STATEMENT OF

Pamela Whitted
Vice President
National Stone, Sand & Gravel Association

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Oversight Hearing on
"The Aging of the Energy and Minerals Workforce: A Crisis in the Making?"

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Thank you Madam Chairman for the opportunity to testify before the Subcommittee on this important topic. The aging of the energy and minerals workforce is having a significant impact on the aggregates industry, so this hearing is particularly timely.

Today I appear on behalf of the National Stone, Sand & Gravel Association, the largest mining association by product volume in the world. NSSGA member companies are responsible for over 90 percent of the crushed stone and 70 percent of the sand and gravel produced annually in the U.S. at over 10,000 operations nationwide by approximately 120,000 working men and women in the aggregates industry. During 2003, a total of about 2.66 billion metric tons of crushed stone, sand, and gravel, valued at $14.4 billion, were produced and sold in the United States. The aggregates industry directly and indirectly contributes a total of $37.5 billion annually to the nation's Gross Domestic Product (GDP).

Before I speak about how the aging workforce is affecting the industry, I believe it is important for you to understand why we, as an association, are here today. The following paragraph is from *The Aggregates Handbook*, an indispensable guide for the industry:

> Beginning in the early 1800's Portland cement and asphalt concrete were developed, which created a demand for high quality aggregate. Also, the invention of the automobile prompted a need for smooth, all-weather paved highways. These developments provided the initial stimulus that ultimately transformed the fledgling aggregate industry into the largest non-fuel mining industry in the United States. The erratic nature of the World War I economy coupled with a lack of priority given to highways and construction led to the organization of a number of national trade associations within the various construction and construction materials industries from 1915 to 1918. Interestingly, the need to improve worker safety and to reduce mine related disabling worker accidents was one of the major issues that led to the establishment of national aggregate associations.

Today, one hundred and one years after the founding of our predecessor organizations, the National Stone, Sand & Gravel Association continues to strive to improve the safety of our work environment. NSSGA and our member companies still believe our most valuable assets are our workers, both young and old.

ROLE OF AUTOMATION TECHNOLOGY

The aggregate industry is like most other industries, and as you are aware, labor costs are the main expense. Since the invention of the steam shovel in 1835 by William Smith Otis, the industry has worked hard to become more and more productive. Some may

argue that machines have displaced workers, and we should go back to the old way of doing things.

I am here to testify that machines have helped make the industry what it is today – the largest mining association by volume in the world! Without it, America's quality of life would suffer substantially as aggregates are a key component in the built environment, homes, highways, bridges, as well as many of the consumer items we use daily. From toothpaste and cosmetics to paint and PVC piping to the foundations for our homes and the roads we drive on, without aggregates, America would be a different place to live.

GENERATIONAL SHIFT IN ATTITUDES

When I was having trouble with word problems in high school my math teacher reminded me, "identifying the problem is the key to finding the solution." In the case before us today, one can argue it is the changing demographics of the workforce that is the culprit. Each generational group has its own set of ideas as to what constitutes a good job and to be successful. Younger workers, for example, tend to place a higher value on their time away from work than earlier generations. Additionally, new workers are much more knowledgeable about what they want and don't want and the value society places on specific careers. An honest day's pay for an honest day's work doesn't mean much to younger workers if it means they will be hauling trash or cleaning portable toilets.

The 1980's and 90's were dreadful for the industry in this respect. Workers simply chose different careers or educational paths that directed them away from a career in the mining industry. Many of our operations have an age gap, where the plant manager is his mid-forties and everyone else is in their mid-twenties. A whole generation of workers was lost to us and our industry will have to work overtime-training younger employees to take the reins when current plant operators retire. However, generational attitude changes are only part of the problem.

WHAT IS THE PROBLEM?

The aggregates industry confronts two key problems -- image and education. In conjunction with this are the varied needs of an aggregate operation. One individual cannot perform all the various duties. A typical company will have a mix of hourly and full-time employees, and the industry is facing shortages in both areas. Truck drivers, mechanics, welders, and electricians are in short supply for a variety of reasons, along with the coming long-term shortage in mining engineers. But why?

First let me talk about our image problem. Who wants to work in an environment where you are guaranteed to get dirty every day and either sweat or freeze depending on the time of year and location of your job? Actually, not many, if you characterize the

job that way. Fairly or unfairly, society has mistakenly characterized mining in a negative way; believing it only scars the earth, pollutes the water and fouls the air. Until societal views change, the mining industry will continue to be perceived in a negative light. The bright side is that in addition to the myriad essential and valuable uses of our products that civilization depends upon to exist, our companies provide competitive wages, training, leadership opportunities, career advancement, and a highly varied work schedule that will continuously challenge the worker at worksites conveniently located near attractive and culturally diverse population centers.

Our mission is to educate people that the aggregates industry is an exciting field in which they want to work. The population as a whole has very little exposure to the aggregates industry because stone, sand and gravel are mainly used as a construction component. Unless they are enthusiastic shoppers of home improvement stores, the general public probably is unaware of our products. Individual member companies of NSSGA are finding various degrees of success in education and recruitment. Some, who put more emphasis on recruitment, are doing better than others.

The second problem facing the industry -- education -- comes in two parts. First, some in the industry argue that many of our k-12 schools place more emphasis on an educational track more suitable for attending a university than a trade school. The hypothesis coincides with the image problem, in that society as a whole does not put a particularly high value on labor-intensive jobs and therefore consciously or unconsciously encourages children to take pre-college courses with the hope the student will attend a four-year college. Unfortunately, this does not take into account the needs of the students. Some simply are not suited for college. This is not a reflection on their intelligence or abilities it is simply a fact. Our schools need to be able to guide students into educational tracks that are suited to their needs, not society's desires.

The second part of the problem is the coming shortage of professors to teach the students. Academics are predicting problems for mining engineering schools due to a dearth of undergraduate degree holders continuing on to advanced degrees. Without masters and doctoral candidates, there may not be enough teachers in the future to train undergraduate students. One of the main difficulties is the lack of research funds, which will be addressed later.

INDUSTRY ACTIONS

Currently, the aggregates industry hires roughly one-half of all mining engineers graduated each year. We offer a competitive salary and are located in desirable locations near population centers, as opposed to other mining sectors. To fill all the varied jobs in our industry, some of our member companies hire civilian engineers and train them for quarry work. Other member companies partner with engineering

schools to increase their visibility with students and to help ensure the next generation of engineers are properly trained and knowledgeable of the aggregates industry.

NSSGA has helped establish student chapters at seven schools for this purpose. The schools are: Virginia Tech, University of Missouri– Rolla, University of Southern Illinois at Carbondale, Michigan Tech, Montana Tech, University of Nevada Reno, and the Colorado School of Mines.

There are two local programs, which are excellent examples that specifically illustrate the activities of the industry to recruit top-notch employees. The first program, sponsored by Chaney Enterprises, of Waldorf, Md., in partnership with College of Southern Maryland, is a training program for truck drivers, offering 320 hours of intense Class A Commercial Truck Driver Training. Through the partnership the company increases its visibility to prospective employees and ensures those employees are sufficiently trained.

The second is a collaborative approach where the transportation construction industry partners with state and federal agencies to show off careers in the field of highway construction. Aptly titled ***Maryland Quality Initiative***, the group is set to hold its second Highway Construction & Engineering Career Day on October 26, 2004, at Timonium Fairgrounds. The purpose of the event is to provide an opportunity for students to learn more about career opportunities and the technology used in civil engineering and highway construction.

These are just two examples of the many programs our member companies participate in to attract employees. NSSGA also is engaged in educational activities to train the next generation of industry leaders. NSSGA hosts the following educational seminars and conferences to help improve the quality of the workforce that are directed at: Marketing & Sales Professionals, Safety Professionals, Automation, Plant Operations, Environmental Management, and Supervisory Training. In addition, NSSGA offers technical training sessions on drilling and blasting, noise & dust monitoring, and dredging. Through these courses the association is slowly developing a curriculum for aggregates professionals to help the industry train and advance its employees.

WHAT HAPPENS AFTER GRADUATION?

According to Peter Knight, Canadian chair in mining, and associate professor, Pontificia Universidad Catolica de Chile, in his recent study titled "Mining Engineers: Becoming a Scarce Resource?" even once a mining engineer is trained and hired, only 45 percent remain in the industry, while the rest end up in sales and services and as federal government employees. The problem for the mining industry is that we cannot solve the whole problem because a huge portion of the employers are not feeding back into the system through grants, scholarships and partnering with schools. Additionally, the

mining industry cannot count on foreign trained engineers to fill the gap for two reasons. First, these students are not trained to the same standards U.S. students are. Second, after attaining a higher degree and some experience, many mining engineers return to their native country for educational purposes.

The industry as a whole will need approximately 300 mining graduates per year to keep up with projected growth. This is a much higher figure than the 100 graduates the U.S. produces today. The National Research Council is considering a proposal to conduct a study on Energy and Mineral Resources Workforce Capacity Building and Education. The study would assess and quantify the perception that there is a pending shortfall of a qualified workforce in industries that utilize earth resources in this Country, and define a path to ameliorate the deficiencies that are defined by the study.

WHAT CAN GOVERNMENT DO?

Ronald Reagan once said, "The most terrifying words in the English language are: I'm from the government and I'm here to help." While the people in this room mean well, we have to be very careful when we ask for help, I think we could all do well to heed his words.

There are two simple things Congress could do to help.

1. Support more federal R&D.
2. Let the market work.

The National Stone, Sand & Gravel Association strongly encourages Congress to recognize the importance of research and development in the academic community. I would like to point out the cover story of this week's "CQ Weekly" is about the importance of basic research to our nation. Basic research will help our economy well into the future and is deserving of your support. Unfortunately, the article misses the large role research plays in training our future scholars. Research programs support our PhD candidates, which in turn support our masters and undergraduate programs. We need all three to maintain a vibrant and well-educated workforce.

Let me explain my second point by stating the law of supply and demand and the market works. For example, do you remember a few years back when web pages were first developed? It was not unheard of for web page designers to make $100,000 a year salary or more. Web page designers were in short supply and well paid. Within a few years, salaries for web page designers fell considerably as more and more designers came into the workforce. I predict the same will happen with mining engineers if the foundation for training students remains solid.

Madam Chairman, before I conclude I would like to return to the issue of safety. Industry leaders recognize that there are still too many injuries to our workers and that we can do better. One of the keys to maintaining a strong workforce is to make every effort to ensure that every worker returns home safe after a hard day's work.

I am proud that the National Stone, Sand & Gravel Association was the first trade association to form an alliance with the Mine Safety Health Administration (MSHA) to address key issues facing the aggregates industry. The first action was to undertake a voluntary effort to cut the number of worker incidents 50 percent by 2007. Nearly 90 percent of our member company employees are now covered by the safety pledge signed by NSSGA members committing them to improving their company's safety program. This effort shows the value the aggregates industry places on its workers of all ages and their safety.

I would like to submit for the record an article from *Rock Products* magazine by Charlotte Garvey titled, "Aging Miners." In short, the article is about National Institute of Occupational Health and Safety and National's attempts to address the upswing in injury and illness rates among older miners.

In conclusion, Madam Chairman, thank you for the opportunity to present the views of the National Stone, Sand & Gravel Association today. I hope there were a few nuggets of information gleaned by everyone here today to help shed light on the issue before us.