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PUBLIC BUILDINGS, HAZARDOUS MATERIALS,
AND PIPELINE TRANSPORTATION

OF THE

COMMITTEE ON TRANSPORTATION
AND INFRASTRUCTURE

HEARING ON

THE BELLINGHAM, WASHINGTON HAZARDOUS LIQUID PIPELINE EXPLOSION

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TESTIMONY OF
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Chairman Franks and Members of the Subcommittee, I appear today on behalf of SAFE Bellingham. Thank you for this opportunity to testify.

On June 10th, Liam Wood was doing exactly what any young man his age might choose to do on a warm spring day. He went fishing in the gorge of a beautiful creek lined with 100 foot tall trees, and dripping with moss and ferns. An incredible northwest scene! Perhaps he went out of love of the sport. Perhaps he went to let the cool sound of the creek wash some cares away. Whatever the reason, he found more than anyone in our community could ever have dreamed of.

While fishing on June 10th, Liam Wood found a quarter million gallons of gasoline flowing down the beautiful creek in the heart of our city. The fumes overwhelmed him and he fell in the creek and drowned before the fuel was even ignited. When ignition occurred, a fireball exploded burning two young children, Stephen Tsiorvas and Wade King, to death. That such a beautiful place could turn so terrifying in just an instant is one of the visions that has mobilized the citizens of Bellingham to work to make sure that such a needless tragedy never happens again -- anywhere in the country. Such a vision still haunts many of us with children, and it is the reason I am here today talking with you, the people who can ensure that such a tragedy never happens again.

SAFE Bellingham is a community based organization which did not even exist on June 10, 1999 -- the day that the Olympic Pipeline exploded in a fireball in Bellingham, Washington killing three young people and plunging a fiery dagger in the heart of this community. SAFE Bellingham came into existence shortly after this tragic event as the community tried to come to grips with the pain, shock, and sorrow. In the aftermath, we have learned many things. We have learned about weaknesses in the federal oversight of petroleum pipeline safety. We have learned about the federal government's efforts to prohibit state and local governments from protecting their citizens from tragedies like these. And we have learned that pipeline companies -- driven by this year's bottom line -- sometimes this quarter's bottom line -- do not have the economic incentive to deal with hidden risks that may not explode onto the scene until some later year. We come to Washington, D.C. today to share our new found insights with you.

While our organization may be new, the information we bring to you is not. In educating ourselves and the community in the months since the tragedy, we have had the benefit of learning from many others who have worked in or for the petroleum pipeline industry for years. The City of Bellingham has hired four pipeline engineers who among them have nearly 100 years of experience: Dr. Jim Liou, Robert Eiber, Rick Kuprewicz, and John Luopa. We express our appreciation to the insights they have provided.

In our limited time today, I want to focus on four things we have learned in the aftermath of the Bellingham accident: the inadequacy of current federal regulations; the inappropriate federal preemption of state and local safety regulations; the absence of adequate self-regulation by Olympic Pipe Line Company (the operator of the pipeline that exploded); and the need for effective community involvement in overseeing pipeline safety issues.

INADEQUACY OF CURRENT FEDERAL REGULATIONS

Sadly, one of the first things we learned was that the petroleum pipeline industry has escaped the safety regulations that have made so much of America a safer place in the last part of the 20th century. Some of the most fundamental aspects of pipeline safety are not addressed or are addressed inadequately in current federal law. Consider the following:

* Testing and Inspection of Pipelines.

Current federal law requires pipelines to be hydrostatically pressure tested only once -- before operations commence. These pipes then sit in the ground for years and decades. They are subjected to corrosion and strain from earth movement. They are subjected to enormously high operating pressures. But there is no requirement that these pipelines ever be hydrostatically pressure tested again.

Pipelines can also be inspected internally by the use of so-called "smart pigs." These internal inspection devices use different technologies such as ultrasonic or magnetic waves, to try to detect some (not all) anomalies in the pipe. Different types of pigs have different strengths (and weaknesses) in detecting different types of anomalies. Over the last decade or two, some vendors have developed smart pigs with much better capabilities than earlier versions. While not

perfect, these devices provide a useful tool for determining the condition of the pipe after it is put into service. Ironically, while federal regulations require that new pipelines be designed to accommodate smart pigs, there is no federal regulation requiring that the smart pigs be used.

There also is no oversight of how pipeline operators use (or neglect) the information they receive from these internal inspection devices. In Bellingham, Olympic had run a smart pig through the pipe five years before the accident. The inspection device had detected numerous anomalies but Olympic chose to ignore most of them. Only after the tragedy was Olympic forced (by the Office of Pipeline Safety) to dig up the pipe in numerous additional locations where anomalies had been detected and finally determine whether the pipe's integrity had been compromised. Notably, before Olympic undertook a remedial hydrostatic pressure test this fall, it first repaired a dozen or more sections of the pipeline that had been identified as containing anomalies five years earlier.

* Leak Detection.

There is no federal requirement for pipeline operators to utilize leak detection systems. If a computer based leak detection system is used, there are only very general regulations specifying how it should be configured. These standards fall far short of assuring reliability. Thus, the Bellingham explosion was preceded for more than an hour by a huge rupture which dumped almost 300,000 gallons from the pipeline. There was so much gasoline flowing down Whatcom Creek that it turned the creek into a river of gasoline. Yet Olympic's controllers 100 miles away in Renton, Washington apparently were unaware. For more than an hour, the gasoline gushed with no warning to the controllers from the unreliable leak detection system.

* Management Audits.

Even a properly designed and constructed pipeline becomes a menace to the communities through which it crosses if it is not operated and maintained well. If settings on safety valves can be adjusted in the field with no comprehensive oversight, there is a problem. If safety procedures are not updated when new facilities are added to the line, there is a problem. If operators cannot find records of what type of pipe they have in the ground, there is a problem.

Other segments of the petroleum industry have been required to adopt extensive safety management practices and undergo safety management audits. See, e.g., 29 C.F.R. § 1910.119. But these federal requirements have not yet been made applicable to petroleum pipelines. In fact, the pipeline industry has been specifically exempted from the very safety management practices Congress determined were needed to protect employees and the general public in other energy related industries.

* Right-of-Way Encroachment.

Current regulations require right-of-way minimums of 50 feet -- but this is waived if there is at least 12 inches of dirt covering the pipe. This makes no sense. The industry is aware that construction backhoes and other heavy equipment are a major source of damage to pipelines and such equipment has the capability of reaching far more than 12 inches below the ground surface.

There also is no regulation assuring that a pipeline operator responds appropriately once notified of construction in the right-of-way. In Bellingham, for instance, there are indications that in 1994 Olympic knew heavy construction equipment was operating in very close proximity to its pipe (where it ruptured in 1999) but Olympic did not provide continuous oversight of the construction to prevent damage to its pipe.

* Avoiding Over-Pressurization.

There is no federally defined minimum standard for assuring that a pipeline is "fail-safe," i.e., that it cannot be over-pressured to the point of breaking the pipe. Many pipeline companies install pumps that can create pressures greater than the pipes can withstand. They then use pressure safety valves to prevent over-pressurization. But there are no federal regulations assuring that these critical devices are adequately designed, installed, maintained -- or even used! In the Bellingham explosion, for instance, there are indications that a key pressure safety relief valve was improperly selected and/or installed. The NTSB report suggests that it operated numerous times in the preceding months -- far too frequently for a valve that was supposed to activate for emergencies only.

Further, without adequate oversight, there is a danger that a supposedly redundant backup safety system will be just as susceptible to failure as the primary system. For instance, in the Bellingham accident, flawed input data apparently caused Olympic's main computer to fail. But then when the backup computer came on line, it was fed the same flawed data and it failed, too. There is also no redundancy when both a primary and backup system rely on the same power source. With no regulatory standards established, the industry is free to make critical mistakes like these.

In the end, the best protection against over-pressurization is assuring that the pumps are not sized so large that they can create pressure to the point of bursting the pipe. But there is no federal prohibition on over-sizing pumps.

* Heavier Than Air Releases.

Certain petroleum products when released to the atmosphere can form a heavier than air vapor cloud mist that hugs the ground and is slow to dissipate. Indeed, this is precisely what happened in Bellingham where the rupture generated a heavier than air vapor cloud that flowed like water, following the terrain a great distance, until it reached an ignition point nearly half a mile away. Most of the deaths from liquid pipeline spills in the last 30 years have been caused by heavier than air vapor cloud explosions, yet federal law does not address this phenomenon for gasoline, jet fuel, and other petroleum products frequently transported in pipelines.

* Valve Location Requirements.

The strategic placement of check valves and block valves can do much to limit the volume of a spill. The very general, minimum requirements in current federal law do not address spill volume, elevation changes, and other factors such as terrain and population density that must be taken into account in determining an adequate number and placement of valves.

* Inadequate Reporting.

We can learn from the past only if we know what has happened in the past. Current federal law seems designed to frustrate our ability to learn from past mistakes. The duty to report to OPS certain "safety conditions" is waived if the condition is corrected within a particular timeframe. Spills of less than 2,100 gallons generally need not be reported. The City

of Bellingham recently negotiated with Olympic Pipe Line an agreement that requires Olympic to report these "safety conditions" regardless of whether they are corrected within the timeframe and virtually all spills regardless of size. The federal government should establish similar reporting requirements.

FEDERAL PREEMPTION

Ironically, at the same time that federal law is so inadequate in mandating safety requirements for the pipeline industry, federal law simultaneously prohibits state and local governments from adopting their own safety-based standards. Congress is well aware that state and local governments can regulate safety and environmental protection without compromising industry's ability to operate on a national and international level. To take but one obvious example, the trucking industry, whose fleets criss-cross our state borders thousands of times a day, are subject to safety requirements at the state and local level. See 49 U.S.C. § 14501(c)(2). As long as state and local safety regulations do not interfere with interstate commerce and do not conflict with federal requirements, Congress has seen fit to allow this additional level of protection.

Yet when it comes to oil pipelines, Congress has set a different standard. Here, Congress prohibits state and local government from protecting their own citizens from the calamities that can befall them from a poorly designed, operated, and/or managed pipeline. The sooner states and local government are given the power to protect their citizens, the sooner we will see significant advances made in safety protection for this industry.[1]

[1] This is not the first time that the states have called for stronger federal regulation of petroleum pipelines and a relaxation of federal preemption. Following the pipeline explosion and fire in Moundsview, Minnesota, the Minnesota Commission on Pipeline Safety investigated and deliberated over four months and concluded that federal regulations of petroleum safety had to be increased and that federal preemption of state regulations should be relaxed. These recommendations were finalized in December 1986, nearly 13 years ago and circulated widely in these halls. Sadly, the federal government has failed to fully pursue, adopt, and implement most of the Commission's recommendations. Perhaps Liam Wood, Wade King, and Stephen Tsiorvas would be alive today if it had.

THE PIPELINE INDUSTRY DOES NOT ADEQUATELY REGULATE ITSELF

You will hear from the industry that it is in their own self-interest to regulate themselves and avoid spills of valuable petroleum products and explosions which cause the deaths of innocent people. But the sad truth is that in much of today's corporate world the focus is on the bottom line -- not the bottom line five or ten years from now, but the bottom line this year, this quarter, this month -- TODAY. Short-term financial incentives frequently push managers in the direction of maximizing revenues and profits at the expense of risks which may not manifest themselves for years or even decades.

This approach is not unique to the oil pipeline industry. As a society, we have responded to this phenomenon by imposing safety standards on other industries. Those standards are far and above those that have been required of the pipeline industry. How many more tragedies like Bellingham's must be witnessed before we see the same level of safety mandated for petroleum pipelines as we do for other segments of the petroleum industry? Hopefully none. Congress should act speedily to mandate federal safety standards before we lose a single more innocent life.

COMMUNITY OVERSIGHT

In the wake of the Exxon Valdez accident, Congress (in the Oil Pollution Act of 1990 (OPA 90)) mandated the creation of a well-funded, independent, non-profit citizen oversight council. See 33 U.S. Code, § 2732. Following the OPA 90 model, we propose legislation that would mandate the creation of citizen organizations to review, monitor, and comment on pipeline companies' risk management and risk assessment studies; their spill response and prevention plans; their prevention and response capabilities; their safety and environmental protection capabilities; and their actual impacts on the environment. The Citizen Advisory Council would play a major role in increasing public awareness of pipeline safety, spill response, spill prevention, and environmental protection issues.

The Citizen Advisory Council would have no law enforcement or regulatory authority but would have the same access to pipeline facilities and records as state and federal regulatory agencies. Like the OPA 90 language, the proposed legislation should direct federal agencies to cooperate with and consult with the Citizen Advisory Council on substantive matters related to pipeline operations.

The Citizen Advisory Council's members would be appointed by the Governor of the State and be comprised of representatives of appropriate interest groups such as local municipalities and counties, environmental organizations, fishing organizations, and recreational groups.

This legislative proposal is designed to promote partnership and cooperation between local citizens, industry, and government, and to build trust and provide citizen oversight of environmental compliance by fuel pipeline companies.

In Bellingham, on June 10, 1999, we learned that while pipelines are out of sight, they cannot always be put out of mind. When there are design, construction, operational, or maintenance failures, disaster can strike. A Citizen Advisory Council can play a major role in assuring that these dangerous pipelines, while out of sight, are never again out of mind.

Thank you for your time.