San Francisco Chronicle* reported that PG&E requested \$5 million in 2008 to replace a different segment of the transmission pipe that exploded in San Bruno, but that the repair work on that segment was never completed. Is that accurate?

Mr. JOHNS. That particular segment of pipeline, which was not the pipeline in question for today, was originally part of our rate filing in the 2007 time frame. And that request, at that time, was based on initial analysis, as part of our preventive maintenance program. When we did further analysis of that pipeline, we realized that the pipeline was still in—was in good order and did not require any immediate attention. And so, it was rescheduled, and other higher-priority work was done instead.

Senator BOXER. OK. Well, here's what they said. They said—I'll read it again—"PG&E requested \$5 million in 2008 to replace a different segment of the transmission pipe that exploded in San Bruno, but that the repair work on that segment was never completed. It was also reported that PG&E requested, again, another

\$5 million in 2009 for that same segment. But now, that segment won't be replaced until 2013."

So, is the newspaper right? You requested \$5 million, you didn't spend it. Then you went back and requested another \$5 million, and you're not going to spend it until 2013. Why were those repairs never completed?

Mr. JOHNS. Senator, what we do is, is that we have over 20,000 different pipeline segments that we constantly analyze and look out into the future as to potential needed repairs, preventive maintenance. And things will move up and down on that list, as far as priorities are concerned.

So, for instance, if you have a pipeline in an area where maybe somebody's going to do some construction, that might move it up on the list of potential need for watching, because somebody might be able to dig into it. If they then complete the construction and move on, then that would move down the list. So, we are constantly reevaluating the need.

So, the specific item that you looked at was originally on our list of things to do. And as we went out and did further work, we realized that we did not need to do that at that point in time, could do that later, but, instead, could do other high-priority work. And, as I said, in total over the last 5 years, including the years that this particular pipeline segment was involved, we actually spent more than what was authorized by the CPUC. So, we took that \$5 million and spent it on higher-priority items during that time.

Senator BOXER. OK. By the way, this is the *San Francisco Chronicle*. I'm just asking you questions that were raised by these investigative reporters. So, I'm trying to understand it.

So, what you're saying is, you asked the CPUC for \$5 million for this segment of pipe—not the one that exploded, but another segment of that same pipeline, to repair it. You didn't repair it, because it didn't need it. But, then you went right back and asked for another \$5 million for the same segment. I'm confused. And you raised rates to cover that. Is that correct?

Mr. JOHNS. We include not just this \$5 million, but all of our segments that we plan to do work, in our filings with the Public Utilities Commission, to make sure we're doing our preventive maintenance. So, what we did with the \$5 million in that year was—is, we worked on higher-priority work. And, as I said, we actually spent more than what was authorized.

Senator BOXER. OK.

Well, let me ask Mr. Clanon this question. What is your agency doing to ensure that repairs that are paid for by increased rates—in other words, they asked for a specific segment. You said yes. They didn't do it. Then they come back the next year, ask for it again. They still haven't done it. Are you checking and balancing this? Do you have a list of these areas they're supposed to fix? Do you check on them, that they're supposed to do it? Or how does that work? Do they send you an amended request and say, "By the way, we decided not to do this, but we're going to use this \$10 million for other things?" How do you work it?

Mr. CLANON. Senator, they request an overall budget for all their pipeline work. Let's say it's \$200 million. They come in to the PUC; they say, "We need \$200 million to do pipeline work." And at the

time of that filing, they say, “And these are the projects that we think we need to do.” There is a process—you’ve seen this process in action, I know, many times—at agencies like the PUC, outside interveners. Eventually, the Public Utilities Commissioners decide on an overall budget. The PUC doesn’t say, “You’ve got to fix this milepost right here.” We’re looking at an overall budget.

There’s a really important reason for that. It’s so that folks, like Mr. Johns here, can exercise their professional judgment about where the money should be placed in an individual year.

It’s not surprising that individual projects can move up and down on that list. And it doesn’t mean that the ratepayers are paying twice. What it means is that the utility managers are the ones responsible for deciding where the money that they get through the regulatory process should be spent.

Does the regulator then come along later and say, “OK, where was it spent? Was it spent wisely?” Absolutely. That happens the next time that the utility comes in to ask for a budget. There’s actually one of these proceedings every 2 or 3 years at the PUC, and that’s the kind of oversight that is levied.

I think this particular charge by the *San Francisco Chronicle* is just based on a misunderstanding of the way that utilities are regulated. You don’t want public utilities commissions deciding which particular fix has to be made in which particular year. You want the competent people at the utilities held accountable for those decisions. And that’s the way it works.

Senator BOXER. I guess my concern is, they come in and they say, “We need to fix it.” And they don’t fix it, and then they say, “Oh, let’s ask for the same money again.” And then they don’t fix it until 2013. If you’re only looking at that every 2 years, my own opinion is, I think you need to scrutinize these lists a little bit better. That from afar, seems to me, especially in light of what’s happening here—because they may decide to go ahead and fix something else that’s not in a highly-populated area, and you may think it’s more important to take care of those fixes.

Mr. CLANON. I think you’re very right, ma’am. And actually, there has been a step forward in this, just in the last 10 days. PG&E actually made public, for the first time, in a broadcast way, a week ago yesterday, the list of the top 100 transmission replacement and maintenance projects, and immediately went out and spoke to the local officials, folks like the mayor and the—and—in San Bruno—so that the local people also now understand, in PG&E service territory, where this list of projects is, so that they can help the PUC scrutinize those projects, help keep PG&E’s management’s feet to the fire, which is the appropriate thing when work that is scheduled is put off, probably for good reasons—but, increasing the public scrutiny by putting the information out there. I applaud PG&E for doing that.

Senator BOXER. Well, it may be for good reason, but it could be wrong, too.

Mr. CLANON. Absolutely.

Senator BOXER. We need a check and balance.

Mr. CLANON. Absolutely. And—

Senator BOXER. OK. Let me ask you this. Why has the CPUC not required automatic or remote shut-off valves for transmission pipe-

lines in high-consequence areas? And are you considering mandating the use of remote or automatic shut-off valves on all high-risk transmission lines?

Mr. CLANON. We are, yes. In my testimony, as I mentioned, we've already asked PG&E for an analysis of PG&E's system to tell us where remote and automatic cutoff valves make sense. So, that's going to be an active issue for us, not 18 months from now, but actually right now. We're beginning that review already.

As to why it hasn't been done to this point, I don't know that any State has been requiring that. I don't know that there's an example of it.

Senator BOXER. Well, that's—

Mr. CLANON. These valves are—

Senator BOXER.—coming from California, you know we're always the leader.

Mr. CLANON. Well, I'm with you on that. And maybe we'll be ahead of the curve on this one, too.

Senator BOXER. I would hope so.

Mr. CLANON. We need to talk about—

Senator BOXER. Let me just say, this is the most serious accident in the country, in terms of lives lost. Am I correct?

Mr. CLANON. I think that's absolutely right.

Senator BOXER. All right. So, we have to take action and set the pace here. So, what I would like to see you do is work swiftly as you can. We now know, because we've gotten the information, how many miles we have of these high-consequence lines. And you know how close your friend lived to that line.

Mr. CLANON. Yes.

Senator BOXER. And that's just a disaster waiting to happen, now that we look at it, you know? So, it seems to me, we've been—we've not only been warned, we've been told that we have to take action. So, I'm going to ask you to submit in writing to me, What is the PUC's plan for moving ahead with these automatic shut-off valves? And let's be a leader on this.

[The information referred to is contained in the appendix.]

Senator BOXER. Now, when utilities request a rate increase for repairs of a line that's designated as high-consequence, how long do they have to complete those repairs? I suppose you don't have any distinction, here, whether it's high-consequence or not. You don't put a time limit on it?

Mr. CLANON. We don't, yes. It's a thing that gets reviewed over time as the utility comes in for rate requests. It gets scrutinized by experts within the PUC process. It'll now also be scrutinized by folks at the local level and by the media, now that that—

Senator BOXER. OK.

Mr. CLANON.—that information is actually public. I think that will help us provide that kind of oversight.

Senator BOXER. Well, if I could recommend this, just as a thought, what's the total number of lines that you oversee, intrastate?

Mr. CLANON. It's a lot. It's something like 6,000 miles, just in PG&E's own—

Senator BOXER. Well, what about all of them?

Mr. CLANON.—territory. And double that, plus a little bit more—

Senator BOXER. Twelve thousand.

Mr. CLANON.—for the whole State, yes.

Senator BOXER. OK. But, then if you look at that, and then approximately 3,000 miles—is that right?—is high-consequence?—3,600. So, you have, let's just say, approximately, 12,000 miles of line and about 3,600 high-consequence. Would you think about taking that 3,600 miles and just making that a priority, and separating it out from everything else you do? I mean, God help us if something happens in a community like this. If it's in a remote area, it's bad. But, here it's a disaster. So, will you take a look at that idea of changing your rules for the high-consequence lines?

Mr. CLANON. Of course.

Senator BOXER. That's good.

Have you mandated a time-frame for PG&E to complete inspections and repairs on the top 100 high-risk segments list that the company recently released?

Mr. CLANON. No. And, as I said—so, they're—now we have all the folks at the local level scrutiny—scrutinizing that list, along with folks at the PUC. So, the amount of oversight that that list is getting now will provide a strong feet-to-the-fire for PG&E to make sure that the ones that are related to public safety are up at the top of the list. And I'm sure that's the way PG&E would want it anyway. But, now we've got much stronger public oversight, along with the PUC.

Senator BOXER. OK.

And, Mr. Johns, is PG&E complying with the directive issued by the CPUC on September 12, including immediate inspection of all natural gas lines? And what date is PG&E expected to fully comply with that directive?

Mr. JOHNS. Senator, we have been immediately implementing all of the items that were directed by the CPUC, and they're—depending on which item, some of them are already completed, some of them are moving forward to meet the dates that the CPUC put forth in their order last week. So, we have—as Mr. Clanon said, we have already reduced the pressure in the pipelines, the three pipelines in the peninsula. We have already completed the resurvey of those three pipelines. We've begun the aerial survey and the foot survey of the rest of our system, starting first with those high-consequence areas.

Senator BOXER. OK. And, Mr. Johns, why did it take nearly 2 hours to shut the gas off?

Mr. JOHNS. Our team had to go through the process of getting to—get the tools and equipment, go through—6-o'clock-in-the-evening traffic to get to those things. They did, and got there as quickly as they could, in order to turn the valves off and stop the gas flow. In fact, the team that went out there—and it was—the first responder actually went out before they were even called, because they could see that there was an incident out there. And, as I would expect them to, and as the great team members that they are, that they saw an accident that was occurring that required response immediately, and they got out there as quickly as they could.

Senator BOXER. But, I'm assuming that you're not in any way saying that that's a good enough response—2 hours.

Mr. JOHNS. What I'm saying is, is that I believe they got there—

Senator BOXER. No, I'm not—

Mr. JOHNS.—as quickly as they could.

Senator BOXER.—asking you to—in other words, we all support everybody who was on the scene. But, you're not suggesting that that's an adequate situation, are you, for a future disaster like that, to take 2 hours to shut off this ball of fire?

Mr. JOHNS. What I will say is, is that we will look at every way we can to make sure that responses are as quick as possible—

Senator BOXER. OK, but that's—

Mr. JOHNS.—and quicker than that.

Senator BOXER.—not the—you—it's 6 o'clock at night, and you're in traffic. Don't you think we ought to have shut-off valves in place?

Mr. JOHNS. What I believe is, is that we will work in—with the CPUC to put—to look where it makes sense, because shut-off valves, in that instance, would—assuming that they work— would have turned it off faster than what we got there.

Senator BOXER. Assuming they work, of course.

Mr. JOHNS. Yes.

Senator BOXER. So, you would agree that, had there been a shut-off valve, we could have averted the worst disaster, if those valves worked.

Mr. JOHNS. What I will agree with is, is that if there were an automated shut-off valve or a remote-control—

Senator BOXER. Yes.

Mr. JOHNS.—shut-off valve in there, that the gas flow would have stopped faster than by the time our people got there. As you heard the Vice Chair say, he is investigating what the ramifications are, as far as the timing of it, in terms of the disaster—

Senator BOXER. What's your understanding of how a shut-off valve works? Do you have some out there in place?

Mr. JOHNS. What type of shut-off valve?

Senator BOXER. I'm asking you. Do you have shut-off valves—remote shut-off valves, automatic shut-off valves? Do you work with those?

Mr. JOHNS. We have those throughout our system.

Senator BOXER. You do.

Mr. JOHNS. We have manual valves—

Senator BOXER. And have they ever worked for you?

Mr. JOHNS. The remote shut-off valves?

Senator BOXER. Yes.

Mr. JOHNS. And the automatic shut-off valves? Yes, they have.

Senator BOXER. OK. Could you get a letter to me, as to—just to give me an example of where they've worked, and how they've worked?

[The information referred to is contained in the appendix.]

Mr. JOHNS. Yes, I can—

Senator BOXER. Thank you. That would be very, very helpful.

I know these are hard questions. Mr. Johns, the *LA Times* reported that PG&E's leak rate is at 6.2, annually, per 1,000 miles

of transmission pipes serving high-consequence areas. This is more than six times the average leak rate for the Nation's six other large operators. Can you explain why PG&E's leak rate is so high? And what actions are you taking to address this problem of leakage?

Mr. JOHNS. Senator, I understand that the *LA Times* wrote that article.

Senator BOXER. Yes.

Mr. JOHNS. I do not know how they came up with the numbers. What I can tell you is, is that, when we compare ourselves across the industry on the leak rate per pipeline mile for high-concentration areas, our rate is .0057, and the industry's rate is .0049. Those are very close together. I don't know where the *LA Times* got their information.

Senator BOXER. Well, we understand the reported leak rates at Southern California Gas—it's 2.3 per 1,000 miles, compared to 6.2 per 1,000 miles for you. That's for all your lines.

Mr. JOHNS. Again, they referred to high-concentration areas. I have the information, that's on PHMSA's website that says, "Here's what it is for high-concentration areas for the entire country," and the average is .0049.

Senator BOXER. Well, I'm just talking about Southern California Gas.

Mr. JOHNS. Yes, and I'm not familiar with what their—

Senator BOXER. OK.

Mr. JOHNS.—their rate is.

Senator BOXER. Mr. Clanton, are you familiar with the leak rate of PG&E, compared to Southern California Gas?

Mr. CLANON. I've seen some of those numbers. And one point to make about those numbers, without saying that they're not important, is that they vary pretty wildly during—from year to year. They're also pretty small. They go from 2 or 3 up to 9 or so in a year. So, the experience of 2 or 3 bad years can really skew those numbers.

I don't want to pooh-pooh these numbers. I think that we have to look at them hard. But, it is important not to try to reduce something like gas pipeline safety to one number. I don't want to pooh-pooh that analysis. I think we have to look at it hard. But, the analysis of gas pipeline safety, in general, I think the Committee understands how complex that is, and so do we all, working in it.

Senator BOXER. Mr. Johns, what methods does PG&E use to inspect transmission lines that are not able to use "smart pig" technology?

Mr. JOHNS. Yes, there are three approved methods, by the Federal regulation. One of them is the "smart pig" methodology. The other one is referred to as "external corrosion direct assessment," or ECDA, and the other one is high-pressure testing. And so, we utilize all three of those methodologies. We use the pigging where we possibly can. And if not, then we use, generally, the external corrosion detective methodology. And then we use the high-pressure testing, generally when we're putting in new lines.

Senator BOXER. OK. And you recently released a list of the top 100 high-risk pipeline segments. When will inspections and repairs be completed on those segments?

Mr. JOHNS. Yes, we did release those, as—Senator, as you and I talked about—

Senator BOXER. Yes.

Mr. JOHNS.—at your conference. We wanted to make those available to the public. And, in fact, starting just over the weekend, we made it available so that all of our customers could go online, in a secure—

Senator BOXER. Good.

Mr. JOHNS.—area, to see how far away they are from any of those.

As far as our top 100 lines, as you refer to them, again, that is—

Senator BOXER. Well, I think that was your list of the top 100 high-risk pipeline segments.

Mr. JOHNS. Our—it's our list of the top 100 planning segments. It's part of our risk-management process. It's for our future preventive maintenance programming. And I think, when people look at that list, what they will find is, is that there are some instances where there's planned replacement, because we want to make sure that we get ahead of that. There's other places where all we need to do is monitor it, or maybe other areas where we need to do just more testing. So—

Senator BOXER. Well, when will—

Mr. JOHNS.—there are dates associated with each one of those segments.

Senator BOXER. So, can you tell me when those inspections and repairs will be completed on those top 100?

Mr. JOHNS. We have made public when each one of those areas—and on there is a date as to, if there is construction to be done, when that construction is expected to be completed. Otherwise, it would be ongoing monitoring and further analysis. And that's also on that list. I'll be glad to give you that list.

[The information referred to is contained in the appendix.]

Senator BOXER. And before you're ordered to do this by CPUC, if they do order you, will you commit to installing remote access or automatic shut-off valves on those high-risk pipelines?

Mr. JOHNS. I will work with the CPUC to put them in where everybody believes that they make sense to put in.

Senator BOXER. So, you won't decide it. They'll decide it?

Mr. JOHNS. No, we will work with them.

Senator BOXER. OK.

Mr. JOHNS. They've asked us to put together a list and an analysis of where and how to implement these, where they would make sense. We will complete that analysis and provide that to them by their deadline. And we will work with them—and, quite frankly, with the industry as a whole, because this is something that I think all companies need to be looking at, as to, "Where do these make sense?" so that we can run the safest pipelines possible.

Senator BOXER. Well, again, where it makes sense is where the people live. I mean, that's clear. And if we have 10,000 miles—12,000 miles of pipeline, and 3,600 are by people, that's where you've got to look first. So, that should guide you.

Has PG&E found any leaks on transmission lines since CPUC ordered an immediate inspection of all gas lines following the explosion? Have you discovered any leaks?

Mr. JOHNS. We completed the leak survey on the three pipelines in the peninsula. We found one leak, not on the pipeline, but at a valve. We immediately fixed it.

Senator BOXER. Good. And you're continuing that—

Mr. JOHNS. We are.

Senator BOXER.—and make those improvements as soon as you can, not waiting until anyone smells any gas; you're just going.

Mr. JOHNS. Senator, we have a very robust program, where we're constantly doing leak—

Senator BOXER. Good.

Mr. JOHNS.—surveys, we're walking our pipelines. And what I want to do is—make sure that you are aware is that—I assure you, if something is potentially endangering the public, we fix it immediately.

Senator BOXER. OK.

Mr. JOHNS. We do not put it on a list. We do not wait until later.

Senator BOXER. Good.

Mr. JOHNS. We fix it immediately.

Senator BOXER. OK. You know, we're going to see what happened with this, and we don't know the answer yet.

But, Mayor, I want to ask you something. Under the Pipeline Safety Improvement Act of 2002, each pipeline operator is required to develop and implement a continuing public education program to increase awareness for the public, and training for emergency response agencies. How often have you and your first responders worked with PG&E to ensure that our first responders are knowledgeable in the most up-to-date layout of your pipeline system, and ensure that you had accurate maps on hand and knew how to respond?

Mr. RUANE. Senator, I'm not aware of any workings along with PG&E. Now, I may be just not up on the information, but I'm not aware of any.

Senator BOXER. OK.

Well, I just want to thank the panel. I think that we got very clear answers here. I think we got some ideas on how to move forward. And I hope we will work closely together.

We did learn of the eighth victim. When you said it, Mr. Mayor, we had gotten a notification from the Governor that that was confirmed.

We have to take steps, as the Mayor said, to ensure this never happens again, and that San Bruno is made whole. I mean, that's key.

For me, it seems there are obvious things we have to do: immediate thorough inspections on these high-risk areas, and action to address any problem that is noted; shut-off valves in areas like this; better reporting so that we know the results of inspections; and greater oversight.

We need a good bill. I think the Feinstein-Boxer bill is good, but you may have ideas to make it better, and I would look forward to everyone's help on that; we may have left something out. Mr. Kessler, Mr. Johns, Mr. Clanton, and Mayor, I'd like you to look at

this bill, because we want to make it workable, and we want to make sure that people can look back to this time and say, "That was the time they said, "This won't happen again." Because Mr. Kessler is right, if we don't move these pipelines are not getting younger, you know. We know what causes these problems—corrosion, excavation, all these—we know. This isn't a mysterious thing. We need to take the information we have, and we need to make sure that we move forward and we fix the problem.

And all of you have been invaluable to me and, I know, to Senator Feinstein, Senator Lautenberg, Senator Thune, and Senator Johanns, all who are really interested. This is a problem that we face nationwide, and I want to see California be the leader here. We have to do that, because we suffered this loss and we need to take action.

So, I thank every single one of you for being here. I know this wasn't an easy time for any of us, but I think it was important to do this. As we try to make this right, there are a lot of people for whom their world can never be made right. So, we owe it to everybody to make sure nobody goes through what these families, these victims and their families, are going through.

Thank you very much.

[Whereupon, at 5:06 p.m., the hearing was adjourned.]

## A P P E N D I X

UNITED STATES SENATE  
*Washington, DC, September 13, 2010*

Hon. CYNTHIA L. QUARTERMAN,  
Administrator,  
Pipeline and Hazardous Materials Safety Administration,  
Washington, DC.

Dear Administrator Quarterman:

This weekend, we witnessed the devastating damage in San Bruno, California where a natural gas pipeline explosion claimed the lives of at least four people and injured 60 others. More than three dozen homes were destroyed.

Californians must feel confident that their communities are safe and that the regulatory agencies responsible for maintaining natural gas pipelines are doing everything possible to guarantee their safety. It is critical that the public's confidence is restored and that utilities are held accountable for the safety of their pipelines.

While this particular pipeline was an *intrastate* pipeline under the jurisdiction of the California Public Utilities Commission, we request that you immediately begin inspections of the 1,500 miles of *interstate* natural gas transmission pipelines in California that fall under Federal jurisdiction—with priority given to those near residential areas. We also ask that you provide us with the following information:

1. The total number of miles of all interstate natural gas transmission and distribution pipelines located within the State of California and a list of those pipelines located in residential areas.
2. A list of California cities and counties in which these pipelines are located.
3. The installation dates for these pipelines and the dates any upgrades or improvements were completed.
4. The schedule by which these pipelines are inspected. Please list the dates of the most recent inspections and any scheduled future inspections.

Given the seriousness of this matter, we request that this information be provided to us within the next few working days.

Sincerely,

BARBARA BOXER,  
*United States Senator.*  
DIANNE FEINSTEIN,  
*United States Senator.*

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PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION  
U.S. DEPARTMENT OF TRANSPORTATION  
*Washington, DC, September 27, 2010*

Hon. BARBARA BOXER,  
U.S. Senate,  
Washington, DC.

Dear Senator Boxer:

Thank you for your letter of September 13, co-signed by Senator Dianne Feinstein, regarding the tragic events in San Bruno and your safety concerns about the natural gas transmission pipelines in California. All Californians as well as all Americans should feel confident that their communities are safe and that the State and Federal pipeline safety regulators are doing what is necessary to protect our citizens.

As overseers of the Nation's 2.5 million miles of pipelines, the United States Department of Transportation (Department) holds the people's trust to ensure that

pipeline operators are in compliance with pipeline safety regulations. I am committed to ensuring both human and environmental safety. Like all Americans, I am concerned by the recent tragedy in San Bruno and have directed my staff to fully support the National Transportation Safety Board in its investigation and the California Public Utility Commission in its enforcement actions.

You asked that we immediately begin inspections of the 1,500 miles of federally regulated interstate natural gas transmission pipelines in California with priority to those near residential areas. Department engineers in the Pipeline and Hazardous Materials Safety Administration (PHMSA) inspect gas transmission, gas gathering and gas distribution (municipal) pipeline operators in the State of California. PHMSA regional personnel are currently in the process of developing their inspection plans for Fiscal Year 2011. These inspection plans take into consideration risks that each pipeline poses to the public and the environment as well as when an operator was last inspected. Higher risk pipelines are inspected more frequently than less risky pipelines. In general, the PHMSA Western Region schedule for inspecting pipelines is at least once every 2 to 3 years. So far for Fiscal Year 2011, two inspections that have already been tentatively planned in California are for Plains Exploration and Production Company and Rosetta Resources. Our current plan is to inspect all pipelines inspected in 2008 in 2011, as well as many pipelines inspected in 2009, as resources permit.

You asked for additional information about the number of pipeline miles in California, where the pipelines intersect residential areas, when the pipelines were installed and dates of recent inspections. I have enclosed the information you requested in your letter. An identical response has been sent to Senator Feinstein.

I hope this information is helpful to you. If I can provide further assistance, please do not hesitate to contact me or Julia P. Valentine, Associate Administrator for the Office of Governmental, International and Public Affairs, at 202-366-4831.

Regards,

CYNTHIA L. QUARTERMAN,  
*Administrator.*

Enclosure

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ENCLOSURE

**PHMSA Responses to September 13, 2010 Request  
From Senator Boxer and Senator Feinstein**

1. *The total number of miles of all interstate natural gas transmission and distribution pipelines located within the State of California and a list of those pipelines located in residential areas.*

1,209 miles<sup>1</sup> of active interstate natural gas transmission pipelines in the State of California have been reported to the National Pipeline Mapping System (NPMS).

102,659 miles of gas distribution main pipelines in the State of California were reported on calendar year 2009 Annual Reports.<sup>2</sup> Distribution mileage is generally residential in nature.

8,572,075 gas distribution service lines in the State of California were reported on calendar year 2009 Annual Reports.<sup>3</sup>

PHMSA does not maintain information on local land use and therefore we are unable to identify which of the gas transmission and distribution pipelines are specifically located in residential areas. However, based on computations of proximity of the mileage in the NPMS to densely populated areas from census information, we can say that there are about 3,636 miles of gas transmission miles within densely populated areas in California. Regardless, all of the active inspection units both within and outside of high consequence areas (HCAs) in California have been inspected since 2008 with the exception of two units scheduled for inspection this Fall.

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<sup>1</sup>With the inclusion of Idled and inactive pipes (not currently operating but not removed from the system), the interstate mileage in NPMS is about 1,500. The interstate mileage is only available through the National Pipeline Mapping System.

<sup>2</sup>Source: Distribution main miles from PHMSA Form F7100.1-1 Data as of 9/17/2010.

<sup>3</sup>Source: Number of Services from PHMSA Form F7100.1-1 Data as of 9/17/2010.

2. A list of California cities and counties in which these pipelines are located.

Interstate and Intrastate Gas Transmission Pipelines by California Urbanized Area

Urbanized Area	OPID	Operator Name	Mileage
Antioch,CA	2731	Chevron Pipe Line Co.	8.6
Antioch, CA	31477	CPN Pipeline Company	28.9
Antioch, CA	15007	Pacific Gas & Electric Co.	27.6
Antioch, CA	18608	Standard Pacific Gas Line Inc.	12.3
Antioch,CA	31296	Venoco, Inc.	6.4
Atascadero—El Paso de Robles (Paso Robles), CA	2731	Chevron Pipe Line Co.	2.7
Atascadero—El Paso de Robles (Paso Robles), CA	31684	ConocoPhillips	0.0
Atascadero—El Paso de Robles (Paso Robles), CA	15007	Pacific Gas & Electric Co.	0.5
Atascadero—El Paso de Robles (Paso Robles), CA	18484	Southern California Gas Co.	11.2
Bakersfield, CA	2731	Chevron Pipe Line Co.	5.7
Bakersfield, CA	32116	Dick Brown Technical Services	5.0
Bakersfield, CA	840	Mojave Pipeline Operating Company	1.2
Bakersfield, CA	15007	Pacific Gas & Electric Co.	24.3
Camarillo, CA	18484	Southern California Gas Co.	9.5
Chico, CA	15007	Pacific Gas & Electric Co.	4.4
Concord, CA	2731	Chevron Pipe Line Co.	4.2
Concord, CA	31477	CPN Pipeline Company	1.4
Concord, CA	15007	Pacific Gas & Electric Co.	35.3
Concord, CA	18608	Standard Pacific Gas Line Inc.	3.8
Davis, CA	15007	Pacific Gas & Electric Co.	9.9
El Centro, CA	18484	Southern California Gas Co.	7.3
Fairfield, CA	15007	Pacific Gas & Electric Co.	11.3
Fresno, CA	15007	Pacific Gas & Electric Co.	32.3
Gilroy—Morgan Hill, CA	15007	Pacific Gas & Electric Co.	10.1
Hemet, CA	18484	Southern California Gas Co.	17.4
Indio—Cathedral City—Palm Springs, CA	18484	Southern California Gas Co.	3.9
Lancaster—Palmdale, CA	18484	Southern California Gas Co.	30.1
Livermore, CA	15007	Pacific Gas & Electric Co.	15.3
Lodi, CA	31697	Lodi Gas Storage, LLC	0.3
Lodi, CA	15007	Pacific Gas & Electric Co.	8.2
Lompoc, CA	18484	Southern California Gas Co.	2.9
Los Angeles—Long Beach—Santa Ana, CA	117	Air Products & Chemicals Inc.	14.1
Los Angeles—Long Beach—Santa Ana, CA	31610	BP West Coast Products LLC	18.6
Los Angeles—Long Beach—Santa Ana, CA	2731	Chevron Pipe Line Co.	19.6
Los Angeles—Long Beach—Santa Ana, CA	32083	DCOR, LCC	1.3
Los Angeles—Long Beach—Santa Ana, CA	26134	ExxonMobil Oil Corp.—West Coast	47.8
Los Angeles—Long Beach—Santa Ana, CA	31068	Seal Beach Gas Processing Venture	1.1
Los Angeles—Long Beach—Santa Ana, CA	18484	Southern California Gas Co.	567.1
Los Angeles—Long Beach—Santa Ana, CA	32253	Tesoro Los Angeles Refinery	0.7
Los Angeles—Long Beach—Santa Ana, CA	19410	Thums Long Beach Co.	4.1
Madera, CA	15007	Pacific Gas & Electric Co.	13.3
Manteca, CA	15007	Pacific Gas & Electric Co.	3.8
Merced, CA	15007	Pacific Gas & Electric Co.	14.9
Mission Viejo, CA	18484	Southern California Gas Co.	33.0
Modesto, CA	15007	Pacific Gas & Electric Co.	61.0
Napa, CA	15007	Pacific Gas & Electric Co.	8.8
Oxnard, CA	26134	ExxonMobil Oil Corp.—West Coast	0.9
Oxnard, CA	18484	Southern California Gas Co.	51.0
Petaluma, CA	15007	Pacific Gas & Electric Co.	14.2
Porterville, CA	18484	Southern California Gas Co.	4.0
Redding, CA	32304	City of Redding	0.9
Redding, CA	15007	Pacific Gas & Electric Co.	27.7

## Interstate and Intrastate Gas Transmission Pipelines by California Urbanized Area—Continued

Urbanized Area	OPID	Operator Name	Mileage
Riverside—San Bernardino, CA	18484	Southern California Gas Co.	118.2
Sacramento, CA Sacramento, CA	15007 30749	Pacific Gas & Electric Co. Sacramento Municipal Utility District	140.7 10.1
Salinas, CA	15007	Pacific Gas & Electric Co.	30.0
San Diego, CA San Diego, CA	18112 18484	San Diego Gas & Electric Co. Southern California Gas Co.	193.9 29.6
San Francisco—Oakland, CA San Francisco—Oakland, CA San Francisco—Oakland, CA San Francisco—Oakland, CA	2731 32308 15007 18608	Chevron Pipe Line Co. Northern California Power Authority Pacific Gas & Electric Co. Standard Pacific Gas Line Inc.	12.0 0.7 199.2 8.3
San Jose, CA San Jose, CA	15007 32054	Pacific Gas & Electric Co. Silicon Valley Power	87.4 2.2
San Luis Obispo, CA	18484	Southern California Gas Co.	10.2
San Rafael—Novato, CA	15007	Pacific Gas & Electric Co.	31.8
Santa Barbara, CA Santa Barbara, CA	32083 18484	DCOR, LLC Southern California Gas Co.	0.1 75.5
Santa Clarita, CA Santa Clarita, CA	26134 18484	ExxonMobil Oil Corp.—West Coast Southern California Gas Co.	0.1 42.5
Santa Cruz, CA	15007	Pacific Gas & Electric Co.	22.5
Santa Maria, CA	18484	Southern California Gas Co.	22.4
Santa Rosa, CA	15007	Pacific Gas & Electric Co.	24.9
Seaside—Monterey—Marina, CA	15007	Pacific Gas & Electric Co.	16.1
Stockton, CA	15007	Pacific Gas & Electric Co.	27.9
Temecula—Murrieta, CA	18484	Southern California Gas Co.	33.4
Thousand Oaks, CA	18484	Southern California Gas Co.	40.1
Tracy, CA	15007	Pacific Gas & Electric Co.	4.3
Turlock, CA	15007	Pacific Gas & Electric Co.	9.3
Vacaville, CA	15007	Pacific Gas & Electric Co.	8.5
Vallejo, CA	15007	Pacific Gas & Electric Co.	16.1
Victorville—Hesperia—Apple Valley, CA Victorville—Hesperia—Apple Valley, CA Victorville—Hesperia—Apple Valley, CA	15007 18484 18536	Pacific Gas & Electric Co. Southern California Gas Co. Southwest Gas Corp.	0.4 1.5 8.7
Visalia, CA	18484	Southern California Gas Co.	3.8
Watsonville, CA	15007	Pacific Gas & Electric Co.	12.3
Yuba City, CA Yuba City, CA	31477 15007	CPN Pipeline Company Pacific Gas & Electric Co. <i>TOTAL:</i>	1.9 32.8 2,546.6

Please note: PHMSA was unable to identify a comprehensive, reliable source for California political city boundaries. These statistics use the U.S. Census' Urbanized Area boundaries. Urbanized areas are based on population density and correspond closely to city boundaries.

Source: National Pipeline Mapping System, 09/10.

## Interstate and Intrastate Gas Transmission Pipelines by California County

County	OPID	Operator Name	Mileage
Alameda Alameda	32308 15007	Northern California Power Authority Pacific Gas & Electric Co.	0.7 170.2
Amador	15007	Pacific Gas & Electric Co.	21.2
Butte Butte	15007 31287	Pacific Gas & Electric Co. Wild Goose Storage Inc.	117.4 13.3
Calaveras	15007	Pacific Gas & Electric Co.	17.7
Colusa Colusa	15007 31287	Pacific Gas & Electric Co. Wild Goose Storage Inc.	186.6 20.4
Contra Costa Contra Costa	2731 31477	Chevron Pipe Line Co. CPN Pipeline Company	45.1 56.7

## Interstate and Intrastate Gas Transmission Pipelines by California County—Continued

County	OPID	Operator Name	Mileage
Contra Costa	15007	Pacific Gas & Electric Co.	206.0
Contra Costa	18608	Standard Pacific Gas Line Inc.	40.8
Contra Costa	31296	Venoco, Inc.	27.5
El Dorado	15007	Pacific Gas & Electric Co.	4.4
Fresno	31394	California Gas Gathering Inc.	33.8
Fresno	2731	Chevron Pipe Line Co.	45.0
Fresno	15007	Pacific Gas & Electric Co.	485.2
Fresno	18484	Southern California Gas Co.	32.3
Glenn	15007	Pacific Gas & Electric Co.	150.4
Humboldt	15007	Pacific Gas & Electric Co.	97.3
Imperial	31891	North Baja Pipeline LLC	57.8
Imperial	18484	Southern California Gas Co.	143.2
Kern	2731	Chevron Pipe Line Co.	179.4
Kern	31477	CPN Pipeline Company	13.9
Kern	32116	Dick Brown Technical Services	12.0
Kern	26134	ExxonMobil Oil Corp.—West Coast	1.7
Kern	997	Midway Sunset Cogeneration Co.	3.8
Kern	840	Mojave Pipeline Operating Company	227.7
Kern	15007	Pacific Gas & Electric Co.	377.9
Kern	18201	Seneca Resources Corp.	3.8
Kern	18484	Southern California Gas Co.	466.0
Kings	2731	Chevron Pipe Line Co.	36.1
Kings	15007	Pacific Gas & Electric Co.	74.7
Kings	18484	Southern California Gas Co.	137.2
Lassen	30838	Tuscarora Gas Transmission Company	101.2
Los Angeles	117	Air Products & Chemicals Inc.	14.1
Los Angeles	31610	BP West Coast Products LLC	18.6
Los Angeles	2731	Chevron Pipe Line Co.	17.9
Los Angeles	26134	ExxonMobil Oil Corp.—West Coast	48.0
Los Angeles	18484	Southern California Gas Co.	675.9
Los Angeles	32253	Tesoro Los Angeles Refinery	0.7
Los Angeles	19410	Thums Long Beach Co.	4.1
Madera	15007	Pacific Gas & Electric Co.	118.2
Marin	15007	Pacific Gas & Electric Co.	40.5
Mendocino	15007	Pacific Gas & Electric Co.	49.9
Merced	15007	Pacific Gas & Electric Co.	160.0
Modoc	15007	Pacific Gas & Electric Co.	80.6
Modoc	30838	Tuscarora Gas Transmission Company	86.9
Monterey	2731	Chevron Pipe Line Co.	26.5
Monterey	26134	ExxonMobil Oil Corp.—West Coast	0.9
Monterey	15007	Pacific Gas & Electric Co.	208.0
Napa	15007	Pacific Gas & Electric Co.	49.8
Nevada	15007	Pacific Gas & Electric Co.	16.6
Orange	2731	Chevron Pipe Line Co.	1.7
Orange	32083	DCOR, LLC	1.8
Orange	26134	ExxonMobil Oil Corp.—West Coast	1.1
Orange	31068	Seal Beach Gas Processing Venture	1.1
Orange	18484	Southern California Gas Co.	181.7
Placer	15007	Pacific Gas & Electric Co.	72.9
Riverside	4280	El Paso Natural Gas Co.	43.2
Riverside	32093	Ex El Pipeline Services LLC	14.1
Riverside	31891	North Baja Pipeline LLC	24.0
Riverside	18484	Southern California Gas Co.	780.0
Sacramento	31477	CPN Pipeline Company	7.1
Sacramento	31697	Lodi Gas Storage, LLC	13.6
Sacramento	15007	Pacific Gas & Electric Co.	166.0
Sacramento	32203	Rosetta Resources	3.9
Sacramento	30749	Sacramento Municipal Utility District	39.7
Sacramento	18608	Standard Pacific Gas Line Inc.	13.5
San Benito	15007	Pacific Gas & Electric Co.	184.4
San Bernardino	4280	El Paso Natural Gas Co.	50.3
San Bernardino	844	Kern River Gas Transmission Co.	237.1
San Bernardino	840	Mojave Pipeline Operating Company	234.3

## Interstate and Intrastate Gas Transmission Pipelines by California County—Continued

County	OPID	Operator Name	Mileage
San Bernardino	15007	Pacific Gas & Electric Co.	528.6
San Bernardino	20044	Praxair, Inc.	2.2
San Bernardino	12874	Questar Pipeline Company	36.2
San Bernardino	18484	Southern California Gas Co.	730.8
San Bernardino	18536	Southwest Gas Corp.	20.6
San Bernardino	19610	Transwestern Pipeline Company LLC	0.9
San Diego	31477	CPN Pipeline Company	2.1
San Diego	18112	San Diego Gas & Electric Co.	256.1
San Diego	18484	Southern California Gas Co.	43.0
San Francisco	15007	Pacific Gas & Electric Co.	19.2
San Joaquin	31697	Lodi Gas Storage, LLC	23.6
San Joaquin	15007	Pacific Gas & Electric Co.	262.6
San Joaquin	31296	Venoco, Inc.	8.1
San Luis Obispo	2731	Chevron Pipe Line Co.	45.8
San Luis Obispo	31684	ConocoPhillips	9.6
San Luis Obispo	15007	Pacific Gas & Electric Co.	43.4
San Luis Obispo	18484	Southern California Gas Co.	131.2
San Mateo	15007	Pacific Gas & Electric Co.	104.2
Santa Barbara	32083	DCOR, LLC	0.1
Santa Barbara	4908	ExxonMobil Production Company	1.4
Santa Barbara	18667	Plains Exploration & Production Company (PXP)	7.4
Santa Barbara	18484	Southern California Gas Co.	203.7
Santa Clara	31477	CPN Pipeline Company	0.9
Santa Clara	15007	Pacific Gas & Electric Co.	178.1
Santa Clara	32054	Silicon Valley Power	2.2
Santa Cruz	15007	Pacific Gas & Electric Co.	55.0
Shasta	32304	City of Redding	2.8
Shasta	15007	Pacific Gas & Electric Co.	184.0
Siskiyou	15007	Pacific Gas & Electric Co.	41.3
Solano	31477	CPN Pipeline Company	29.6
Solano	31697	Lodi Gas Storage, LLC	6.7
Solano	15007	Pacific Gas & Electric Co.	284.8
Sonoma	15007	Pacific Gas & Electric Co.	126.0
Stanislaus	15007	Pacific Gas & Electric Co.	198.5
Sutter	31477	CPN Pipeline Company	23.0
Sutter	15007	Pacific Gas & Electric Co.	131.4
Tehama	15007	Pacific Gas & Electric Co.	181.9
Trinity	15007	Pacific Gas & Electric Co.	36.2
Tulare	18484	Southern California Gas Co.	151.4
Ventura	31067	Aera Energy LLC	1.2
Ventura	26134	ExxonMobil Oil Corp.—West Coast	0.9
Ventura	18484	Southern California Gas Co.	293.8
Ventura	32178	Vintage Production California LLC	1.6
Yolo	15007	Pacific Gas & Electric Co.	177.0
Yolo	30749	Sacramento Municipal Utility District	35.9
Yuba	15007	Pacific Gas & Electric Co.	62.8
		<b>TOTAL:</b>	<b>11,989.1</b>

Source: National Pipeline Mapping System, 09/10; mileage represents in-service miles.

3. *The installation dates for these pipelines and the dates any upgrades or improvements were completed.*

Operators are required to report the decade of installation for pipelines jurisdictional to PHMSA on a yearly basis. Below is a summary of the total miles reported in California on calendar year 2009 Annual Reports:

	Unknown	Pre-1940	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009	TOTAL
<i>Transmission</i>										
Onshore	72	553	998	3,363	2,151	823	1,051	2,044	874	11,930

	Unknown	Pre-1940	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009	TOTAL
Offshore	0	0	0	0	10	0	8	0	0	18
<i>Gathering</i>										
Onshore	14	0	0	40	59	20	81	10	3	228
Offshore	0	0	0	0	40	0	45	3	0	87
<i>System Total</i>	<i>86</i>	<i>553</i>	<i>999</i>	<i>3,403</i>	<i>2,260</i>	<i>843</i>	<i>1,185</i>	<i>2,057</i>	<i>877</i>	<i>12,263</i>

Source: 2009 Gas Transmission and Gathering Annual Reports PHMSA F7100.2-1.

Gas Distribution	Unknown	Pre-1940	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009	TOTAL
Miles of Main	147	4,929	6,356	15,828	14,949	16,425	17,480	12,705	13,840	102,659
Number of Services	2,490	178,763	344,058	1,173,203	1,174,889	1,521,456	1,770,891	1,193,827	1,212,498	8,572,075

Source: 2009 Gas Distribution Annual Reports PHMSA 7100.1-1.

4. *The schedule by which these pipelines are inspected. Please list the dates of the most recent inspections and any scheduled future inspections.*

PHMSA uses a risk-based inspection planning approach to prioritize which companies and which segments of pipeline should be inspected and what type of inspection is needed. The risk-based inspection planning process, which annually occurs in the fall for the subsequent year, considers company inspection and compliance history as well as performance indicators such as leaks, reported incidents and safety related condition reports. Additional safety factors are considered such as the proximity to populated or environmentally sensitive areas and the material properties of the pipeline itself. The process considers how long it has been since the last inspection to assure that every pipeline company is inspected on a regular basis. PHMSA also factors in any safety concerns we might have that are not otherwise accounted for. There are many types of inspections, from a standard inspection, which focuses on shorter segments of pipeline, to a comprehensive company-wide integrated inspection. We inspect for compliance with operator qualification requirements and drug prevention and alcohol misuse regulations. PHMSA may also perform special inspections targeted on specific safety concerns and investigates all public complaints. Because of the nature of our planning process, it is not possible to provide a list of all scheduled future inspections. We have provided below the information that we currently have available.

The most recent (or scheduled) inspection date for each federally inspected unit is shown below.<sup>4</sup> Plans at this time are to include the units inspected in 2008 in the 2011 inspection schedule as well as some of the units inspected in 2009.

Pipeline systems inspected by the California Public Utilities Commission are scheduled by their office and not included below.

Gas Transmission and Gathering Systems		Most Recent or Scheduled Inspection Date
OPID	Name	
117	Air Products & Chemicals Inc. <i>Unit 72616</i> <i>Unit 34285</i> <i>Unit 10785</i>	<i>2/4/2010</i> <i>2/2/2010</i> <i>1/21/2009</i>
840	Mojave Pipeline Operating Company <i>Unit 8325</i>	<i>4/27/2009</i>
844	Kern River Gas Transmission Co. <i>Unit 53735</i>	<i>2/9/2010</i>
997	Midway Sunset Cogeneration Co. <i>Unit 71425</i>	<i>2/19/2008</i>
999	Breitbart Energy Corp. <i>Unit 4335</i>	<i>6/18/2008</i>
2731	Chevron Pipe Line Co. <i>Unit 3495</i> <i>Unit 35105</i>	<i>9/18/2008</i> <i>9/17/2008</i>

<sup>4</sup>Source: PHMSA Safety Monitoring & Reporting Tool (SMART); Data as of 9/17/2010; Unit lists may include inactive/idled pipes that are not operating currently but not vacated and removed from the system so they are still considered inspection units by PHMSA.

Gas Transmission and Gathering Systems		Most Recent or Scheduled Inspection Date
OPID	Name	
	<i>Unit 65045</i>	3/12/2009
4280	El Paso Natural Gas Co. <i>Inspected with Unit 8325</i>	4/27/2009
4908	ExxonMobil Production Company <i>Unit 4525</i>	3/31/2010
12874	Questar Pipeline Company <i>Unit 25745</i>	4/4/2008
18667	Plains Exploration & Production Company (PXP) <i>Unit 4305</i> <i>Unit 8105</i> <i>Unit 16465</i> <i>Unit 30165</i>	8/31/2009 <i>Scheduled: 10/2010</i> 9/3/2009 9/1/2009
19410	Thums Long Beach Co. <i>Unit 4365</i>	6/18/2009
20044	Praxair, Inc. <i>Unit 4105</i>	7/24/2008
26085	Plains Marketing, L.P. <i>Unit 29355</i>	11/3/2008
26134	ExxonMobil Oil Corp—West Coast <i>Unit 3425 (idle line not in use but not abandoned, therefore still on record)</i>	8/29/2007
30749	Sacramento Municipal Utility District <i>Unit 12655</i>	8/3/2009
30838	Tuscarora Gas Transmission Company <i>Unit 13265</i>	5/9/2008
30965	Bulldog Gas & Power LLC <i>Unit 72395</i>	3/10/2008
31067	Aera Energy LLC <i>Unit 3415</i> <i>Unit 4565</i> <i>Unit 5205</i> <i>Unit 5305</i> <i>Unit 60935</i>	7/14/2009 9/13/2010 8/24/2010 8/25/2010 6/3/2008
31068	Seal Beach Gas Processing Venture <i>Unit 58735</i>	6/16/2008
31228	Occidental of Elk Hills, Inc. <i>Unit 28805</i>	7/7/2008
31295	Pacific Operators Offshore <i>Unit 14165</i>	9/12/2008
31296	Venoco, Inc. <i>Unit 3345</i> <i>Unit 8135</i> <i>Unit 8585</i>	3/12/2008 5/12/2008 5/15/2008
31394	California Gas Gathering Inc. <i>Unit 70875</i>	3/25/2008
31477	CPN Pipeline Company <i>Unit 3445</i> <i>Unit 4375</i> <i>Unit 48015</i> <i>Unit 71285</i>	4/19/2010 4/20/2010 4/22/2010 10/15/2008
31541	Greka Energy <i>Unit 30185</i>	5/12/2008
31610	BP West Coast Products L.L.C. <i>Unit 58335</i>	8/16/2010
31684	ConocoPhillips <i>Unit 67495</i>	8/19/2009
31806	Linn Western Operating, Inc. <i>Unit 4545</i>	7/7/2008
31891	North Baja Pipeline LLC <i>Unit 44375</i>	11/7/2008
31904	Edison Mission Operations and Maintenance <i>Unit 54935</i>	11/17/2008

Gas Transmission and Gathering Systems		Most Recent or Scheduled Inspection Date
OPID	Name	
31919	Inergy Propane, LLC <i>Unit 70895</i>	1/28/2008
31955	City of Vernon <i>Unit 56735</i>	8/16/2010
31986	Scholl Canyon Landfill Gas Limited <i>Unit 57335</i>	8/14/2008
32054	Silicon Valley Power <i>Unit 62755</i>	1/19/2010
32083	DCOR, LLC <i>Unit 4555</i> <i>Unit 4635</i> <i>Unit 4765</i> <i>Unit 10755</i> <i>Unit 10765</i>	7/13/2010 6/21/2010 6/7/2010 8/18/2008 10/21/2008
32093	Ex El Pipeline Services LLC <i>Unit 50425</i>	5/23/2008
32116	Dick Brown Technical Services <i>Unit 18745</i> <i>Unit 31765</i> <i>Unit 64635</i> <i>Unit 67065</i>	3/11/2009 5/26/2009 3/25/2009 5/27/2009
32178	Vintage Production California LLC <i>Unit 51295</i> <i>Unit 69595</i>	5/5/2009 8/23/2010
32203	Rosetta Resources <i>Unit 69835</i>	Scheduled: 12/2010
32304	City of Redding <i>Unit 73017</i>	3/15/2010
32253	Tesoro Los Angeles Refinery <i>Unit 10775</i>	3/24/2008
32308	Northern California Power Authority <i>Unit 72516</i>	5/20/2009

Municipal Distribution Systems		Most Recent or Scheduled Inspection Date
OPID	Name	
11712	Long Beach Gas Dept, City of <i>Unit 1205</i>	3/29/2010
15084	Palo Alto, City of <i>Unit 555</i>	3/16/2009
31097	Island Energy <i>Unit 15255</i>	12/14/2009
31599	City of Susanville <i>Unit 62155</i>	7/19/2010
32119	City of Victorville <i>Unit 67505</i>	4/14/2009

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARIA CANTWELL TO  
HON. CYNTHIA L. QUARTERMAN

*Question 1.* What steps will PHMSA be taking in the next 6 months to address the aging and corroding infrastructure of our oil and natural gas pipelines to prevent future spills and environmental damage? What steps will PHMSA take in the next year?

Answer. PHMSA plans to take a number of steps in the next six to twelve months to further improve pipeline safety, address aging infrastructure issues and prevent future spills and environmental damage.

1. PHMSA is in the process of finalizing the Administration's rulemaking that accelerate the compliance deadlines contained in the Control Room Management final rule published in December 2009 (RIN 2137-AE64). The Control Room Management Rule is broad reaching and addresses not only the hardware and process improvement aspects of control room operations, but it also focuses on the corrosive effects of human fatigue. The deadlines contained in the origi-

nal rule would require operators to fully implement these requirements by February 2013. On September 17, 2010, PHMSA published a Notice of Proposed Rulemaking (NPRM) that proposed to expedite the program implementation deadline to August 1, 2011, for most of the requirements, except for certain provisions regarding adequate information and alarm management, which would have a program implementation deadline of August 1, 2012. PHMSA proposed this rule so that the Control Room Management rule's safety benefits to the public, property, and the environment will be realized sooner. The comment period for this NPRM will close on November 16, 2010. PHMSA is also accelerating joint planning with our State pipeline safety partners so that we can begin compliance inspections as soon as the first deadlines elapse next fall.

2. PHMSA is in the process of finalizing rules impose regulatory protections governing lower pressure (aka, low stress) hazardous liquid pipelines operating in more rural areas; these pipelines have been regulated under PHMSA hazardous liquid regulations (49 CFR Part 195) near populated areas for many years.

3. PHMSA is preparing to expand the scope of its inspection and enforcement efforts through two major new initiatives that are intended to improve pipeline safety. PHMSA and its many State partners are preparing to begin inspections and enforcement for two major new regulatory initiatives: public awareness programs and distribution integrity management programs (DIMP). Starting later this year and extending into next year, PHMSA and its State partners will conduct public awareness inspections and carry out enforcement actions where non-compliance is identified. And beginning in fall 2011, PHMSA and its State partners will begin inspections of integrity management programs of natural gas distribution operators. PHMSA has worked with its State partners to develop a nationally consistent safety oversight program supported by joint training of State and Federal inspectors. This effort takes a substantial commitment of resources by both State and Federal regulators.

PHMSA issued a Final Rule creating the DIMP regulations on December 4, 2009. These regulations require operators of gas distribution pipelines to develop and implement integrity management programs. The purpose of DIMP is to enhance safety by identifying and reducing pipeline integrity risks. The requirements of DIMP are similar to those required for gas transmission pipelines, but tailored to reflect the differences in and among distribution pipelines. PHMSA believes that DIMP will provide substantial improvements to the safety of gas distribution pipelines. DIMP, for the first time, requires installation of excess flow valves in single family homes for all new connections and when major rehabilitation is done to existing connections.

4. PHMSA plans to issue new reporting requirements for all pipeline operators that will expand the amount of information required to be provided on reports filed annually. This expanded information includes new requirements for operators to include state-by-state information on their hazardous liquid pipelines and other specific information about an operator's system that can help improve safety. PHMSA makes all this data immediately available to its State pipeline safety partners, and expects increased data to improve pipeline safety.

5. PHMSA plans to issue an NPRM proposing to amend the regulations to give PHMSA the authority to pursue enforcement against third party excavators who damage energy pipeline infrastructure because they violated State and Federal requirements for safe digging practices. (PHMSA already has this authority with respect to operators and their contractors.) Under the proposed regulations, PHMSA would be able to take such enforcement action only where a State partner was shown to have an inadequate enforcement program with respect to violations of damage prevention laws. PHMSA believes that this proposed regulatory change will encourage States to strengthen their excavation damage prevention laws and to adequately enforce those laws.

6. In November, PHMSA plans to issue final consensus best practices on land use management near hazardous liquid and natural gas transmission pipelines. These best practices emanate from a multi-year effort led by PHMSA, and were developed in partnership with a wide range of stakeholders including the National League of Cities, the National Association of County Officials, home builders, community officials, and energy pipeline operators. PHMSA expects these best practices to reduce the likelihood and impacts of pipeline accidents.

7. PHMSA published an Advanced Notice of Proposed Rulemaking (ANPRM) (RIN 2137-AE66) on hazardous liquid pipelines on October 18, 2010, and will collect comments in response to it in the coming months. PHMSA is considering

whether changes are needed to the regulations covering hazardous liquid onshore pipelines. In particular, through the ANPRM, PHMSA is seeking comments on whether it should extend regulation to certain pipelines currently exempt from regulation; whether other areas along a pipeline should either be identified for extra protection or be included as additional high consequence areas (HCAs) for integrity management (IM) protection; whether to establish and/or adopt standards and procedures for minimum leak detection requirements for all pipelines; whether to require the installation of emergency flow restricting devices in certain areas; whether revised valve spacing requirements are needed on new construction or existing pipelines; whether repair timeframes should be specified for pipeline segments in areas outside the HCAs that are assessed as part of the IM; and whether to establish and/or adopt standards and procedures for improving the methods of preventing, detecting, assessing and remediating stress corrosion cracking in hazardous liquid pipeline systems. PHMSA will evaluate public comments in response to the ANPRM as it determines whether and how to improve the regulations covering hazardous liquid onshore pipelines.

In addition to taking the steps described above, PHMSA will continue in the coming year to implement its broad safety oversight program, including in the areas of integrity management, public awareness, operator qualification inspection, and enforcement. Additionally, we will analyze risk factors relative to the age of the Nation's pipelines and determine what action is needed to mitigate any identified issues.

*Question 2.* The importation of oil from the oil sands of Canada has been increasing and is becoming a more significant source of oil for the U.S. However, this product is far more corrosive than standard crude. The sulfur content can be over 200 times higher than light crude, which can be severely damaging to pipelines. What steps is PHMSA taking to assure the American public that this highly-corrosive product is safe to move through pipelines into and through the U.S.? Should there be additional regulations and inspections required for pipelines transporting this more-corrosive product?

*Answer.* The crude oil streams being transported in our crude oil pipelines from Canada are a mix of product from numerous domestic and Canadian oil production fields. The operator has a regulatory requirement to ensure that the crude oil is not corroding the pipe by monitoring the characteristics of the oil, evaluating the need for using corrosion inhibitors to minimize the deleterious effects of the oil, and periodically assessing the condition of the pipeline through the use of internal inspection devices to ensure that the corrosion control program is working.

PHMSA has not identified any specific pipeline safety concerns regarding transport of Canadian crude oil. In general, we are not aware of any study indicating sulfur levels in crude oil would specifically cause concern with pipelines. Sulfur derived compounds can add to concerns over stress related corrosion cracking (SCC); however, the concern for SRCC arises if there is a gaseous condition with the crude. As long as the oil remains in liquid form, the sulfur does not affect the pipeline. The Canadian crude oil does not have a tendency to create a gaseous condition and such issues to date have not been identified.

If PHMSA sees systemic corrosion problems stemming from the transport of Canadian crude oil that cannot be addressed by the current regulations, further consideration will be given to additional safety regulations. PHMSA would appreciate any research on this issue the Committee may have that indicates pipeline safety concerns.

*Question 3.* Recognizing the need to balance national security considerations, what changes is PHMSA going to make to allow state and local government officials access to response plans, in order to make sure that these plans are adequate to ensure the safety of the individuals living along those pipelines? If on-site-only reviews are the extent of the review that the government has, what additional training and follow-up is PHMSA planning to ensure that all inspectors have the proper skills and expertise to thoroughly review these plans?

*Answer.* PHMSA receives, reviews, and approves facility response plans (FRPs) for onshore oil pipelines, required by the Federal Water Pollution Control Act and the Oil Pollution Act. PHMSA also provides Federal and State agencies responsible for coordinating emergency response and spill clean-up with plans applicable to an emergency situation as requested. Earlier this year, PHMSA issued an Advisory Bulletin reminding operators of their responsibilities to review and update their oil spill response plans and to comply with other emergency response requirements to ensure the necessary response to a worst case discharge from their pipeline facility.

Since the focus of the hearing for the San Bruno incident was natural gas pipelines, the discussion below focuses on “Emergency Plans,” also required by PHMSA regulations.

PHMSA requires that natural gas and all hazardous liquid pipeline operators have written procedural manuals for operations, maintenance and emergency procedures. These manuals are the emergency plans that PHMSA engineers review during their periodic inspections of the operators. While PHMSA does not normally receive or keep copies of those plans, operators are required to establish and maintain procedures for responding to pipeline emergencies. The plans include the liaison with public officials concerning the location of their pipelines and other facilities, and the procedures, roles, and responsibilities that are assigned to those officials during emergencies. PHMSA has issued an Advisory Bulletin to remind operators of these requirements and that PHMSA and its State Partners will be stepping up our inspection and enforcement regarding emergency response and planning.

Additionally, pipeline operators are required to implement public awareness plans to inform people living and working near a pipeline how to recognize and react to an emergency situation.

To assist agencies that need to contact pipeline operators in their jurisdiction, State and local first response agencies can enter into an agreement to receive pipeline geospatial information from PHMSA’s National Pipeline Mapping System (NPMS). The NPMS public viewer shows major pipelines mapped on a county-by-county basis, as well as points of contact for each pipeline operator. PHMSA provides maps to other Federal agencies such as EPA and USCG.

There are specialists in each PHMSA region, the Community Assistance and Technical Services inspectors, who conduct outreach to State and local officials concerning the benefits and risks that pipelines pose to their community. These specialists can provide valuable assistance for local officials who must consider safety, emergency response and land use in their jurisdictions.

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RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. JOHN THUNE TO  
HON. CYNTHIA L. QUARTERMAN

*Question.* You have testified that “there are currently 113 inspection positions authorized, and there are currently 96 inspectors on-board. We have hired 4 people who should be in within the next 2 months, and there are 13 positions being advertised,” and that PHMSA will quickly act to hire new inspectors if Congress authorizes them. However, the 2006 PIPES Act authorizes 135 inspectors for Fiscal Year 2010, not 113. How do you account for this contradiction?

*Answer.* The 2006 PIPES Act, Section 18(e) requires the Secretary to “ensure that the number of positions for pipeline inspection and enforcement personnel” at PHMSA does not fall below 135 for Fiscal Year 2010. In Fiscal Year 2010, PHMSA allocated 138 positions for pipeline inspection and enforcement personnel. To further explain the comment made during testimony, the 138 positions include an allocation of 113 positions for inspection personnel, PHMSA’s field presence conducting daily examinations of pipeline operators’ facilities and records to verify compliance. The remaining 25 positions are allocated for enforcement personnel which include attorneys, technical specialists, and other individuals who work in tandem with PHMSA’s inspectors to process violations, civil penalties, and other enforcement actions. As of November 17, 2010, PHMSA has 119 of its 138 inspection and enforcement staff on board—100 inspectors and 19 enforcement staff. We are currently in the process of hiring 8 additional inspection and enforcement staff—6 inspectors and 2 enforcement personnel.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JOHN THUNE TO  
HON. CHRISTOPHER A. HART

*Question 1.* NTSB has been critical of PHMSA’s auditing procedures when evaluating an operator’s integrity management program. Does the NTSB believe PHMSA is doing a good job in overseeing its state partners?

*Answer.* The integrity management program concept is responsive to the fact that one size does not necessarily fit all, and each program can be more precisely tailored to the needs of each situation. However, individual tailoring places increased responsibility on the individual pipeline operators, who must develop their programs, and on PHMSA, who must approve and oversee the programs.

We have found in past pipeline accidents that individual operators did not adequately implement their integrity management programs and that PHMSA did not adequately oversee them. In these two recent pipeline accidents—San Bruno, CA,

and Marshall, MI—we will be looking at whether those issues need to be addressed again, and we will examine the level of oversight of the pipeline operators exercised by PHMSA and the California Public Utilities Commission.

*Question 2.* How extensively used are automatic or remote-controlled shut-off valves compared to valves that are manually controlled? Are there any technical or practical limitations on the installation of automatic or remote-controlled shut-off valves and what do they cost?

Answer. As part of a pipeline operator's integrity management program, the location and existence of remote control or automatic shut-off valve information should be available to PHMSA, and PHMSA should have accurate information on the use of these types of valves. The NTSB is on the record supporting automatic and remote controlled shut-off valves, especially in urban and environmentally sensitive areas.

The NTSB is not aware of any specific limitations in using automatic or remote controlled shutoff valves in pipelines in either urban or rural areas. Currently, operators are not required to install these valves as a prescriptive regulation. As seen in San Bruno, the use of an automatic or remote controlled valve could have made a difference in the response time and stopped the flow of gas sooner.

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STATE OF CALIFORNIA—PUBLIC UTILITIES COMMISSION  
San Francisco, CA, March 25, 2011

Hon. JOHN D. ROCKEFELLER IV, Chair

Hon. BARBARA BOXER, Member

U.S. Senate Committee on Commerce, Science, and Transportation,  
Washington, DC.

Re: September 28, 2010 Senate Committee on Commerce, Science, and Transportation hearing on Pipeline Safety: Assessing the San Bruno, California Explosion and Other Recent Accidents

Dear Senators Rockefeller and Boxer:

I am writing to respond to questions Senator Boxer asked of me during the above hearing on September 28, 2010. Please accept my sincere apology for only now responding to these questions.

On March 11, 2011, your staff forwarded the questions below, my responses to which immediately follow:

1. On pages 79 and 80 of the [hearing] transcript, Senator Boxer requested the Federal document filed by CPUC and mentioned by the New York Times where CPUC confesses to regulators that they rarely fine any gas pipeline operator for a violation. Do you have that document?

*We were unable to locate any specific document stating that the CPUC rarely issued fines to gas pipeline operators for violations. However, as documented on the Pipeline and Hazardous Materials Safety Administration (PHMSA) website, it is clear that the CPUC has not issued as many fines as some other states have. In the past, the CPUC has tried to work cooperatively with gas utilities to encourage them to voluntarily report violations of state and Federal rules. This practice was motivated by the assumption that fining the pipeline companies for self-reported violations would act as a disincentive to report future violations. As part of the CPUC's review of our own regulatory procedures following the San Bruno explosion, it is clear that this approach may not be the most effective approach in promoting pipeline safety. In fact, yesterday, the CPUC issued an order to show cause directing Pacific Gas and Electric Company (PG&E) to appear at a hearing to show why it should not be found in contempt for failing to comply with a CPUC pipeline records search order. A proposed stipulated resolution of that order would impose a \$6 million fine on PG&E.*

*The CPUC recently opened a rulemaking (Order Instituting Rulemaking on the Commission's Own Motion to Adopt New Safety and Reliability Regulations for Natural Gas Transmission and Distribution Pipelines and Related Rulemaking Mechanisms, R.1102-019) to revise its General Order 112-E, Rules Governing Design, Construction, Testing, Operation, and Maintenance of Gas Gathering, Transmission, and Distribution Piping Systems. As part of this rulemaking, the CPUC will explore establishing an expedited enforcement process for issuing penalties to gas pipeline operators for violations of all applicable laws, rules, and regulations.*

2. On page 81 of the transcript, Senator Boxer requested a written explanation from CPUC as to why their FY 2010 inspection record was below their average and the industry's. Mr. Clanon agreed to this request. Can you please provide this in writing?

*In recent years, California has experienced severe budget deficits that have adversely affected the CPUC's ability to conduct inspections and investigations. As a result, the CPUC has not been able to maintain the number of field days required by PHMSA in order to receive the maximum grant it is entitled to. In response to the San Bruno accident, the CPUC hired four new utilities engineers. This will allow our Gas Safety Program to increase the number of inspections and investigations it conducts annually. The CPUC will continue to make every effort to ensure that it meets the required number of field days suggested by PHMSA.*

3. On page 90, Senator Boxer asked the CPUC to submit their plan in writing for moving ahead with more automatic shut off valves.

*As mentioned above, the CPUC recently opened a rulemaking to address gas safety issues and to revise its General Order 112-E. As part of the Rulemaking, the CPUC will consider adopting modifications to General Order 112-E requiring gas utilities to develop criteria for installing either automatic or remotely-controlled valves on pipelines located in high consequence areas. The CPUC's Rulemaking will address a pipeline's location, accessibility, and an operator's emergency response capability in weighing the advantages of these valves. The CPUC will require that Pacific Gas and Electric (PG&E) establish a list of recommended locations where manual valves could be replaced with remotely-controlled or automatic valves on its natural gas transmission pipelines. PG&E provided the CPUC with a preliminary analysis which it plans to use as part of its pipeline 2020 Program.*

I want to assure you that we are fully committed to improving pipeline safety in California. Since the tragic San Bruno explosion, we have ordered pressure reductions on certain pipelines in high consequence areas, and directed PO&E to implement the National Transportation Safety Board's (NTSB) Safety Recommendations and conduct a complete and comprehensive records search of pipeline documents in order to determine valid Maximum Allowable Operating Pressure levels. In February, the CPUC opened the rulemaking mentioned above to establish new rules for the safe and reliable operation of natural gas pipelines in California.

We have upcoming public participation hearings in San Bruno, Santa Rosa, and Los Angeles in order to hear public testimony related to gas pipeline safety and the CPUC's regulation of natural gas transmission and distribution pipelines. We also continue to aggressively pursue answers as to why the pipeline in San Bruno ruptured. Yesterday, our Commissioners began consideration of a \$6 million fine against PG&E solely for not responding to our pipeline records search request, and we have entered a penalty phase in our case involving PG&E's recordkeeping. We expect that the NTSB's report on the pipeline rupture, as well as that of the Independent Review Panel the CPUC commissioned, will offer insight into other ways the CPUC and the utilities it regulates can improve pipeline safety. We welcome your interest and input into this very important process.

Please do not hesitate to contact me or my staff if you need us to clarify these responses or if you have any other questions or concerns.

Sincerely,

PAUL CLANON,  
*Executive Director.*

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BARBARA BOXER TO  
CHRISTOPHER JOHNS

*Question 1.* Senator Boxer requested further information on whether the *Contra Costa Times* article was correct as to PG&E leaving \$80 million dollars of pipeline safety money on the table.

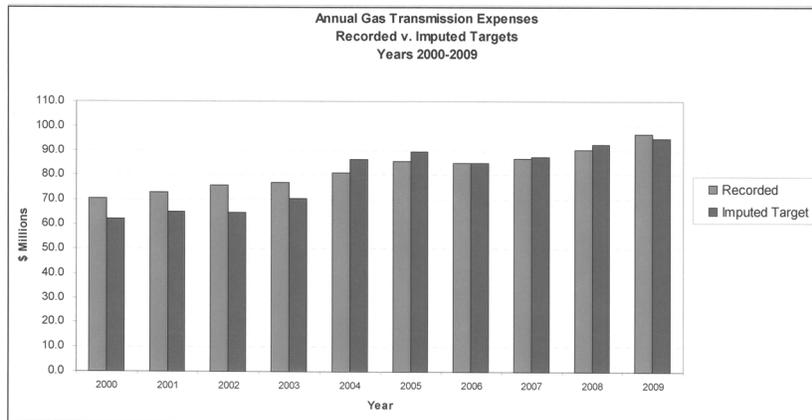
Answer. An article in the *Contra Costa Times* sparked public scrutiny into PG&E's spending on its Gas Pipeline Replacement Program (GPRP). PG&E initiated the GPRP in 1985 as a multi-year program to upgrade its gas distribution facilities. From the beginning of the program in 1985 through the end of 2009, PG&E replaced over 2,100 miles of pipeline system-wide, and spent approximately \$1.7 billion (including replacement of copper services). Although the GPRP included some gas transmission facilities in the early phases of the program, it is now entirely focused on gas distribution pipeline. The segment of pipe that ruptured in San Bruno on September 9 was classified by PG&E as a transmission pipeline.

The *Contra Costa Times* article focused in particular on PG&E's spending on the GPRP in comparison to the General Rate Case (GRC) targets. The article stated that "[b]etween 1993 and 1995 alone, the company collected \$80 million more than it spent for its gas pipeline replacement program." This discussion in the article is based on the California Public Utility Commission's (CPUC) 1996 GRC Final Deci-

sion.<sup>1</sup> As the article itself noted, the Commission’s decision explains that, “[n]otwithstanding PG&E’s underspending of budgeted funds in this program [GPRP] in every year since 1985, PG&E has kept the program on target.”<sup>2</sup> Furthermore, in the subsequent 1999 GRC decision, the CPUC expressly found that the GPRP “has been and remains on schedule.”<sup>3</sup>

The GPRP is only one part of PG&E’s broader pipeline safety and maintenance efforts and, as noted, no longer includes work on gas transmission pipelines. To provide a more complete picture of PG&E’s spending on transmission pipelines, the charts below show recorded expense and capital for the entire Gas Transmission line of business from 2000–2009.<sup>4</sup> For context, PG&E’s recorded spending data is compared to the imputed targets from the company’s rate case decisions for this 10 year period. This data shows that:

- In total, PG&E spent \$2.107 billion on gas transmission capital and expense work during 2000–2009. This reflects total spending of \$202 million more than the imputed target for that period.
- PG&E spent \$1.3 billion on gas transmission capital work during 2000–2009. This represents \$178 million more than the imputed target.
- During the same period, PG&E spent \$892 million on pipeline safety, replacement, and maintenance work (in the work categories for Integrity Management, Pipeline Reliability, Systems Maintenance, and Mark & Locate). This represents \$65 million more than the imputed target for 2000–2009 in those work categories.

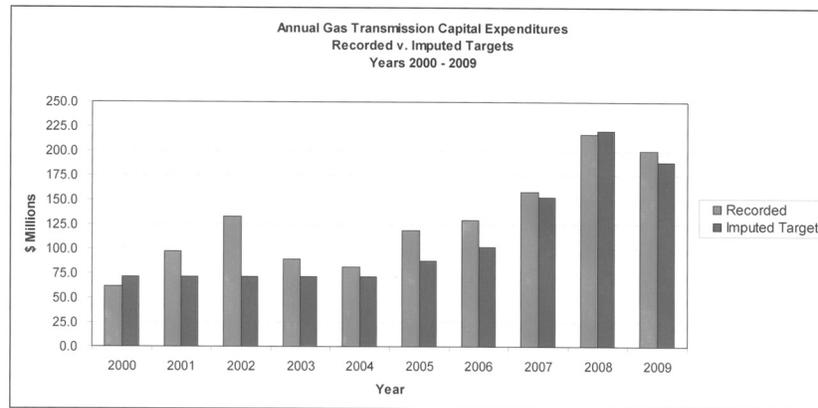


<sup>1</sup>Decision 95–12–055 (Dec. 20, 1995).

<sup>2</sup>*Id.* (mimeo) at 56.

<sup>3</sup>Decision 00–02–046 (Feb. 17, 2000), Finding of Fact No. 107.

<sup>4</sup>We are providing data starting in 2000 in part because PG&E’s recent spending on safety and maintenance is more directly relevant to its current practices. Furthermore, changes in PG&E’s method of accounting for and grouping categories of work prior to 2000 make comparisons with the pre–2000 period challenging.



*Question 2.* Senator Boxer requested a letter describing instances in which remote and automatic shut off valves have worked in PG&E's operation.

Answer. PG&E has hundreds of automatic over pressure protection control valves that protect pipelines from exceeding their maximum operating pressure. PG&E also has some lines with rupture control valves for specific needs and the 24 hour control center has the ability to shut down some pipeline systems via remote control.

Automatic valves are fully automated valves that will operate without human intervention when specific operating conditions on the pipeline arise. Remote-controlled valves can be remotely operated from a control center. It is possible to have automated, remote-controlled valves.

The process for turning off automated valves is different for each type of valve:

Remotely controlled valves: these are valves operated by remote control from our 24-hour manned Gas Control Center

Automatic valves: these are valves with control programs triggered to operate via a specified change in pipeline conditions and do not require remote control or personnel onsite

PG&E has identified an instance in which mainline valves on L-300 equipped with automatic shut-off capability were activated. Between milepoints 299 and 328, approximately 1 month after L-300 had been hit by an agricultural soil ripper, the line ruptured. The automatic shut-off valves that were activated operated successfully.

PG&E is committed to further deploying automated valve technology throughout our natural gas pipeline system. As part of our Pipeline 2020 Program, PG&E has committed to install more than a dozen automated or remote shut-off valves as part of a pilot program. To execute this pilot program effectively, it will be necessary to have a pipeline system that offers the greatest flexibility, or redundancy, to reroute supplies while those valves and their related infrastructure are installed on other sections. In addition, we continue to work on the systems necessary to support this automated technology, such as software systems, to ensure that these automated valves operate effectively and safely.

*Question 3.* Senator Boxer requested a list of when inspections and repairs are to be completed on the top 100 high-risk pipelines in PG&E's network.

Answer. Attached, please find PG&E's March 9, 2011 submission to the California Public Utilities Commission regarding our Updated Long Range Gas Transmission Pipeline Planning Input Top 100 Segments 2007-2009. The document identifies pipeline segments that the company has prioritized for engineering analysis, monitoring or, in some instances, future repair or replacement. The document also provides a status update regarding where these segments are in terms of monitoring, inspections, replacements and repair of the segments.

## ATTACHMENT

PACIFIC GAS AND ELECTRIC COMPANY  
*San Francisco, CA, March 9, 2011*

PAUL CLANON, Executive Director  
 California Public Utilities Commission  
 San Francisco, CA 94102-3298

Re: *Updated* Long Range Gas Transmission Pipeline Planning Input  
 Top 100 Segments—2007–2009

Dear Mr. Clanon:

On February 11, 2011, PG&E provided a combined list of the segments included on PG&E's 2007, 2008 and/or 2009 Top 100 lists for long-range evaluation and planning, along with updated notes on their status as of February 10, 2011.

Attached to this letter is an update to the combined list provided on February 11, 2011. The changes, which mostly reflect location information, are summarized in the table below.

Page	Map No.	Deletion	Addition/Revision
5	Map 2(a)		City: Livermore
7	Map 4(e-f)		City: Fremont
9	Map 5(o-q)		City: Manteca
11	Map 8(a-e)		City: Stanford
11	Map 8(f)	Mile point: 20.43 City: Palo Alto	Mile point: 19.72 City: Woodside
12	Map 12(a)	County: Contra Costa	
14	Map 15	County: Contra Costa	
17	Map 19(b)		City: Roseville
18	Map 23	Description: near	Description: in
20	Map 27(a-c)		City: Clovis
21	Map 27(d-j)		City: Clovis
25	Map 36(d-e)	City: Jersey Island	City: Bethel Island
28	Map 43	Description: through the rural area	
30	Map 53	Description: in	Description: near
30	Map 56		City: West Sacramento
30	Map 57(a)		City: Marysville
31	Map 57(b)		City: Olivehurst
33	Map 63	Description: 100	Description: 101
33	Map 66		City: Morgan Hill Description: Morgan Hill and San Martin

Please contact me should you have any questions.  
 Sincerely,

BRIAN K. CHERRY,  
*Vice President,*  
 Regulatory Relations.

cc: Michael R. Peevey, President  
 Timothy A. Simon, Commissioner  
 Mike Florio, Commissioner  
 Catherine Sandoval, Commissioner  
 Julie Fitch, Energy Division  
 Richard Clark, Consumer Protection Safety Division  
 Julie Halligan, Consumer Protection Safety Division  
 Frank Lindh, General Counsel  
 Harvey Y. Morris, Legal Division  
 Patrick S. Berdge, Legal Division  
 Joe Como, Division of Ratepayer Advocates

March 9, 2011

## LONG RANGE GAS TRANSMISSION PIPELINE PLANNING INPUT

Top 100 Segments—2007, 2008 and Updated 2009

PG&E's top priority is to ensure the safety of our natural gas system. PG&E employs a comprehensive inspection and monitoring program to help achieve this goal. PG&E monitors system status in real time on a 24-hour basis, and regularly conducts leak surveys, patrols and maintenance of all of its natural gas pipelines. *Any issues identified as a threat to public safety are immediately addressed.*

PG&E also uses the data it collects daily on its gas transmission pipeline system to help plan and prioritize future work as part of its long-term risk management planning. As described below, PG&E's "Top 100" lists have been a component of this risk management program. As part of our efforts to enhance operations, PG&E has begun developing our Pipeline 2020 program, which is focused on modernizing our pipeline infrastructure, spurring development of next-generation pipeline inspection technologies, enhancing public safety awareness and emergency response planning, and developing industry-leading best practices, including state-of-the-art risk assessment techniques. Going forward, PG&E will use these new risk management techniques to guide its future work.

PG&E's risk management tools include a program that evaluates data on each of the approximately 20,000 pipeline segments within PG&E's natural gas transmission pipeline system based on the following criteria:

- the potential for third party damage like dig-ins from construction,
- the potential for corrosion,
- the potential for ground movement, and
- the physical design and characteristics of the pipe segment.

PG&E also considers the proximity of a pipeline segment to high-density populations and environmentally-sensitive areas, as well as potential reliability impacts.

Based on all of these factors, PG&E determines which segments warrant further evaluation, monitoring or other future action. Historically, these segments have been included each year on a Top 100 list to help guide the development of future plans. As conditions changed from year to year, PG&E reevaluated which segments were included on the list.

The Top 100 lists were used as engineering planning tools. Their primary function has been to highlight segments for further engineering investigation, monitoring or other long-term follow-up, but they do not determine which segments are designated for immediate repair or replacement.

PG&E has taken a range of appropriate actions depending on circumstances specific to each segment referenced on a Top 100 list. For example, if a segment was listed due to a high level of construction activity in the area, PG&E might have enhanced the surface markings of the pipeline and conducted additional outreach to help avoid accidental dig-ins. In other circumstances, where, for example, a segment was on the list due to its physical design and characteristics, PG&E may have increased its monitoring, patrolling or proposed to replace the segment.

The list below includes the segments on PG&E's 2007, 2008 and/or 2009 lists for long-range evaluation and planning, along with updated notes on their status as of February 10, 2011. As shown in the status summary below, 86 percent of pipeline segments that were listed only in 2007 or 2008 have been completed. For segments on the 2009 list, 56 percent have been completed and the rest are in various phases of action.

For ease of reference, PG&E has retained the same map numbers used in the 2009 list submitted in September 2010. This list also is available on PG&E's website at <http://www.pge.com/planninginput/>, along with maps to assist customers with specific questions about the location of PG&E's natural gas transmission lines.

**Factor Key**

A pipeline segment is identified for further study and long-range planning based upon its risk for one or more of five unique factors:

- **Potential for Third-Party Damage:** Third-party damage is the number one risk to PG&E's pipeline system. Indications that a pipe segment may be at risk for third-party damage include third-party construction activity in the immediate area of the pipeline's location, whether or not the line segment has a history of third-party damage, the depth of cover over the pipeline, the pipe diameter, the degree of surface marking available for the location of the pipe segment,

and local awareness of the potential for third-party damage in the immediate area of the pipeline's location. Some of the actions PG&E would take to reduce this risk factor include additional marking of the pipeline location (when possible), additional education in the immediate area for the 811 system to call before digging, and monitoring of construction activity and/or permits in the area around the pipeline.

- *Potential for Corrosion:* Factors include items such as the external coating design, the resistivity of the soil, and other ground-based factors which could reduce the thickness of the pipe wall. Some of the actions PG&E would take to reduce this risk include regular and ongoing monitoring (PG&E monitors both electronically and by physically checking its cathodic protection system every 2 months at over 6,000 locations in its natural gas transmission system), increasing or replacing the external protective coating of the pipe, or replacement of the pipe itself.
- *Potential for Ground Movement:* Factors include the proximity to seismically active areas, and the potential for soil erosion or landslides around the pipeline. Some of the actions PG&E would take to reduce this risk include increased monitoring, changing the soil material in which the pipe segment is buried, changing the alignment of the pipe segment, or burying the pipe segment at a greater depth beneath the ground level (for erosion prevention).
- *Physical Design and Characteristics:* Factors include items such as the age of pipe, the type of welding performed on the pipe, the fittings used in the pipeline, and the materials used to manufacture the pipe. Some of the actions PG&E would take to reduce this risk factor include replacement of the pipe or fittings in order to upgrade or improve the design or characteristics of the line segment or reducing pipeline pressure.
- *Overall:* A pipeline segment with an "Overall" factor is included on the list based upon its ranking in more than one of the factors outlined above but not based upon any single factor.

#### *Rank*

PG&E's Top 100 list for a particular year was composed of the segments that ranked highest in each of the above five categories. It is important to note the "rank" that PG&E previously included in its 2009 Top 100 list and has also included in this combined 2007–2009 list is a relative ranking of these segments. PG&E has provided this "rank" as a means of comparing the total risk management score of a segment on a particular Top 100 list against the other segments on that list.

#### *Status Key*

- *Monitoring:* PG&E is monitoring and reviewing these pipeline segments to see if they need to be addressed through a specific project.
- *Initiated:* PG&E has determined that the pipeline segment merits further study and analysis.
- *Engineering:* PG&E is defining the scope of the project and readying it for construction.
- *Construction:* PG&E has a project that is under construction.
- *Completed:* PG&E has determined that no further action is warranted on this segment due to the completion of an investigation that results in improved/updated pipeline information or the completion of an evaluation or construction project.

Regardless of status, every segment identified below remains within PG&E's comprehensive inspection and monitoring program discussed above. Any issues identified as a threat to public safety are immediately addressed.

#### *Status Summary*

The following table provides a brief summary of the current status of the pipeline segments on PG&E's 2007, 2008 and 2009 Top 100 lists. Note that there are 78 pipeline segments on the 2007 and/or 2008 lists that do not also appear on the 2009 list. Also, note that the total number of individual segments on an annual list varies because some segments qualify for the list in more than one risk factor category (*e.g.*, both for Potential for Ground Movement and Potential for Corrosion), reducing the total number of unique segments to less than 100. Conversely, in some years segments rank the same in a risk factor category, with these "ties" increasing the total number of segments to more than 100. For this reason, the 2007 list contains 85 segments and the 2008 list contains 110 segments. In total, there are 178 unique pipeline segments on the 2007–2009 Top 100 lists.

Status as of February 2011	Segments Only on 2007 and/or 2008 Lists		Current 2009 Segments	
	Count	%	Count	%
Completed	67	86%	56	56%
Construction or Engineering	8	10%	27	27%
Initiated or Monitoring	3	4%	17	17%
TOTALS	78	100%	100	100%

PG&E's goal is to be the best in class nationally on gas safety as we work to earn back the trust and confidence of our customers. Our current programs and the improvements that will come through our Pipeline 2020 program are key elements to achieving that goal.



Map No.	Pipeline	Segment	Location: County (City)	Year On List	Description as of February 2011	Factor	Status as of February 2011	Rank
1(a)	L103	Segment 117.1, Mile Points 11.00–11.42	San Benito	2007 2008 2009	Segment 117.1 is located in an unpopulated area on steep terrain which is particularly susceptible to ground motion. It will be replaced as part of a project to relocate 6 miles of pipe between Hwy 156 and Crazy Horse Rd. near San Juan Bautista due to exposure to the San Andreas fault line and through hillsides which are susceptible to landslides and soil erosion problems.	Potential for Ground Movement	Engineering	2007: 71 2008: 94 2009: 71
1(b)	L103	Segment 117.3, Mile Points 11.42–11.42	San Benito	2007 2008	The ground movement risk for segment 117.3 was reduced based on PG&E's system-wide assessment of U.S. Geological Survey data on the severity of erosion, including in the area in which this segment lies, causing this segment not to appear on the 2009 list.	Potential for Ground Movement	Completed	2007: 77 2008: 94
1(c)	L103	Segment 117.5, Mile Points 11.42–11.65	San Benito	2007 2008 2009	<i>(Notwithstanding its removal from the list, this segment of pipe is part of the project to relocate 6 miles of pipe between Hwy 156 and Crazy Horse Rd. near San Juan Bautista discussed at Map No. 1(a). Status: Engineering.)</i> See description for Map No. 1(a).	Potential for Ground Movement	Engineering	2007: 72 2008: 92 2009: 72
2(a)	L107	Segment 127.1, Mile Points 14.00–14.82	Alameda (Livermore)	2008 2009	This section of Line 107 is located across the open hills from south Livermore to Arroyo del Valle. Based upon a recently completed engineering analysis, PG&E plans to convert this section from transmission pipeline to distribution feeder main.	Physical Design & Characteristics	Engineering	2008: 90 2009: 74
2(b)	L107	Segment 127.5, Mile Points 14.82–15.12	Alameda	2008 2009	See description for Map No. 2(a).	Physical Design & Characteristics	Engineering	2008: 107 2009: 89/90
2(c)	L107	Segment 127.57, Mile Points 15.13–15.36	Alameda	2009	See description for Map No. 2(a).	Physical Design & Characteristics	Engineering	2008: 104 2009: 91
2(d)	L107	Segment 127.6, Mile Points 15.36–15.36	Alameda	2008 2009	See description for Map No. 2(a).	Physical Design & Characteristics	Engineering	2008: 100 2009: 79/80
2(e)	L107	Segment 127.7, Mile Points 15.36–15.70	Alameda	2008 2009	See description for Map No. 2(a).	Physical Design & Characteristics	Engineering	2008: 101 2009: 79/80
3(a)	L107	Segment 129, Mile Points 15.89–16.40	Alameda (Livermore)	2008 2009	This section of Line 107 is located across the open hills south of Livermore from Arroyo del Valle to the Vallecitos Valley. Based upon a recently completed engineering analysis, PG&E plans to convert this section from transmission pipeline to distribution feeder main.	Physical Design & Characteristics	Engineering	2008: 101 2009: 79/80

3(b)	L107	Segment 131.5, Mile Points 17.11– 18.00	Alameda	2009	See description for Map No. 3(a).	Potential for Ground Movement	Engineering	2009: 82
3(c)	L107	Segment 132.2, Mile Points 18.00– 18.67	Alameda	2007 2009	See description for Map No. 3(a).	Potential for Ground Movement	Engineering	2007: 69 2009: 73
4(a)	L107	Segment 139, Mile Points 21.07– 22.29	Alameda	2007 2008 2009	This section of L107 is located across the open hills through the Vallecitos Valley to Calaveras Rd in Sunol. Based upon a recently completed engineering analysis, PG&E plans to convert this section from transmission pipeline to distribution feeder main. In addition, the external corrosion risk for segment 139 was reduced based on inspection of its coating condition, causing this segment not to appear on the 2009 list for potential corrosion (though the segment remained on the list for ground movement). The external corrosion risk for segment 140 was reduced based on inspection of its coating condition, causing this segment not to appear on the 2009 list.	Potential for Ground Movement Potential for Corrosion (2007 and 2008)	Engineering	2007: 78 2008: 93 2009: 77
4(b)	L107	Segment 140, Mile Point 22.29	Alameda	2008	The external corrosion risk for segment 140 was reduced based on inspection of its coating condition, causing this segment not to appear on the 2009 list.	Potential for Corrosion	Completed	2008: 109
4(c)	L107	Segment 141, Mile Points 22.29– 22.301	Alameda	2008	See description for Map No. 4(b).	Potential for Corrosion	Completed	2008: 108
4(d)	L107	Segment 141.8, Mile Points 22.34– 22.79	Alameda	2008	See description for Map No. 4(b).	Potential for Corrosion	Completed	2008: 103
4(e)	L107	Segment 150, Mile Points 25.73– 26.01	Alameda (Fremont)	2007 2008	The ground movement risk for this segment was reduced based on PG&E's system-wide reassessment of U.S. Geological Survey data on the severity of erosion, including in the area in which this segment lies, causing this segment not to appear on the 2009 list.	Potential for Ground Movement	Completed	2007: 81 2008: 99
4(f)	L107	Segment 151, Mile Points 26.01– 26.509	Alameda (Fremont)	2007 2008	See description for Map No. 4(e). ( <i>Notwithstanding its removal from the list, PG&amp;E plans to re-place this segment in 2011 or 2012 in order to accommodate the work described on L131 below. See Map No. 14. Status: Engineering.</i> )	Potential for Ground Movement	Completed	2007: 61 2008: 77
5(a)	L108	Segment 111, Mile Points 6.25 –6.82	San Joaquin	2007	This segment consists of 2,897 feet of pipe near Airport Way and S Kasson Rd in Manteca. The external corrosion risk for this segment was reduced based on investigation of pipe strength and wall thickness, causing this segment not to appear on the 2008 and 2009 lists.	Potential for Corrosion	Completed	2007: 45
5(b)	L108	Segment 122.1, Mile Points 11.74– 12.14	San Joaquin	2008	PG&E replaced this segment as part of a project that replaced 2.5 miles of pipe from Woodward Rd to West Ripon Rd (MP 11.74 to 14.15) due to the design materials used. Construction was completed in 2010.	Physical Design & Characteristics	Completed	2008: 81

Map No.	Pipeline	Segment	Location: County (City)	Year On List	Description as of February 2011	Factor	Status as of February 2011	Rank
5(c)	L108	Segment 122.3, Mile Points 12.14-12.16	San Joaquin	2008	See description for Map No. 5(b).	Physical Design & Characteristics	Completed	2008: 82
5(d)	L108	Segment 123, Mile Points 12.16-12.47	San Joaquin	2007 2008	See description for Map No. 5(b).	Physical Design & Characteristics	Completed	2007: 64 2008: 78
5(e)	L108	Segment 123.7, Mile Points 12.47-12.51	San Joaquin	2008	See description for Map No. 5(b).	Physical Design & Characteristics	Completed	2008: 67
5(f)	L108	Segment 123.8, Mile Points 12.51-12.59	San Joaquin	2008	See description for Map No. 5(b).	Physical Design & Characteristics	Completed	2008: 53
5(g)	L108	Segment 124, Mile Points 12.59-12.69	San Joaquin	2008	See description for Map No. 5(b).	Physical Design & Characteristics	Completed	2008: 54
5(h)	L108	Segment 124.3, Mile Points 12.69-12.70	San Joaquin	2008	See description for Map No. 5(b).	Physical Design & Characteristics	Completed	2008: 46
5(i)	L108	Segment 124.6, Mile Points 12.70-12.72	San Joaquin	2008 2009	See description for Map No. 5(b).	Physical Design & Characteristics	Completed	2008: 38 2009: 43/44
5(j)	L108	Segment 125, Mile Points 12.72-12.76	San Joaquin	2008 2009	See description for Map No. 5(b).	Physical Design & Characteristics	Completed	2008: 49 2009: 43/44
5(k)	L108	Segment 125.05, Mile Points 12.76-12.79	San Joaquin	2008	See description for Map No. 5(b).	Physical Design & Characteristics	Completed	2008: 68
5(l)	L108	Segment 125.1, Mile Points 12.79-13.19	San Joaquin	2008	See description for Map No. 5(b).	Physical Design & Characteristics	Completed	2008: 83
5(m)	L108	Segment 125.3, Mile Points 13.19-13.21	San Joaquin	2008	See description for Map No. 5(b).	Physical Design & Characteristics	Completed	2008: 84
5(n)	L108	Segment 126, Mile Points 13.21-13.71	San Joaquin	2008	See description for Map No. 5(b).	Physical Design & Characteristics	Completed	2008: 85
5(o)	L108	Segment 126.3, Mile Points 13.71-13.73	San Joaquin (Manteca)	2008	See description for Map No. 5(b).	Physical Design & Characteristics	Completed	2008: 86
5(p)	L108	Segment 127, Mile Points 13.73-14.13	San Joaquin (Manteca)	2007 2008	See description for Map No. 5(b).	Physical Design & Characteristics	Completed	2007: 65 2008: 87

5(g)	L108	Segment 127.3, Mile Points 14.13— 14.15	San Joaquin (Manteca)	2008	See description for Map No. 5(b).	Physical Design & Characteristics	Completed	2008: 106
6(a)	L108	Segment 140.9, Mile Points 37.04— 37.14	San Joaquin	2008	PG&E plans to replace this segment as part of a project to enable an in-line inspection assessment to be performed. PG&E plans to commence construction in 2011.	Potential for Third Party Damage	Engineering	2008: 50
6(b)	L108	Segment 144, Mile Points 38.00— 38.17	San Joaquin	2007	The external corrosion risk for segment 144 was reduced based on inspection of its coating condition, causing this segment not to appear on the 2008 and 2009 lists.	Potential for Corrosion	Completed	2007: 50
6(c)	L108	Segment 145, Mile Points 38.17— 39.00	San Joaquin	2007 2008	The external corrosion risk for segment 145 was reduced based on inspection of its coating condition, causing this segment not to appear on the 2009 list.	Potential for Corrosion	Completed	2007: 51 2008: 47
6(d)	L108	Segment 146.35, Mile Points 39.18— 39.21	San Joaquin	2007 2008 2009	Replace 8,000 feet of pipe through the rural area near Armstrong Rd near Lodi due to the design materials used.	Physical Design & Characteristics Overall (2009)	Initiated	2007: 30 2008: 29 2009: 23/4
6(e)	L108	Segment 146.6, Mile Points 39.21— 39.23	San Joaquin	2007 2008 2009	See description for Map No. 6(d).	Physical Design & Characteristics Overall (2009)	Initiated	2007: 31 2008: 30 2009: 23/4
6(f)	L108	Segment 147, Mile Points 39.23— 39.47	San Joaquin	2007 2008 2009	See description for Map No. 6(d).	Physical Design & Characteristics Overall (2009)	Initiated	2007: 32 2008: 31 2009: 23/4
6(g)	L108	Segment 147.05, Mile Points 39.47— 39.60 (33)	San Joaquin	2008	The external corrosion risk for segment 147.05 was reduced based on inspection of its coating condition, causing this segment not to appear on the 2009 list.	Potential for Corrosion	Completed	2008: 33
6(h)	L108	Segment 159, Mile Points 44.9— 45.93	San Joaquin	2007	Replace 12,900 feet of pipe near W Peltier Rd, east of Lodi due to the design materials used.	Physical Design & Characteristics	Initiated	2007: 76
7(a)	L108	Segment 179.5, Mile Points 62.57— 63.29	Sacramento (Elk Grove)	2008 2009	Replace 8,000 feet of pipe from Laguna Blvd to Dwight Road in Elk Grove due to the design materials used. Construction is currently planned to commence in 2011.	Physical Design & Characteristics	Engineering	2008: 34 2009: 15
7(b)	L108	Segment 179.7, Mile Points 63.29— 63.50	Sacramento (Elk Grove)	2007	See description for Map No. 7(a).	Physical Design & Characteristics	Engineering	2007: 60
8(a)	L109	Segment 137, Mile Points 15.00— 15.38	Santa Clara (Palo Alto/ Stanford)	2007 2009	PG&E has adjusted the cathodic protection system to better protect these pipeline segments from corrosion. More recent analysis has shown marked improvement. No further action relative to the potential for external corrosion is contemplated at this time.	Potential for Corrosion	Completed	2007: 57 2009: 56
8(b)	L109	Segment 137.19, Mile Points 15.38— 15.65	Santa Clara (Palo Alto/ Stanford)	2009	See description for Map No. 8(a).	Potential for Corrosion	Completed	2007: 59 2009: 60/61/ 62
8(c)	L109	Segment 137.2, Mile Points 16.80— 16.93	Santa Clara (Palo Alto/ Stanford)	2007	See description for Map No. 8(a).	Potential for Corrosion	Completed	2007: 56

Map No.	Pipeline	Segment	Location: County (City)	Year On List	Description as of February 2011	Factor	Status as of February 2011	Rank
8(d)	L109	Segment 137.32, Mile Points 15.65–16.01	Santa Clara (Palo Alto/Stanford)	2007 2009	See description for Map No. 8(a).	Potential for Corrosion	Completed	2009: 60/61/62
8(e)	L109	Segment 137.8.1 Mile Points 16.19–16.33	Santa Clara (Palo Alto/Stanford)	2007 2009	See description for Map No. 8(a).	Potential for Corrosion	Completed	2007: 58 2009: 60/61/62
8(f)	L109	Segment 148, Mile Points 19.71–19.72	San Mateo (Woodside)	2008	See description for Map No. 8(a).	Potential for Corrosion	Completed	2008: 79
9(a)	L114	Segment 106, Mile Points 3.18–3.80	Solano/Sacramento	2009	PG&E has conducted an engineering review of the potential for ground movement along this segment, crossing the Sacramento River and adjacent levees from Sherman Island north. This project includes L114-2, segment 101, discussed at Map No. 24(b). Based on this review, PG&E is planning to replace this crossing in 2013.	Potential for Ground Movement	Engineering	2009: 84/85
9(b)	L114	Segment 120, Mile Points 7.32–7.69	Sacramento/Contra Costa	2009	PG&E has evaluated the potential of rerouting gas to allow the removal of 7,500 feet of three pipeline segments (L-114, segment 120; L114-1, segment 103, discussed at Map No. 24(a); and SP4Z, segment 112, discussed at Map No. 24(c)) crossing the San Joaquin River, underwater, near the Antioch Bridge due to the potential for ground movement. Based upon this evaluation, PG&E plans to remove these pipeline segments from service in 2011.	Potential for Ground Movement	Engineering	2009: 88/87
10	L114	Segment 153.2, Mile Points 28.00–28.87	Alameda	2009	Evaluate the potential replacement of 7,000 feet of pipe between Vasco Rd and Dalton Crossover, located on steep slopes from the North Livermore Valley to Vasco Rd due to the potential for ground movement.	Potential for Ground Movement	Initiated	2009: 69
11	L130	Segment 101, Mile Points 0.00–0.50	Solano/Sacramento	2009	PG&E has completed an engineering analysis of 4,000 feet of pipe crossing the Sacramento River near the Rio Vista Bridge due to the potential for ground movement. This section of pipeline is located underwater. In conjunction with the Army Corp. of Engineer's dredging project planned for 2013, PG&E, plans to replace this crossing in 2013.	Potential for Ground Movement	Engineering	2009: 34
12(a)	L131	Segment 134.2, Mile Points 27.02–27.05	Alameda	2007	PG&E has evaluated the replacement of this section of L131, which is located over the steep hills north of Livermore, and plans to replace this segment. In addition, as part of PG&E's transmission integrity management program, an in-line inspection assessment is planned for 2011.	Physical Design & Characteristics	Initiated	2007: 79

12(b)	L131	Segment 151, Mile Points 37.89– 38.49	Alameda (Pleasanton)	2009	PG&E has evaluated the replacement of 4,990 feet of pipeline between Ruby Hills to Foleys Crossover in Pleasanton and Sunol due to the potential for ground movement, and plans to replace this segment. This pipeline is located on the steep slopes over the Pigeon Pass near Hwy. 84 south of Livermore. In addition, as part of PG&E's transmission integrity management program, an in-line inspection is planned for 2011.	Potential for Ground Movement	Initiated	2009: 70
13	L131	Segment 157.2, Mile Points 42.16– 42.35	Alameda (Sunol)	2007 2008 2009	Replace 1,350 feet of pipe at Calaveras Rd, Sunol due to the potential for ground movement. This segment of L131 is located on a steep hillside in the Sunol Valley immediately northeast of the Calaveras Fault and Road, just southeast of I-680. Construction was completed in October 2010.	Potential for Ground Movement	Completed	2007: 53 2008: 60 2009: 59
14(a)	L131	Segment 164, Mile Points 46.34– 46.84	Alameda (Fremont)	2007 2008	The ground movement risk for segment 164 was reduced based on PG&E's system-wide reassessment of U.S. Geological Survey data on the severity of erosion, including in the area in which this segment lies, causing this segment not to appear on the 2009 list.	Potential for Ground Movement	Completed	2007: 84 2008: 105
14(b)	L131	Segment 165, Mile Points 46.96– 48.23	Alameda (Fremont)	2007 2008 2009	<i>(Notwithstanding its removal from the list, this segment is part of the project to remove 22,363 feet of pipe between the Vargas Rd and Irvington Station from transmission service discussed at Map No. 14(b), Status: Engineering)</i> PG&E plans to remove 22,363 feet of pipe between the Vargas Rd and Irvington Station from transmission service, either by converting the pipe to a distribution main or into an outer, unpressurized casing in which a new pipeline would be inserted. This section of L131 is located over the steep slopes from the Vargas Rd to Mission Blvd and through a 10–15 foot easement through central Fremont to I-880. Construction to permanently remove this from transmission service currently is planned for 2012.	Potential for Ground Movement	Engineering	2007: 42 2008: 45 2009: 31
14(c)	L131	Segment 167.9, Mile Points 48.94– 49.36	Alameda (Fremont)	2007 2008 2009	In addition, as part of PG&E's transmission integrity management program, an in-line inspection assessment is planned for 2011.	Potential for Ground Movement Overall	Engineering	2007: 33 2008: 21 2009: 12
14(d)	L131	Segment 169, Mile Points 49.38– 50.46	Alameda (Fremont)	2007 2008 2009	See description for Map No. 14(b).	Potential for Ground Movement	Engineering	2007: 37 2008: 44 2009: 22
15	L131	Segment 115, Mile Points 7.39–7.75	Sacramento	2009	PG&E plans to complete an engineering review of 2,066 feet of pipe located in the rural area near Sherman Island Levee Rd and the Antioch Bridge on Sherman Island in 2011. Based on this review, PG&E will determine whether any repair, replacement or other action is warranted.	Potential for Ground Movement	Initiated	2009: 75

Map No.	Pipeline	Segment	Location: County (City)	Year On List	Description as of February 2011	Factor	Status as of February 2011	Rank
16(a)	L132	Segment 106, Mile Points 1.27-1.34	Santa Clara (San Jose)	2007	The ground movement risk for segment 106 was reduced based on PG&E's system-wide reassessment of U.S. Geological Survey data, including on the ground movement risk associated with this segment, causing this segment not to appear on the 2008 and 2009 lists. <i>(Notwithstanding its removal from the list, PG&amp;E currently plans to replace this segment as part of a project to replace pipe due to the potential for ground movement. PG&amp;E plans to commence construction in 2012. Status: Engineering.)</i>	Potential for Ground Movement Overall	Completed	2007: 24
16(b)	L132	Segment 106.7, Mile Points 1.35-1.87	Santa Clara (San Jose)	2007 2009	PG&E plans to replace this segment as part of a project to replace pipe due to the potential for ground movement. PG&E plans to commence construction in 2012.	Potential for Ground Movement Overall	Engineering	2007: 34 2009: 26
16(c)	L132	Segment 112.7, Mile Points 3.05-3.067	Santa Clara (Santa Clara)	2007 2008	This segment is part of a project to replace pipe and install other facilities in order to internally inspect L132 through the urban areas between Milpitas and Crystal Springs reservoir. PG&E plans to commence construction in 2012 and to complete the in-line inspection assessments in 2013. See description for Map No. 16(c).	Overall	Engineering	2007: 19 2008: 11
16(d)	L132	Segment 113, Mile Points 3.067-3.3	Santa Clara (Santa Clara)	2007 2008	The replacement of this segment in South San Francisco had been planned for 2009. However, analysis by PG&E's pipeline engineers in early 2008 showed that the segment did not need replacement at that time. This updated analysis was subsequently confirmed by a March 2009 direct assessment of this segment. PG&E currently plans to replace this segment in 2012.	Overall	Engineering	2007: 16 2008: 6
16(e)	L132	Segment 189, Mile Points 42.13-43.55	San Mateo (South San Francisco)	2007	PG&E has completed an engineering review of 6,061 feet of pipe between Elkhorn Ave and Hwy 99 near Caruthers and Fresno for susceptibility to external corrosion. Based on cathodic protection survey results, the cathodic protection was determined to be satisfactory. Due to the presence of an outer pipe casing, which is required for railroad crossings but also increases the potential for corrosion, PG&E will continue to monitor these segments to determine whether future action is warranted.	Overall	Engineering	2007: 21
17(a)	L138	Segment 116, Mile Points 22.70-23.40	Fresno (Riverdale)	2007 2008 2009	PG&E reassessed this segment from 2007 to 2008 due to the relocation of a nearby highway to a greater distance from segment 129, lowering the risk associated for this segment. This segment does not appear on the 2008 and 2009 lists. PG&E plans to replace this segment due to the design materials used. Construction is planned to commence in 2012.	Potential for Corrosion	Monitoring	2007: 36 2008: 23 2009: 49
17(b)	L138	Segment 129, Mile Points 38.08-38.42	Fresno (Easton)	2007		Potential for Corrosion	Completed	2007: 46
17(c)	L138	Segment 130, <sup>2</sup> Mile Points 38.42-38.58	Fresno	2007 2008 2009		Physical Design & Characteristics	Initiated	2007: 28 2008: 35 2009: 16

17(d)	L138	Segment 130.11, <sup>3</sup> Mile Points 38.59– 38.59	Fresno	2007 2008 2009	See description for Map No. 17(c).	Physical Design & Characteristics	Initiated	2007: 28 2008: 41 2009: 20 2009: 18
17(e)	L138	Segment 145, Mile Points 48.29– 48.64	Fresno (Fresno)	2009	The third-party damage risk assessment for this segment increased in 2009 due to previous damage on a pipeline near this location. A subsequent engineering investigation concluded that this segment is not exposed to any elevated third party damage risk, that surface marking of the segment is adequate and therefore that no further action is warranted.	Potential for Third Party Damage	Completed	2009: 46
18	L147	Segment 110.6, Mile Points 3.26–3.28	San Mateo (San Carlos)	2009	PG&E has completed an engineering review of the design materials of 105 feet of pipe near Brittan Ave and El Camino Real in San Carlos. Based upon the results of this review, PG&E has determined that no repair, replacement or other action is warranted.	Physical Design & Characteristics	Completed	2009: 46
19(a)	L173	Segment 102.1, Mile Points 1.01–1.11	Placer (Roseville)	2007 2008 2009	An engineering review of this pipeline segment near Hwy 65 and Washington Blvd in Roseville has been conducted to assess risk for potential third-party damage. One third-party dig-in occurred nearby. Most of the area has been fully developed and the Blue Oaks overpass has been completed. The risk of third-party damage has been reduced and no further action is warranted.	Potential for Third Party Damage	Completed	2007: 41 2008: 39 2009: 38
19(b)	L173	Segment 102.6, Mile Points 1.45–1.50	Placer (Rocklin/ Roseville)	2008 2009	See description for Map No. 19(a).	Potential for Third Party Damage	Completed	2008: 42 2009: 29
20(a)	L187	Segment 154.2, Mile Points 58.47– 58.48	Monterey	2007	This segment is located in a rural area near Hwy 101, south of Salinas. It was assessed as having a potential for third-party damage. However, this assessment was revised in 2008 after PG&E conducted an additional public information program in the area and concluded that the risk of future third party damage was no longer as high, causing the segment not to appear on the 2008 or 2009 lists.	Potential for Third Party Damage	Completed	2007: 54
20(b)	L187	Segment 160, Mile Points 61.75– 62.00	Monterey	2009	PG&E has completed an engineering review of 1,320 feet of pipe through the rural area near Hwy 101 across from Hartnell Rd near Salinas for the potential for damage by third parties. Based on this review, PG&E has performed notifications and installed additional line markers. No further action is warranted.	Potential for Third Party Damage	Completed	2009: 39
21(a)	L215	Segment 104, Mile Points 3.00–3.43	Stanislaus	2008 2009	PG&E conducted an engineering review of 3,310 feet of pipe between Hwy 33 in Patterson and Hwy 99 in Turlock based on corrosion monitoring data from segments 122.3 and 123. Three areas around the pipe were dug up to permit physical examinations of the pipe. Based on this review, no further action is warranted at this time.	Potential for Corrosion	Completed	2008: 75 2009: 65
21(b)	L215	Segment 122.3, Mile Points 19.46– 19.48	Stanislaus (Turlock)	2008 2009	See description for Map No. 21(a).	Potential for Corrosion	Completed	2008: 69 2009: 63/64

Map No.	Pipeline	Segment	Location: County (City)	Year On List	Description as of February 2011	Factor	Status as of February 2011	Rank
21(c)	L215	Segment 123, Mile Points 19.56-19.74	Stanislaus (Turlock)	2008	See description for Map No. 21(a).	Potential for Corrosion	Completed	2008: 66 2009: 63/64
22(a)	0401-01	Segment 104, Mile Points 2.40-2.48	Marin (San Rafael)	2009	PG&E has completed an engineering review of 1,887 feet of pipe through the suburban area along Lindero St near Albert Park Ln in San Rafael. Based upon the results of this review, PG&E has determined that no repair, replacement or other action is warranted. See description for Map No. 22(a).	Overall	Completed	2007: 8 2009: 99
22(b)	0401-01	Segment 104.8, Mile Points 2.48-2.76	Marin (San Rafael)	2009	PG&E replaced 247 feet of pipe near Foster Rd and Saint Francis Cir in Napa in 2009.	Overall	Completed	2008: 4 2009: 14
23	0407-01	Segment 104.8, Mile Points 1.83-1.88	Napa (Napa)	2009	PG&E has evaluated the potential of rerouting gas to allow the removal of 7,500 feet of three pipeline segments (L114-1, segment 103; L-114, segment 120, discussed at Map No. 9(b); and SP4Z, segment 112, discussed at Map No. 24(c)) crossing the San Joaquin River, underwater, near the Antioch Bridge due to the potential for ground movement. Based upon this evaluation, PG&E plans to remove these pipeline segments from service in 2011.	Physical Design & Characteristics Potential for Ground Movement	Completed	2009: 45
24(a)	L114-1	Segment 103, Mile Points 7.33-7.73	Solano/Sacramento	2009	PG&E plans to remove these pipeline segments from service in 2011.	Potential for Ground Movement	Engineering	2009: 87/88
24(b)	L114-2	Segment 101, Mile Points 3.18-3.80	Solano/Sacramento	2009	PG&E has completed an engineering review of the potential for ground movement along this segment, crossing the Sacramento River and adjacent levees from Sherman Island north. This project includes L114, segment 106, discussed at Map No. 9(a). Based on this review, PG&E plans to replace this crossing in 2013. See description for Map No. 24(a).	Potential for Ground Movement	Engineering	2009: 84/85
24(c)	SP4Z	Segment 112, Mile Points 7.45-7.82	Solano/Sacramento	2009	See description for Map No. 24(a).	Potential for Ground Movement	Engineering	2009: 83
25(a)	L118A	Segment 166.1, Mile Points 30.38-30.38	Madera	2008	The third-party damage risk for segment 166.1 was revised in 2009 after PG&E conducted an additional public information program in the area, causing the segment not to appear on the 2009 list. In addition, PG&E has confirmed that surface marking of the location is in place. Therefore, the risk of third-party damage has been reduced and no further action is warranted at this time.	Potential for Third Party Damage	Completed	2008: 96

25(b)	L118A	Segment 166.13, Mile Points 30.38– 30.40	Madera	2007 2008 2009	An engineering review of this pipe segment near Avenue 18 ½ near Madera has been conducted to assess risk for potential third party damage. One third party dig-in occurred nearby. However, farming operations over the pipeline have since changed, and the pipeline now lies beneath a farm road. In addition, PG&E has confirmed that surface marking of the location is in place, and conducted an additional public information program in the area. Therefore, the risk of third-party damage has been reduced and no further action is warranted at this time. See description for Map No. 25(b).	Potential for Third Party Damage	Completed	2007: 75 2008: 97 2009: 76
25(c)	L118A	Segment 166.17, Mile Points 30.40– 31.06	Madera	2007 2008 2009	PG&E has completed an engineering review of the design materials of 1,437 feet of pipe near Lompasas Ave and Grove Ave in Sacramento. Based upon the results of this review, PG&E has determined that no repair, replacement or other action is warranted.	Potential for Third Party Damage	Completed	2007: 55 2008: 63 2009: 55
26	L119B	Segment 101, Mile Points 0.00–0.01	Sacramento (Sacramento)	2009	A subsequent engineering investigation concluded that this segment is not exposed to any elevated third-party damage risk, and therefore that no further action is warranted.	Physical Design & Characteristics	Completed	2009: 54
27(a)	1202-16	Segment 100, Mile Points 0.00–0.08	Fresno (Fresno/Clovis)	2008 2009	The third-party risk on this line is elevated due in part to a third-party dig-in in the local area, which elevates the risk of nearby segments under PG&E's integrity management program.	Potential for Third Party Damage	Completed	2008: 22 2009: 19
27(b)	1202-16	Segment 101, Mile Points 0.08–0.19	Fresno (Fresno/Clovis)	2007 2008 2009	A subsequent engineering investigation concluded that this segment is not exposed to any elevated third-party damage risk, and therefore that no further action is warranted.	Potential for Third Party Damage	Completed	2007: 38 2008: 24 2009: 23/24/ 25
27(c)	1202-16	Segment 101.1, Mile Points 0.19–0.27	Fresno (Fresno/Clovis)	2008 2009	See description for Map No. 27(a).	Potential for Third Party Damage	Completed	2008: 25 2009: 23/24/ 25
27(d)	1202-16	Segment 101.2, Mile Points 0.27–0.49	Fresno (Fresno/Clovis)	2009	All segments (10,331 feet) of pipe along N Clovis Ave between E Shields Ave and E Ashlan Ave in Fresno and Clovis have been evaluated. Seven excavations were performed to examine the pipe for potential corrosion. Four of the sites examined showed no corrosion, and the remaining three showed a minimal amount of corrosion. Additional investigation in 2010 indicated that while this segment is not exposed to any elevated external corrosion risk, minor adjustments to the cathodic protection levels may be appropriate. PG&E will continue to monitor cathodic protection levels in 2011 and make adjustments when necessary. See description for Map No. 27(a).	Potential for Corrosion	Monitoring	2009: 27
27(e)	1202-16	Segment 102, Mile Points 0.49–1.03	Fresno (Fresno/Clovis)	2008 2009	See description for Map No. 27(a).	Potential for Third Party Damage	Completed	2008: 26 2009: 23/24/ 25

Map No.	Pipeline	Segment	Location: County (City)	Year On List	Description as of February 2011	Factor	Status as of February 2011	Rank
27(f)	1202-16	Segment 103, Mile Points 1.03-1.05	Fresno (Fresno/Clovis)	2007 2008 2009	See description for Map No. 27(d).	Potential for Corrosion Overall	Monitoring	2007: 28 2008: 17 2009: 13
27(g)	1202-16	Segment 103.1, Mile Points 1.05-1.11	Fresno (Fresno/Clovis)	2007 2009	See description for Map No. 27(d).	Potential for Corrosion	Monitoring	2007: 44 2009: 35
27(h)	1202-16	Segment 103.3, Mile Points 1.11-1.20	Fresno (Fresno/Clovis)	2007 2009	See description for Map No. 27(d).	Potential for Corrosion	Monitoring	2007: 39 2009: 33
27(i)	1202-16	Segment 115, Mile Points 1.67-2.42	Fresno (Fresno/Clovis)	2007 2008 2009	See description for Map No. 27(d).	Potential for Corrosion Overall	Monitoring	2007: 23 2008: 15 2009: 21
27(j)	1202-16	Segment 117, Mile Points 2.58-2.59	Fresno (Fresno/Clovis)	2007 2008 2009	See description for Map No. 27(d).	Overall	Monitoring	2007: 20 2008: 14 2009: 97
28	L142S	Segment 114, Mile Points 7.30-8.70	Kern (Bakersfield)	2009	PG&E conducted an in-line inspection of 7,425 feet of pipe along S Union Ave between Watts Dr and 3rd St in Bakersfield due to the potential for external corrosion, and made all necessary repairs. As part of its monitoring effort, PG&E will conduct another in-line inspection of this line in September 2011.	Potential for Corrosion	Monitoring	2009: 28
29	1509-04	Segment 106, Mile Points 0.78-0.88	Sutter (Yuba City)	2009	PG&E has conducted an engineering review of 531 feet of pipe through the suburban area near N Walton Ave and Bridge St in Yuba City for the potential for damage by third parties. Two third-party dig-ins occurred nearby. However, development around the pipeline has since been completed; the pipeline is now under a roadway and a landscape easement. Therefore, the risk of third-party damage has been reduced.	Potential for Third Party Damage	Completed	2009: 47
30(a)	1509-05	Segment 120.1, Mile Points 6.23-6.28	Sutter (Yuba City)	2007 2008 2009	PG&E has conducted an engineering review of 1,371 feet of pipe through the suburban area near N Walton Ave and Bridge St in Yuba City for the potential for damage by third parties. Two third-party dig-ins occurred nearby. However, development around the pipeline has since been completed; the pipeline is now under a roadway and a landscape easement. Therefore, the risk of third-party damage has been reduced.	Potential for Third Party Damage	Completed	2007: 49 2008: 61 2009: 36/37
30(b)	1509-05	Segment 120.2, Mile Points 6.28-6.29	Sutter (Yuba City)	2007 2008 2009	See description for Map No. 30(a).	Potential for Third Party Damage	Completed	2007: 52 2008: 65 2009: 48
30(c)	1509-05	Segment 120.3, Mile Points 6.29-6.33	Sutter (Yuba City)	2007 2008 2009	See description for Map No. 30(a).	Potential for Third Party Damage	Completed	2007: 40 2008: 62 2009: 36/37
30(d)	1509-05	Segment 121, Mile Points 6.33-6.49	Sutter (Yuba City)	2007 2009	See description for Map No. 30(a).	Potential for Third Party Damage	Completed	2007: 43 2009: 40

31	1815-45	Segment 130.3, Mile Points 2.04-2.13	Monterey	2007 2008 2009	PG&E plans to complete an engineering review of 437 feet of pipe through the suburban area near Hwy 68 and Agujito Rd near Monterey by June 2011. Based on this review, PG&E will determine whether any repair, replacement or action is warranted. In addition, as part of PG&E's transmission integrity management program, an external corrosion direct assessment is planned for 2011. In 2010 PG&E isolated this segment (i.e., capped the pipe at both ends to prevent gas supply from reaching this segment) to mitigate the risk of damage by third-parties. No further action is warranted. See description for Map 32(a).	Overall	Initiated	2007: 5 2008: 9 2009: 5
32(a)	L195A 3-1	Segment 100, Mile Points 0.00-0.00	Sacramento (Isleton)	2009	In 2010 PG&E isolated this segment (i.e., capped the pipe at both ends to prevent gas supply from reaching this segment) to mitigate the risk of damage by third-parties. No further action is warranted. See description for Map 32(a).	Potential for Third Party Damage	Completed	2009: 57/58
32(b)	L195A 3-1	Segment 102, Mile Points 0.00-0.04	Sacramento (Isleton)	2009	See description for Map 32(a).	Potential for Third Party Damage	Completed	2009: 57/58
32(c)	L195A 3-1	Segment 102.1, Mile Points 0.04-0.17	Sacramento (Isleton)	2009	See description for Map 32(a).	Potential for Third Party Damage	Completed	2009: 42
33(a)	L210A	Segment 116, Mile Points 14.15-16.00	Solano (Fairfield)	2008	The third-party damage risk assessment for this segment increased in 2008 due to previous damage on a pipeline near this location. A subsequent engineering investigation concluded that this segment is not exposed to any elevated third party damage risk, that surface marking of the segment is adequate and therefore that no further action is warranted. (Notwithstanding its removal from the list, PG&E plans to perform an internal line inspection on this segment in 2011. See Map No. 33b. Status: Initiated.)	Potential for Third Party Damage	Completed	2008: 37
33(b)	L210A	Segment 117.5, Mile Points 18.73-18.86	Solano (Fairfield)	2008 2009	Construction has been completed to install equipment and modify the pipeline to allow an in-line inspection to be conducted. An in-line inspection assessment is scheduled for 2011.	Overall Potential for Ground Movement	Completed (Construction Initiated (In-Line Insp.) Completed	2008: 20 2009: 1
33(c)	L210A	Segment 117.6, Mile Points 18.86-18.96	Solano (Fairfield)	2007 2008	See description for Map No. 33(a).	Potential for Third Party Damage Overall	Completed	2007: 47 2008: 51
33(d)	L210A	Segment 118.1, Mile Points 18.97-19.47	Solano (Fairfield)	2007 2008 2009	See description for Map No. 33(b).	Overall	Completed (Construction Initiated (In-Line Insp.) Completed	2007: 4 2008: 1 2009: 10
34(a)	L300A	Segment 240.3, Mile Points 277.85-278.01	Kern (Bakersfield)	2008 2009	PG&E has conducted an engineering review of this pipeline segment located in the suburban area between Buena Vista Rd and Pacheco Rd in Bakersfield for the potential for damage by third parties. This segment was relocated due to the widening of the road and no further action is warranted.	Potential for Third Party Damage	Completed	2008: 36 2009: 30

Map No.	Pipeline	Segment	Location: County (City)	Year On List	Description as of February 2011	Factor	Status as of February 2011	Rank
34(b)	L300A	Segment 240.61, Mile Points 278.01-278.10	Kern (Bakersfield)	2009	See description for Map No. 34(a).	Potential for Third Party Damage	Completed	2009: 32
35(a)	L300B	Segment 193, Mile Points 161.02-161.07	San Bernardino	2009	PG&E has completed an engineering review of the design materials of 843 feet of pipe through the rural area. Based on this review, PG&E determined that no repair, replacement or other action was warranted.	Physical Design & Characteristics	Completed	2009: 67/68
35(b)	L300B	Segment 194, Mile Points 161.43-161.48	San Bernardino	2009	In addition, as part of PG&E's transmission integrity management program, an external corrosion direct assessment is planned for 2011.	Physical Design & Characteristics	Completed	2009: 67/68
36(a)	L316A	Segment 111, Mile Points 0.61-0.78	Contra Costa	2009	See description for Map No. 35(a).	Potential for Corrosion	Completed	2009: 92
36(b)	L316A	Segment 112, Mile Points 0.79-1.00	Contra Costa	2009	PG&E has completed an engineering review of 7,777 feet of pipe between Jersey Island Rd on Jersey Island and Taylor Rd on Bethel Island. Based on cathodic protection survey results, the cathodic protection was determined to be adequate. No further assessment or work is planned at this time.	Potential for Corrosion	Completed	2009: 94
36(c)	L316A	Segment 113, Mile Points 1.00-1.09	Contra Costa	2009	See description for Map No. 36(a).	Potential for Corrosion	Completed	2009: 86
36(d)	L316A	Segment 115, Mile Points 1.19-1.23	Contra Costa (Bethel Is)	2009	See description for Map No. 36(a).	Potential for Corrosion	Completed	2009: 81
36(e)	L316A	Segment 116, Mile Points 1.23-2.05	Contra Costa (Bethel Is)	2009	See description for Map No. 36(a).	Potential for Corrosion	Completed	2009: 78
36(f)	L316A	Segment 117, Mile Points 2.05-2.31	Contra Costa (Bethel Is)	2009	See description for Map No. 36(a).	Potential for Corrosion	Completed	2009: 93
37	DCUST 1416	Segment 100, Mile Points 0.00-0.01	Humboldt (Ferndale)	2007 2008 2009	PG&E has conducted an engineering review of 28 feet of pipe through the rural area near Fernbridge Dr and Depot St near Ferndale. Based upon the results of this review, PG&E has determined that no repair, replacement or other action is warranted.	Potential for Ground Movement Overall	Completed	2007: 14 2008: 2 2009: 6
38	DFDS 3543	Segment 100, Mile Points 10.91-10.91	Marin (Novato)	2007 2009	PG&E has completed an engineering review of 3 feet of pipe near Redwood Blvd and Atherton Ave in Novato. Based on the results of this review, PG&E has determined that no repair, replacement or other action is warranted.	Overall	Completed	2007:18 2009: 11

39(a)	DRIP 7966	Mile Points 0.00–0.00	Santa Clara (San Jose)	2007 2009	PG&E has completed an engineering review of the potential for ground movement along 10 feet of pipe near Milpitas-Alviso Rd and Ranch Dr in San Jose. Based upon the results of this review, PG&E has determined that no repair, replacement or other action is warranted.	Potential for Ground Movement	Completed	2009: 7 2007: 7
39(b)	DRIP 7970	Segment 651, Mile Points 0.00–0.00	Santa Clara (San Jose)	2007	PG&E completed an engineering review of the physical design and characteristics of this 10 foot pipeline segment located near Yerba Buena Rd in San Jose. Based upon the results of this review, PG&E determined that no repair, replacement or other action was warranted.	Physical Design & Characteristics Overall	Completed	2007: 7
40	DRIP 7971	Segment 651, Mile Points 0.00–0.00	Santa Clara (Milpitas)	2007 2009	PG&E has completed an engineering review of the potential for ground movement along 10 feet of pipe near Milpitas-Alviso Rd and Ranch Dr in Milpitas. Based upon the results of this review, PG&E has determined that no repair, replacement or other action is warranted.	Potential for Ground Movement	Completed	2007: 1 2009: 17
41(a)	SP3	Segment 160.3, Mile Points 198.49–198.49	Contra Costa (San Pablo)	2008 2009	Replace approximately 300 feet of pipe inside PG&E's San Pablo Station and crossing Rumill Blvd in San Pablo due to the potential for ground movement. Construction is planned for 2012. The small section of pipeline that includes this segment has been isolated ( <i>i.e.</i> , closed valves at both ends to prevent gas supply from reaching this segment) from the rest of PG&E's system, reducing its overall risk.	Potential for Ground Movement	Engineering	2008: 48 2009: 41
41(b)	SP3	Segment 160.36, Mile Points 198.49–198.49	Contra Costa (San Pablo)	2008 2009	See description for Map No. 41(a).	Potential for Ground Movement	Engineering	2008: 56 2009: 50/51/ 52/53
41(c)	SP3	Segment 160.4, Mile Points 198.49–198.49	Contra Costa (San Pablo)	2008 2009	See description for Map No. 41(a).	Potential for Ground Movement	Engineering	2008: 57 2009: 50/51/ 52/53
41(d)	SP3	Segment 160.5, Mile Points 198.49–198.52	Contra Costa (San Pablo)	2008 2009	See description for Map No. 41(a).	Potential for Ground Movement	Engineering	2008: 58 2009: 50/51/ 52/53
41(e)	SP3	Segment 160.6, Mile Points 198.52–198.55	Contra Costa (San Pablo)	2008 2009	See description for Map No. 41(a).	Potential for Ground Movement	Engineering	2008: 59 2009: 50/51/ 52/53
42(a)	X6337	Segment 100, Mile Points 10.84–10.84	Marin (Novato)	2007 2009	PG&E has completed an engineering review of two 30-foot segments of pipe near Redwood Blvd and Alherton Ave in Novato. Based upon the results of this review, PG&E has determined that no repair, replacement or other action is warranted.	Physical Design & Characteristics Overall	Completed	2007: 12 2009: 8/9
42(b)	X6337	Segment 101, Mile Points 10.84–10.84	Marin (Novato)	2007 2009	See description for Map No. 42(a).	Physical Design & Characteristics Overall	Completed	2007: 13 2009: 8/9
43	X6526	Segment 505, Mile Points 0.24–0.24	Kings (Kettleman City)	2009	PG&E has conducted an engineering review of the design materials of about 9 feet of pipe south of Kettleman City. Based upon the results of this review, PG&E has determined that no repair, replacement or other action is warranted.	Physical Design & Characteristics Overall	Completed	2009: 66

Map No.	Pipeline	Segment	Location: County (City)	Year On List	Description as of February 2011	Factor	Status as of February 2011	Rank
44	DREG 4197	Segment 801, Mile Points 0.00-0.00	San Mateo (East Palo Alto)	2007 2008 2009	PG&E has completed an engineering review of 18 feet of pipe near Dumbarton Ave. and Donahoe St. in East Palo Alto. Based upon the results of this review, PG&E has determined that no repair, replacement or other action is warranted.	Overall	Completed	2007: 22 2008: 19 2009: 95
45(a)	7221-15	Segment 101, Mile Points 0.04-1.31	Stanislaus (Modesto)	2007 2008 2009	PG&E has completed an engineering review of 6,709 feet of pipe along Dale Rd between Standiford Ave and Bangs Ave. Based on this review, PG&E determined that no repair, replacement or other action was warranted.	Overall, Physical Design & Characteristics	Completed	2007: 3 2008: 40 2009: 96
45(b)	7221-15	Segment 102.3, Mile Points 1.44-1.51	Stanislaus (Modesto)	2007 2008	See description for Map No. 45(a).	Overall	Completed	2007: 17 2008: 32
46	DREG 3875	Segment 101, Mile Points 0.00-0.00	Marrin (Novato)	2007 2008 2009	PG&E has completed an engineering review of 285 feet of pipe near Redwood Blvd and Atherton Ave in Novato. Based upon the results of this review, PG&E has determined that no repair, replacement or other action is warranted.	Overall	Completed	2007: 17 2008: 32 2009: 98
47	STUB 7912	Segment 551, Mile Points 0.04-0.04	Stanislaus (Modesto)	2007 2009	PG&E has completed an engineering review of 2 feet of pipe near Dale Rd and Bangs Ave in Modesto as part of the effort described at Map No. 45(a). Based on this review, PG&E determined that no repair, replacement or other action was warranted.	Overall	Completed	2007: 6 2009: 100
48(a)	L150	Segment 118.3, Mile Points 17.51-17.89	Yolo (Davis)	2008	PG&E plans to remove this segment of pipe near Olive Dr. and Richards Blvd. in Davis from transmission service by converting the pipe to a distribution main or retiring it. Construction to permanently remove this segment from transmission service currently is planned for 2011.	Overall	Engineering	2008: 12
48(b)	L150	Segment 118.8, Mile Points 18.08-18.09	Yolo (Davis)	2007 2008	See description for Map No. 48(a).	Overall	Engineering	2007: 25 2008: 10
48(c)	L150	Segment 119, Mile Points 18.09-18.0913	Yolo (Davis)	2007 2008	See description for Map No. 48(a).	Overall	Engineering	2007: 15 2008: 3
49	L220	Segment 134.2, Mile Points 22.14-22.17	Yolo (Davis)	2007	This segment consists of 154 feet of pipe near Olive Dr in Davis. This segment was assigned a lower risk value in 2008 based upon improved external corrosion information, causing it not to appear on the 2008 list. The risk value of the segment was lowered further in 2009 based upon improved geophysical information. No repair, replacement or other action is warranted.	Overall	Completed	2007: 27
50	L314	Segment 127, Mile Points 28.11-28.83	San Bernardino (Victorville)	2008	PG&E inspected the coating condition of this segment (4,446 feet of pipe through the rural area along N D St. and Hwy 15 in Victorville) in 2008 and reduced the external corrosion risk as a result of this inspection, causing it not to appear on the 2009 list.	Potential for Corrosion	Completed	2008: 74

51	L1402	Segment 130, Mile Points 24.00– 25.00	Shasta	2008	The third-party damage risk assessment for this segment increased in 2008 due to previous third-party damage to this segment. A subsequent engineering investigation concluded that this segment is not exposed to any elevated third party damage risk, that surface marking of the segment is adequate and therefore that no further action is warranted.	Potential for Third Party Damage	Completed	2008: 43
52	0126-01	Segment 101, Mile Points 0.00– 0.1409	Contra Costa (Richmond)	2007	This segment consists of 745 feet of pipe near W Gertrude and McKosken Rd in Richmond. Its potential for corrosion was reduced after PG&E determined that the segment lay in soil which was less corrosive than previously assessed and did not have an outer pipe casing. This reassessment caused the segment not to appear on the 2008 and 2009 lists.	Potential for Corrosion	Completed	2007: 73
53	L057A	Segment 103, Mile Points 7.48–9.04	Contra Costa (Brentwood)	2007	PG&E conducted a survey of this pipeline segment near Fallman Rd near Brentwood to assess its potential susceptibility to external corrosion. Based upon the information obtained from that survey regarding the adequacy of the cathodic protection system and the pipeline coating condition, PG&E determined that no repair or replacement of this segment was warranted.	Potential for Corrosion	Completed	2007: 80
54	0603-01	Segment 101.2, Mile Points 0.005– 0.20	Solano (Fairfield)	2008	PG&E conducted an investigation of this segment of pipe through the suburban area along Illinois St. in Fairfield. Based upon the results of this investigation, PG&E determined that no repair, replacement or other action was warranted.	Overall	Completed	2008: 16
55	0646-01	Segment 115.3, Mile Points 10.25– 10.31	Yolo	2008	This segment consists of 302 feet of pipe in a rural area along County Rd 97A and Hwy 5 near Woodland. PG&E improved the cathodic protection of this segment, reducing the external corrosion risk and causing it not to appear on the 2009 list.	Potential for Corrosion	Completed	2008: 98
56	L119A	Segment 109.7, Mile Points 8.57–8.58	Yolo (West Sacramento)	2007 2008	The third-party damage risk assessment for this segment increased in 2007 due to previous third-party damage to this segment. A subsequent engineering investigation concluded that this segment is not exposed to any elevated third party damage risk, that surface marking of the segment is adequate and therefore that no further action is warranted.	Potential for Third Party Damage	Completed	2007: 62 2008: 72
57(a)	L124B	Segment 123.5, Mile Points 20.04– 20.10	Yuba (Marysville/ Olivehurst)	2008	The external corrosion risk for this segment was reduced based on an inspection of its coating condition, causing this segment not to appear on the 2009 list.	Potential for Corrosion	Completed	2008: 76
57(b)	L124B	Segment 125, Mile Points 20.35– 20.55	Yuba (Marysville/ Olivehurst)	2008	See description for Map No. 57(a).	Potential for Corrosion	Completed	2008: 89
58(a)	L126B	Segment 103, Mile Points 1.43–2.16	Humboldt (Eureka)	2007 2008	The fault crossing in this area (16,197 feet of pipe near New Tompkins Hill Rd. in Eureka) was assigned a lower risk value in 2009 based upon improved geophysical information, causing it not to appear on the 2009 list.	Potential for Ground Movement	Completed	2007: 85 2008: 110
58(b)	L126B	Segment 104, Mile Points 2.17–2.73	Humboldt (Eureka)	2007 2008	See description for Map No. 58(a).	Potential for Ground Movement	Completed	2007: 83 2008: 102

Map No.	Pipeline	Segment	Location: County (City)	Year On List	Description as of February 2011	Factor	Status as of February 2011	Rank
58(c)	L126B	Segment 105, Mile Points 2.73–4.00	Humboldt (Eureka)	2007 2008	See description for Map No. 58(a). The external corrosion risk for this segment was reduced based on inspection of its coating condition, causing this segment not to appear on the 2008 and 2009 lists for potential for corrosion.	Potential for Ground Movement Potential for Corrosion (2007)	Completed	2007: 48 2008: 55
58(d)	L126B	Segment 106, Mile Points 4.00–4.69	Humboldt (Eureka)	2007 2008	See description for Map No. 58(c).	Potential for Ground Movement Potential for Corrosion (2007) Completed	Completed	2007: 74 2008: 95
58(e)	L126B	Segment 106.85, Mile Points 4.70– 4.71833	Humboldt (Eureka)	2007	The external corrosion risk for segment 106.85 was reduced based on inspection of its coating condition, causing this segment not to appear on the 2008 and 2009 lists. Potential for Corrosion	Completed	2007: 82	
58(f)	L126B	Segment 107.6, Mile Points 5.093– 5.133	Humboldt (Eureka)	2007 2008	See description for Map No. 58(a).	Potential for Ground Movement Overall	Completed	2007: 35 2008: 27
59	1301–01	Segment 124, Mile Point 0.00	Sonoma (Petaluma)	2008	The third-party damage risk assessment for this segment increased in 2008 due to previous third-party damage to this segment. This segment is now located inside a fenced PG&E station. A subsequent engineering investigation of this area confirmed that this segment is not exposed to any elevated third party damage risk and therefore that no further action was warranted.			2008: 18
60(a)	L138C	Segment 105.3, Mile Points 44.72– 44.81	Fresno (Fresno)	2008	PG&E conducted a survey of this pipeline running along North and Cedar in Fresno for susceptibility to external corrosion. Based upon the information obtained from that survey regarding the adequacy of the cathodic protection system, PG&E determined that no repair, replacement or other action was warranted.	Potential for Corrosion	Completed	2008: 52
60(b)	L138C	Segment 105.6, Mile Points 44.81– 44.90	Fresno (Fresno)	2008	See description for Map No. 60(a).	Potential for Corrosion	Completed	2008: 64
61	L142S	Segment 116.3, Mile Points 8.9927– 9.01	Kern (Bakersfield)	2007	This segment consists of 65 feet of pipe along V St north of Brundage Ln. in Bakersfield. The external corrosion risk for this segment was reduced based on inspection of its coating condition, causing the segment not to appear on the 2008 and 2009 lists.	Potential for Corrosion	Completed	2007: 68

62	L162A	Segment 113.2, Mile Points 7.07–7.22	San Joaquin (Tracy)	2007 2008	This segment consists of 814 feet of pipe near Grant Line and Macarthur in Tracy. In 2009, PG&E updated its system-wide risk assessment of certain properties relative to the external corrosion risk which reduced the relative risk for this segment, and the risk due to third party damage for this segment in particular was reduced due to an additional public information program. This segment does not appear on the 2009 list.	Overall	Completed	2007:26 2008: 7
63	L177A	Segment 215.1, Mile Points 170.57– 171.00	Humboldt (Fortuna)	2008	The fault crossing in this area (2,251 feet of pipe near Hwy 36 and Hwy 101 near Fortuna) was assigned a lower risk value in 2009 based upon improved geophysical information, causing it not to appear on the 2009 list.	Potential for Ground Movement	Completed	2008: 28
64(a)	L181B	Segment 104.6, Mile Points 2.17–2.18	Monterey	2007 2008	The third-party damage risk assessment for this segment increased in 2007 due to previous third-party damage to this segment. A subsequent engineering investigation concluded that this segment is not exposed to any elevated third party damage risk, that surface marking of the segment is adequate and therefore that no further action is warranted.	Potential for Third Party Damage	Completed	2007: 67 2008: 88
64 (b)	L181B	Segment 104.8, Mile Points 2.18–2.21	Monterey	2007 2008	See description for Map No. 64(a).	Potential for Third Party Damage	Completed	2007: 66 2008: 80
65	L197B	Segment 105, Mile Points 4.14–4.40	San Joaquin	2008	The third-party damage risk assessment for this segment increased in 2008 due to previous damage on a pipeline near this location. A subsequent engineering investigation concluded that this segment is not exposed to any elevated third party damage risk, that surface marking of the segment is adequate and therefore that no further action is warranted.	Potential for Third Party Damage Overall	Completed	2008: 5
66	L300A	Segment 369.051, Mile Points 473.09– 473.99	Santa Clara (Morgan Hill/San Martin)	2008	This segment consists of 4,780 feet of pipe near Foothill Rd. and Maple Rd. in Morgan Hill and San Martin. The risk of third-party damage was reduced based on analysis of the depth of cover over this segment, which found the cover to be adequate.	Potential for Third Party Damage	Completed	2008: 73
67(a)	L300B	Segment 336.0, Mile Points 362.7061–362.7087	Fresno	2007	This segment is located near Gale Ave. and S. Butte Rd. near Coalinga. In 2007, PG&E conducted a survey of these pipeline segments to assess their potential susceptibility to external corrosion. Based upon the information obtained from that survey regarding the functioning of the cathodic protection system and the pipeline coating condition, PG&E determined that no repair or replacement of these segments was warranted.	Potential for Corrosion	Completed	2007: 70
67(b)	L300B	Segment 336.5, Mile Points 362.8785–362.883	Fresno	2007	See description for Map No. 67(a).	Potential for Corrosion	Completed	2007:63

Map No.	Pipeline	Segment	Location: County (City)	Year On List	Description as of February 2011	Factor	Status as of February 2011	Rank
67(c)	L300B	Segment 336.9, Mile Points 362.89– 362.90	Fresno	2008	This segment consists of 69 feet of pipe near Gale Ave. and S. Butte Rd near Coalinga. In 2007, PG&E conducted a survey of pipeline segments in this area to assess their potential susceptibility to external corrosion. Based upon the information obtained from that survey regarding the functioning of the cathodic protection system and the pipeline coating condition, PG&E determined that no repair or replacement of these segments was warranted.	Potential for Corrosion	Completed	2008: 70
68	L302W	Segment 107.5, Mile Points 5.01–5.13	Yolo	2008	This segment consists of 594 feet of pipe near Hwy 5 and Road 2A, north of Woodland. PG&E plans to complete an assessment of an adjacent segment for susceptibility to external corrosion in 2011. Based on this assessment, PG&E will determine whether any repair, replacement, or other action is warranted.	Potential for Corrosion	Initiated	2008: 71
69	DREG 4102	Segment 801, Mile Points 0.00–0.02	Yolo (Davis)	2007 2008	PG&E conducted an engineering review of this pipeline segment located near 2nd St. in Davis. Based upon the results of this review, PG&E determined that no repair, replacement or other action was warranted.	Overall Physical Design & Characteristics (2007)	Completed	2007: 2 2008: 8
70(a)	Stub 8484	Segment 301, Mile Points 0.0034– 0.0042	Alameda (Union City)	2007	PG&E conducted an engineering review in 2008 of this 2 foot segment located near Alvarado-Niles Rd & Decoto Rd in Union City. Based on review of pipe characteristics, this segment does not appear on the 2008 and 2009 lists.	Overall	Completed	2007: 10
70(b)	Stub 8485	Segment 301, Mile Points 0.00– 0.002	Alameda (Union City)	2007 2008	PG&E has conducted an engineering review of this pipeline segment located near Alvarado Niles Rd & Decoto Rd in Union City. Based on review of pipe characteristics, this segment does not appear on the 2009 list.	Overall	Completed	2007: 11 2008: 13

<sup>1</sup>This segment number is referred to as segment number 137.08 in the 2007 Top 100 list.

<sup>2</sup>In 2007, a portion of segment 130 was identified as segment 129.6. In 2008, that portion was renamed as segment 130.

<sup>3</sup>In 2007, segment 130.11 was identified as segment 129.6. In 2008, it was renamed as segment 130.11.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARIA CANTWELL TO  
RICK KESSLER

*Question 1.* As you mention in your written testimony, some in industry are calling for a risk based approach to pipeline safety rather than being required to perform routine inspections every 5 years for pipelines carrying liquid fuel and every 7 years for pipelines carrying natural gas. What do you believe are the potential risks in taking a risk-based approach to natural gas pipeline safety?

Answer. Since nearly the time integrity management was passed for natural gas transmission pipelines as part of the Pipeline Safety Improvement Act of 2002 some within the natural gas industry have lobbied for a relaxation of the 7-year re-inspection interval that Congress set. The Pipeline Safety Trust continues to support the statutory minimum re-inspection periods currently in law and opposes any relaxation of these re-inspection intervals in favor of a more risk-based approach for the following reasons:

1. The baseline inspection period has not even been reached yet, and we believe that it is necessary to go through several re-inspections to determine whether the system is actually working and if it makes sense to change the re-inspection interval. Some companies have not even completed one round of inspections yet. During the first round, many anomalies with the pipelines were identified and repaired. The early data also clearly indicate that there have been problems determining the correct risks to be looking for and then using the correct tools and assessment methods to inspect for those risks. It may take three or four rounds of re-inspections before all these early lessons are learned, and before these lessons are learned we should not risk the public's safety. Subsequent rounds of inspections should also tell us how quickly new anomalies appear and at what rates they are growing. Without that information from ongoing re-inspections it is too early to propose changing the re-inspection interval.
2. A segment of the industry also argues that instead of a standard re-inspection interval that would allow all companies' results to be compared, each company, based on its own internal findings, should be allowed to design its own re-inspection program for each individual segment of its pipelines. This engineered, risk-based approach places much of the authority to draft the inspection requirements with each company. PHMSA clearly does not have the extensive resources necessary to review each program to ensure it is no less protective than the current respective five or seven-year re-inspection intervals and we doubt that pipeline companies would support the additional, significant increases in user fees necessary for PHMSA to attain such resources and maintain them as pipeline mileage expands. This proposed system also includes no way for the public to review and comment on the proposed engineered, risk-based re-inspection proposals and thus removes another public safety backstop.
3. There is also increasing mileage of large high-pressure natural gas pipelines in areas with very high-density populations. The consequences if one of these pipelines should fail in such an area would dwarf the event that occurred in San Bruno on a relatively low-pressure line. Rather than relax inspection requirements, PHMSA should reassess the safety protocols in place to ensure that it is impossible for a pipeline to fail in such an area from any cause that is within the operator's controls (corrosion, materials, operation, maintenance, inspections, etc.).

This year alone there have been major failures (San Bruno, Marshall, Salt Lake City) on pipelines that are required to be doing integrity management programs. This alone shows that it would be irresponsible to even consider allowing companies to expand the interval between inspections. For these reasons, we continue to oppose any change to the re-inspection intervals for transmission pipelines.

*Question 2.* In Washington State, there were 19 significant incidents of pipeline failure reported over the past decade. PHMSA considers a significant incident as one reported by pipeline operators when any of the following conditions are met: (1) fatality or injury requiring in-patient hospitalization; (2) \$50,000 or more in total costs, measured in 1984 dollars; (3) highly volatile liquid releases of 5 barrels or more or other liquid releases of 50 barrels or more; or (4) liquid releases resulting in an unintentional fire or explosion. Do you believe the thresholds that PHMSA uses in its definition of significant incidents are reasonable?

Answer. We believe for the data to be of value in assessing progress being made toward greater safety the definitions for what is reported needs to be consistent, or at least ensure that same type of data can be gathered from what is submitted.

Since it is hard to update historical reports, it is important that all reports made on into the future have the same information for comparison purposes.

That being said, the more incident data that is available the better the quality of our understanding of what safety issues really are, and where greater pipeline safety emphasis needs to be focused. The two criteria that we think could be tightened are the requirements that only injuries that require “in-patient hospitalization” and the \$50,000 threshold for property damage be included in the significant incident database.

In these days of cost control on health care, many significant injuries can occur that do not require hospitalization. We think a more inclusive measure would be anytime a pipeline incident occurs that causes a person who is not an employee of a pipeline company to seek medical attention that incident should be reported.

The \$50,000 property damage threshold also leads to a significant underreporting of incidents, especially incidents on natural gas distribution systems where even the current limited data shows the majority of deaths and injuries occur. With tens of thousands of incidents on distribution systems falling to be reported at the same time millions of dollars are being spent on damage prevention programs, better incident data collection could almost certainly lead to a better understanding of integrity management needs and better targeting of program expenditures.

*Question 3.* Does PHSMA receive information from pipeline operators on all pipeline incidents? If not, should they? Do state commissions collect that information? And if so, what are the essential data fields required so that the process can be made quick and easy for the pipeline operator but still provide useful information for PHSMA?

Answer. We would define an incident as any time a pipeline fails, leaks to the point that it requires repair (some natural gas pipelines leak in ways that do not require repairs), or is damaged in a manner that may lead to a failure or leak in the future. Certainly neither PHMSA, nor any state regulators we are aware of, require reporting of all these types of incidents. PHMSA just completed a rulemaking on reporting requirements that helps clarify and expand many of the data fields. We support these new requirements, but believe expansion of the criteria for reporting as outlined above would provide even better data for decisionmaking and trend tracking.

*Question 4.* Do you have any sense of the proportion of all incidents that are considered significant incidents?

Answer. Based on data reviewed from the Common Ground Alliance, the Texas Railroad Commission and recent statements from PHMSA that they are aware of as many as 90,000 incidents/year that are not included in their database, it is clear that less than 1 percent of all pipeline incidents are currently included within the significant incident definition.

*Question 5.* Nationally, the top three causes of pipeline failures are excavation damage, corrosion, and material/weld/ equipment failure. Do you believe that Washington state’s “Call before you dig” law has contributed to the reduction of all incidents of pipeline failures due to excavation damage in the state over the past decade? Are there things that can be done to strengthen the current state law?

Answer. Washington State’s current “Dig Law” is very weak and does little to reduce the number of incidents caused by excavation damage. The main weaknesses in the current law include the lack of any agency with administrative authority over the law, no legitimate enforcement authority, and no requirement for reporting excavation incidents so education and enforcement can be targeted, and effectiveness and progress can be measured.

The Washington Utilities and Transportation Commission has certainly recognized these weaknesses and has tried over the past 10 years to increase enforcement and effectiveness, but until these weaknesses are fixed by the state legislature progress will be nearly impossible. Luckily, PHMSA’s recent push to require states to increase the effectiveness of their excavation damage prevention programs has caused a multi-stakeholder group in Washington State to work together to draft a much improved version of the State’s Dig Law. It appears this proposed draft will be introduced in the state legislature this coming session. Any support the state’s Congressional Delegation can provide to help ensure the passage of this bill would certainly help increase pipeline safety throughout the state.

*Question 6.* Which states do you believe have the most effective programs for promoting pipeline safety?

Answer. We have not undertaken any sort of comparison of the different states’ regulatory programs so our answer to this question is not based on any real analysis. It also should be noted that state program’s effectiveness varies a good deal depending on which parts of the program is being looked at. For example, Wash-

ington State’s program, overseen by the Washington Utilities and Transportation Commission, is very good for inspections, enforcement, transparency, and citizen involvement, but the state’s damage prevention program is poor because of the reason noted above.

Other states that seem to do an overall good job are Virginia, Minnesota, and New York.

*Question 7.* Do you believe PHSMA has adequate resources in-house to develop all of the standards associated with pipeline safety? What are the dangers for PHSMA to rely on industry developed standards for minimum Federal pipeline safety regulations?

*Answer.* PHMSA has incorporated by reference into its regulations standards, or parts of standards, developed by organizations made up in whole or in part of industry representatives. A review of the Code of Federal Regulations under which PHMSA operates finds the following numbers of incorporated standards:

Standards Incorporated by Reference in 49 CFR Parts 192, 193, 195  
(As of 6/9/2010)

CFR Part	Topic	Standards*
192	Natural and Other Gas	39
193	Liquefied Natural Gas	8
195	Hazardous Liquids	38
		Total 85

\*Note: Some standards may be incorporated by reference in more than one CFR Part.

Those standards were developed by the following organizations: American Gas Association (AGA), American Petroleum Institute (API), American Society for Testing and Materials (ASTM), American Society of Civil Engineers (ASCE), ASME International (ASME), Gas Technology Institute (GTI), Manufacturers Standardization Society of the Valve and Fittings Industry, Inc. (MSS), NACE International (NACE), National Fire Protection Association (NFPA), Pipeline Research Council International, Inc. (PRCI), Plastics Pipe Institute, Inc. (PPI)

While the Pipeline Safety Trust has not done an extensive review of these organizations or their standard setting practices, It is of great concern to us—and we believe it should be to Congress as well—whenever an organization whose mission is to represent the regulated industry is—in essence—writing regulations that the dues-paying members of the organization must follow. A very quick review of the mission statements of some of these organizations reveals statements like these below that show, at a minimum, a conflict between the best possible regulations for the entire public and the economic interests of the industry they represent.

API—“We speak for the oil and natural gas industry to the public, Congress and the executive branch, state governments and the media. We negotiate with regulatory agencies, represent the industry in legal proceedings, participate in coalitions and work in partnership with other associations to achieve our members’ public policy goals.”

AGA—“Focuses on the advocacy of natural gas issues that are priorities for the membership and that are achievable in a cost-effective way.” “Delivers measurable value to AGA members.”

PPI—“PPI members share a common interest in broadening awareness and creating opportunities that expand market share and extend the use of plastics pipe in all its many applications.” “the mission of The Plastics Pipe Institute is to make plastics the material of choice for all piping applications.”

PRCI—“PRCI is a community of the world’s leading pipeline companies, and the vendors, service providers, equipment manufacturers, and other organizations supporting our industry.”

The pipeline industry has considerable knowledge and expertise that needs to be tapped into to draft standards that are technically correct and that can be implemented efficiently. But we also know the industry’s standard setting practices exclude experts and stakeholders who can bring a broader “public good” view to standard setting. We also know that when a regulatory agency needs to adopt industry-developed standards, it is a “red flag” that the agency lacks the resources and expertise to develop these standards on Its own.

It should be noted that the development of such standards is not an open process where interested members of the public or experts outside the industry (such as those in universities and colleges) can review the material and comment. One of the most ridiculous examples of this one-sided process was the development of the Public Awareness standard (API RP 1162) which now governs how pipeline companies have to communicate with the affected public. The process was controlled by industry, even though industry has no particular expertise in this type of public awareness or communication. The many possible independent experts and organizations in the field of communications and education were not sought and ultimately were not a part of the development of this standard.

Even once the standards are incorporated by reference into Federal regulations, the standards remain the property of the standard setting organization and are not provided by PHMSA in their published regulations. If the public, state regulators, or academic institutions want to review the standards they have to purchase a copy from the organization that drafted them. In many cases, this further removes review of the standards from those outside of the industry. Below are just a handful of examples of the cost to purchase for review the standards that are part of the Federal pipeline regulations. The American Petroleum Institute has started to change this policy of charging for their standards and now makes safety standards available for viewing (but not downloading) online, but the others still have not to our knowledge.

Sample Cost of Pipeline Safety Standards Incorporated by Reference Into Federal Regulations  
(As of 6/8/2010)

Standard	Organization	Code of Federal Regulations (Incorporated by Reference)	Cost
ANSI/API Spec 5L/ISO 3183 "Specification for Line Pipe"	API	49 CFR § 192.55, § 192.112, § 192.113, § 195.106	\$245.00
ASME B31.4 –2002 "Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids"	ASME	49 CFR § 195.452	\$129.00
GRI 02/0057 (2002) "Internal Corrosion Direct Assessment of Gas Transmission Pipelines Methodology"	GTI	49 CFR § 192.927	\$295.00
NACE Standard RP0502–2002 "Pipeline External Corrosion Direct Assessment Methodology"	NACE	49 CFR § 192.923, § 192.925, § 192.931, § 192.935, § 192.939, § 195.588	\$83.00
"A Modified Criterion for Evaluating the Remaining Strength of Corroded Pipe"	PRCI	49 CFR § 192.933, § 192.485, § 195.452	\$995.00

We do not believe that PHMSA currently has the resources in-house to handle the development and updating of all these standards. We do not have the solution to this problem, and it is a problem with much broader bounds than just PHMSA, but at a minimum PHMSA should be able to choose what organization develops a standard, set the parameters for the standard, ensure broad stakeholder involvement (by funding state and outside participation if necessary), and ensure complete transparency of the process and product.

*Question 8.* You advocated to the Whatcom County Planning Commission that they should amend the county zoning code so that no construction of schools, hospitals, police, or fire facilities, stadiums or other "high-consequence" uses would be allowed within 500 feet of the pipelines. Additionally, you raised the idea of a 660 foot "consultation zone" on either side of a pipeline. Locally, what has been the reaction to these ideas? Have other communities within Washington or in other states shown interest in these ideas? As you know, Enbridge's Olympic Pipeline runs down the I5 Corridor, which is heavily populated by both residential and commercial enterprises.

*Answer.* After some minor changes to our proposed modifications to Whatcom County's land use regulations to ensure greater safety when development occurs near transmission pipelines, the County Planning Commission and the County Council adopted the proposal in July and it is now part of the Whatcom County Code. We received unanimous support for our proposal from the pipeline companies that operate in the county as well as the Washington Utilities and Transportation Commission (WUTC). There were some initial concerns raised by individuals concerned about protecting their property rights and values with the idea of the "consultation zone." Those concerns for the most part went away once the idea of the

consultation zone was fully understood and people realized that it did not change what they could do on their property it just ensured good communication with the pipeline company to make sure that both the pipeline and the neighborhood was protected.

To our knowledge four communities in Washington State (city of Redmond, City of La Center, Benton County, Whatcom County) have adopted land use rules better defining how development can occur near transmission pipelines. Every one of these ordinances is slightly different reflecting local concerns, but they all share the common goal of increasing public safety. Those four ordinances, along with four from other states, can be found on the Washington Municipal Research and Services Center (MRSC) website at: <http://www.mrsc.org/Subjects/PubSafe/transpipeords.aspx>.

PHMSA is supposed to release the Pipelines and Informed Planning Alliance's (PIPA) report on these types of issues any day now. Washington State has been out in front of the effort for some time now because of a coalition made up of the WUTC, the Association of Washington Cities, The Washington State Association of Counties, the pipeline industry, and the Pipeline Safety Trust. Presentations have been made to local government planners and elected officials across the state, and technical assistance is available to those jurisdictions that want to move forward on ordinances to increase safety around pipelines. The MRSC has an entire website devoted to these planning near pipeline issues, which can be found at: <http://www.mrsc.org/Subjects/PubSafe/transpipes.aspx>.

This type of coordinated effort is what will be needed across the country once PHMSA releases the PIPA report. Unfortunately, it does not appear that PHMSA has the resources to spearhead such a national effort to inform local governments about their options, so we have asked that as part of reauthorization money be made available to PHMSA to specifically address this need.

