HEARING ON: Investigating OSHA’s Regulatory Agenda and Its Impact on Job Creation

COMMITTEE: Subcommittee on Workforce Protections, House Committee on Education and the Workforce

BY: Stuart Sessions
President of Environomics, Inc.

DATE: February 15, 2011
THE CWS’s APPROACH TO WORKPLACE SAFETY

The Coalition for Workplace Safety (CWS) is comprised of a wide range of employers and employers’ associations representing every type of industry from coast to coast. The goal of the CWS is to work with its members to improve workplace safety and health through the following principles:

- **Cooperation.** The CWS believes that workplace safety can be improved through a cooperative approach when all parties involved in this process (employers, employees, and OSHA) work together to achieve better results. Cooperation includes training and education so that employers, employees and OSHA all have a clear understand of what is required to comply with all applicable workplace safety and health obligations.

- **Assistance.** The CWS believes that most employers want to protect their employees and to maintain safe and healthy workplaces, and that OSHA should serve as a resource to assist employers to understand their obligations.

- **Transparency.** The CWS believes that OSHA safety and health regulations must be developed with the full transparency of the data, science and studies relied upon by OSHA. The CWS further believes that an open process with a sufficient opportunity for the public including employers, employees and stakeholders to participate in the rulemaking process and to provide helpful information to OSHA will achieve the best result in the development of a rulemaking that is clearly understandable and takes into account the impact of such rulemaking on employers and employees.

- **Clarity.** The CWS believes that standards and regulations must be written in simple and clear language so that all employers, especially small employers, will be able to understand their requirements without the expense of consultants and attorneys. The CWS further believes that greater clarity will result in greater compliance and lead to improved workplace safety and health.

- **Accountability.** The CWS believes that all parties (employers and employees) must be held accountable for their roles and responsibilities. Employers must provide the necessary training, equipment, resources and company emphasis to ensure that workplace safety and health is a priority and employees must accept that workplace safety depends on their actions and decisions.

More information is at [www.workingforsafety.com](http://www.workingforsafety.com)
Testimony of Stuart L. Sessions
President of Environomics, Inc.
Before the
Subcommittee on Workforce Protections
of the
Committee on Education and the Workforce
U.S. House of Representatives
On Behalf of the
Coalition for Workplace Safety

February 15, 2011

Introduction

Good morning, Mr. Chairman and Members of the Subcommittee on Workforce Protections. Thank you for inviting me today to testify on OSHA’s recent proposal regarding the noise exposure standard and the potential impact of the proposal on job creation.

I am Stuart Sessions, President of the consulting firm Environomics, Inc. I am here today representing the Coalition for Workplace Safety (CWS). The Coalition for Workplace Safety is a group of associations and employers who seek to cost-effectively improve workplace safety. The Coalition has retained me to analyze the potential costs and economic impacts if OSHA were to finalize their proposed new interpretation of the term “feasible” as it applies to the Agency’s standards for occupational exposure to noise.

As an economist, I have worked for more than 30 years in analyzing how a wide variety of environmental, health and safety regulations and administrative actions may affect the U.S. economy. Roughly half of my work in analyzing the economic impact of environmental, health and safety requirements has been as a Federal government employee or contractor, and about half has been as a consultant to private industry.

OSHA proposed its reinterpretation of the noise standard as a policy interpretation and not specifically as a regulation. Nevertheless, this proposed action is typical of how a new
government requirement, whether achieved by formal regulation or simply as a declaration of policy by the agency that enforces the regulations, can affect the U.S. economy and jobs.

I want to share with the Subcommittee today some initial results from two recent analyses of OSHA’s proposed noise reinterpretation by CWS and its members. These analyses have not yet been completed, and they may well not be completed, since OSHA has withdrawn its proposed new interpretation. These analyses, however, focus directly on the Subcommittee’s concern about how OSHA’s requirements may affect job creation. I expect that our preliminary findings from these analyses will be of interest and I have no expectation that the thrust of these analyses will change in a material way. The two analyses are:

1. Case studies. I have been working with about a dozen different companies on case studies of what the OSHA proposal would mean to their operations. The case studies examine how each of these employers complies with the OSHA noise standard now, what they would have to do differently if the proposed interpretation were finalized, and how much compliance with the new interpretation would cost them. And then, the case studies proceed to analyzing the impacts of these compliance costs: what would these compliance costs mean to these businesses and their competitive position, and what would the costs mean in terms of jobs? Would some of the current employees of these companies lose their jobs because the companies become less competitive and lose business, or might the noise compliance measures open new opportunities for these businesses and perhaps result in increasing numbers of jobs in the future?

2. NAM survey. The National Association of Manufacturers (NAM) has conducted a large survey of its member companies with regard to the companies’ hearing protection programs for their employees and the potential impact of the OSHA noise proposal. NAM asked a broad set of questions of the companies, including similar questions as in my case studies about the costs and economic consequences of OSHA’s proposed new interpretation. NAM has obtained more than 315 responses to their survey from manufacturing companies.
In addition to reporting today on some of the results from my case studies and the NAM survey, I have combined data from these and other sources and have estimated the overall potential impact on the national economy of OSHA’s noise reinterpretation in terms of costs and in terms of jobs. While I readily admit that my estimates are rough and uncertain, they contrast with the complete absence of any economic analysis conducted by, or at least made public by, OSHA.

I draw four conclusions from this set of analyses -- from the combination of my case studies, the NAM survey, and the national aggregate analysis:

1. The proposed OSHA noise interpretation would affect a large number and very broad range of American businesses and their employees.

2. The costs for American businesses to comply with OSHA’s proposed new policy would be very high.

3. OSHA’s proposed new interpretation would have substantial negative impacts on U.S. jobs and competitiveness.

4. All this would be for relatively little benefit in terms of improved hearing protection for workers.

Before I explain these conclusions in more detail, I would like to summarize what OSHA’s proposed noise reinterpretation would have required.

OSHA has long had a standard that prescribes 90 decibels as the maximum average noise level to which a worker may be exposed over an 8-hour work shift. OSHA has for several decades maintained the policy that an employer can comply with this 90 decibel standard through whatever combination of three noise-limiting approaches that the employer finds is cost-effective. The three noise-limiting approaches include what are known as: 1) Engineering controls; 2) Administrative controls; and 3) Personal protective equipment. “Engineering controls” include measures to reduce noise by engineered means such as mufflers on noisy
equipment, sound-deadening enclosures for noisy equipment, redesigning or changing equipment or processes so as to make them less noisy, and so forth. “Administrative controls” include measures such as rotating a worker’s tasks so as to limit the fraction of his work shift that the worker spends performing activities with high noise levels. “Personal protective equipment”, or PPE, includes such things as ear plugs or ear muffs that reduce the amount of noise exposure the individual worker receives despite whatever level of ambient noise surrounds the worker. In general, reducing a worker’s noise level is substantially less costly through use of personal protective equipment than through engineering controls or administrative controls.

OSHA’s noise standard does not treat these three means of reducing a worker’s noise exposure equivalently. The standard requires an employer to limit exposure to 90 decibels first by implementing all feasible engineering and administrative controls. Only then, after all feasible engineering and administrative controls have been implemented, can an employer add personal protective equipment in order to get below the 90 decibel limit. The key in how OSHA has sensibly implemented for many years this preference for engineering and administrative controls lies in how OSHA has interpreted the term “feasible” as a limitation on the engineering and administrative controls that will be required. OSHA has long interpreted the word “feasible” as meaning “cost-effective relative to PPE”. Those engineering and administrative controls that are defined as feasible and required to be implemented first consist only of those that are cost-effective relative to PPE. Or, said in a different way, if PPE is effective in limiting workers’ noise exposure to less than 90 decibels and is less costly than engineering and administrative controls, the employer can choose to implement PPE rather than more costly engineering and administrative controls.

In the fall of last year, though, OSHA proposed to reinterpret the term “feasible” as it applies in the noise standard. OSHA proposed to reinterpret “feasible” to mean “capable of being done” instead of meaning “cost-effective”. Under OSHA’s proposed new interpretation, then, in seeking to limit noise exposures to below 90 decibels, an employer would need to implement all possible engineering and administrative controls without regard to cost unless the employer can show that the engineering and administrative controls would threaten the employer’s ability to remain in business. Under the proposed new interpretation, the limit on required engineering and
administrative controls would change from only those that are cost-effective to all such controls that are available short of putting the employer out of business.

Obviously OSHA’s proposed new interpretation of the term “feasible” would greatly increase the required use of engineering and administrative controls relative to PPE in reducing noise exposures. I and the Coalition for Workplace Safety have been working to estimate the costs and economic impacts that would result from OSHA’s proposed new policy. I would like to summarize the four conclusions that I have drawn from our analyses thus far.

1. **The proposed OSHA noise interpretation would affect a large number and very broad range of American businesses and their employees.**

There are a wide variety of tools, machines, vehicles and processes that can generate noise exceeding 90 decibels: saws, hammers, punches, presses, sanders, burners, boilers, blowers, crushers, generators, compressors, aircraft, trucks, busses, locomotives, boats, compressed air, combustion, abrasive blasting, welding and many, many more. Workers operating or maintaining these items, or performing other tasks in the vicinity of these items, can be exposed to noise that may exceed an average of 90 decibels across an 8-hour work shift.

I have reviewed various data sources in order to develop a rough estimate for the number of employees that are exposed above 90 decibels and that therefore could be affected by OSHA’s proposed reinterpretation. I have organized these estimates by industry:

- **Manufacturing.** In regulatory impact analyses that OSHA developed in the late 1970s/early 1980s to support potential changes to the noise standard, the Agency estimated that 19.4% of all production employees in manufacturing industries (SIC codes 20 through 37, plus SIC 49, utilities) work in settings with average ambient noise exceeding 90 decibels. This estimate is rather old, but is apparently the most recent comprehensive estimate that OSHA has developed. Noise exposures in manufacturing have likely been reduced since OSHA’s estimate. I will assume in my calculations that the fraction of manufacturing production
workers now exposed above 90 decibels is somewhere between the roughly 20% that OSHA estimated 30 years ago and 2%, a level one-tenth as high.

- Construction (SIC 15 - 17). A large recent noise survey for residential construction trades found for virtually every job category that at least 10% of full-shift samples exceeded 90 decibels (roofer, framing carpenter, finish carpenter, excavator, drywall installer, brick mason and helpers, landscaper, miscellaneous trades). Exposures among commercial construction workers are higher than among residential workers, while exposures among heavy/public works construction workers are likely also to be higher. Any particular construction worker’s noise exposure can vary significantly from shift to shift as a function of how much of the shift he spends using or near a noisy tool. A brick mason, for example, may spend a large share of one shift using a noisy brick saw, but may not use the saw at all on the next shift. The result is that the fraction of construction workers who are occasionally exposed above 90 decibels for a shift substantially exceeds the fraction of all full-shift samples that exceed 90 decibels. I will assume that somewhere between 20% and 50% of all construction workers are occasionally exposed above 90 decibels, in contrast to the roughly 10% or so of all construction worker samples that exceed 90 decibels.

- Transportation (SIC 40 - 49). Workers around concentrations of transportation vehicles, particularly aircraft, can be exposed to noise levels exceeding 90 decibels. I will assume that the fraction of non-office transportation workers exposed above 90 decibels is similar to that for manufacturing production workers; somewhere between 2% and 20%.

- Other industries. There are many additional industries where workers can often be exposed at average levels exceeding 90 decibels, such as lawn care, tree service, automobile repair, maintenance and repair of large, noisy equipment, and warehousing. These other industries likely account for many fewer highly exposed workers than manufacturing, construction and transportation. I have not sought to estimate the likely much smaller numbers of highly exposed workers in additional industries.
Combining recent employment figures for manufacturing, construction and transportation with estimates of the percentages of each industry’s workers that are exposed to average noise levels exceeding 90 decibels, I estimate that there are some 2 to 7 million workers currently exposed at such levels. These workers and their employers would be directly affected by OSHA’s proposed new interpretation.

I have provided a table at the end of this testimony that shows these estimates and summarizes how I proceed further to calculate the costs and job impacts of OSHA’s proposed policy.

2. The costs for American businesses to comply with OSHA’s proposed new policy would be very high.

OSHA has not estimated what the costs would be for the additional engineering and administrative controls that would be necessitated by the policy. The most recent nationwide cost estimates that OSHA has developed involving additional noise controls can be found in the regulatory impact analyses in the late 1970’s/early 1980’s that I referred to earlier. At that time, OSHA estimated the costs for additional technologically feasible engineering and administrative controls sufficient to reduce ambient noise to 90 decibels or less as the equivalent of $4,037 per affected employee per year in 2010 dollars. Said another way, OSHA estimated for each employee exposed to ambient noise levels exceeding 90 decibels that the cost of engineering and administrative controls to reduce these levels to 90 decibels or below would average $4,037 per year. This cost estimate is OSHA’s most recent, but it is still roughly 30 years old.

A much more current estimate for the costs of the engineering and administrative controls necessitated by OSHA’s proposed reinterpretation can be developed from the NAM survey results and my case studies. Across these two data sources, 45 companies or facilities have estimated both the number of their employees exposed to average ambient noise levels exceeding 90 decibels and the costs of available engineering and administrative controls to reduce these exposures. The resulting estimates for the cost of the proposed OSHA policy per affected employee span a very wide range, all the way from less than $1 per employee per year to more than $200,000 per employee per year. The median estimate from the case studies and NAM’s
survey is $2,950 per affected employee per year, while the average across the 45 companies or facilities is $18,137 per employee per year. I believe that this average figure is skewed by several very high estimates of cost per employee that represent situations where costly controls would reduce noise exposures for very few workers, and that these controls might not actually be implemented in practice. I will assume that the controls more likely to be implemented in practice might average somewhere between about $3,000 and about $10,000 per employee per year. This range brackets the figure that OSHA derived previously of about $4,000 per affected employee per year.

These represent my estimated costs per affected worker of OSHA’s proposed new policy for manufacturing industries specifically. (Both OSHA’s estimate and the NAM survey that provided most of my cost data addressed manufacturers only.)

I would expect that the cost per affected worker for transportation industries would be roughly similar to these estimated costs for manufacturing industries. I thus will assume an identical range of between $3,000 and $10,000 per affected employee per year.

For construction industries, I believe that these costs for engineering and administrative controls would be much lower than for manufacturing, perhaps only one-tenth as much. Most of the engineering controls for construction involve changes to small equipment – less noisy saws, compressors, jackhammers, etc., in contrast to manufacturing where the noise-reducing measures would often involve changes to large machines, entire process lines or significant portions of a shop floor. For my very rough total national cost estimate for OSHA’s proposed policy, I estimate the cost per affected worker in construction industries at one-tenth that for manufacturing, and thus roughly $300 to $1,000 per worker per year.

To develop an estimate for the total national cost of OSHA’s proposed policy, we can multiply each of these figures on the cost per affected employee by the estimates I discussed earlier for the number of employees in different industries that are exposed to ambient workplace noise exceeding 90 decibels. In total, we get a national cost estimate for OSHA’s proposed noise reinterpretation that is somewhere in the range from $1.2 billion dollars per year to $27 billion
dollars per year. The total national cost is nearer the higher end of this range if we assume OSHA’s figure to the effect that nearly 20% of manufacturing production workers are in work settings with ambient noise levels exceeding 90 decibels, while the figure is near the lower end of this range if we assume conservatively that only one-tenth as many workers are exposed to high noise levels as OSHA estimated.

An annual cost of somewhere between $1.2 and $27 billion is quite large relative to most other new requirements that the Federal government imposes on private industry. Only a few Federal regulations, typically fewer than five per year over the several decades that OMB has been keeping records, impose a burden of this magnitude on the economy. This figure reflects all Federal regulations for all purposes – environmental protection, homeland security, transportation safety, consumer protection, etc., as well as occupational health and safety. OSHA’s proposed new policy on noise would be among the most expensive new requirements that the Federal government considers each year.

This is a very large cost for a policy that OSHA proposed to adopt by simply declaring it, without meeting the due process sorts of requirements that would apply if the policy reinterpretation were instead to be a regulation. If OSHA’s reinterpretation were to have been proposed as a regulation, as many would say it should have been, at a cost of more than a billion dollars per year this initiative would have been subject to the following important requirements:

- Executive Order 12866. The Executive Order requires any agency proposing a regulation that would cost more than $100 million to prepare a regulatory impact analysis (RIA). In the RIA, OSHA would need to: 1) Provide a clear and thorough explanation of the need for the proposed action; 2) Explicitly estimate the benefits and costs and economic impacts of the proposal; and 3) Fairly consider alternatives to the proposal.

- The Small Business Regulatory and Enforcement Fairness Act (SBREFA). OSHA’s proposal would undoubtedly have a significant impact on a substantial number of small businesses. As such, pursuant to the requirements of SBREFA, OSHA would need to: 1) Analyze the impact of the proposed policy on small businesses specifically; 2) Convene a
panel of small business representatives that would provide the Agency with advice on how potentially to reduce the impact of the proposal on small businesses; and 3) Consider a range of alternatives that would reduce the economic burden on small businesses.

By attempting to issue the noise standard interpretation as a policy declaration instead of a regulation, OSHA avoided all these procedural safeguards. OSHA avoided the need for analyzing costs and benefits and considering alternatives under Executive Order 12866. Indeed, the Office of Information and Regulatory Affairs was not even informed of this proposal. OSHA avoided the need to examine impacts on small businesses and the need to consider alternatives that might reduce these impacts. In my view, avoiding these requirements for analysis, disclosure and transparency makes for poor public policy.

3. **OSHA’s proposed new interpretation would have substantial negative impacts on U.S. jobs and competitiveness.**

The companies responding to the NAM survey and those involved in the case studies have offered a variety of comments on what OSHA’s proposed new interpretation would mean for their businesses. I will quote some responses to the question of whether OSHA’s proposal would affect the company’s competitive position:

- Foreign imports (even from Canada) are coming in at lower delivered cost. Labor content is already more than 25% of each sales dollar. More labor inefficiency [from administrative controls] will push us far higher.

- I would shut down.

- Most of our facilities agreed that given the estimated costs required to comply, they would in many cases either contract the work to outside suppliers (who would have to meet the same requirements) or consider moving the work out of the U.S.
• Cost increases would significantly increase cost for two processes where there is already significant and growing competition from China.

• Added costs with no commensurate increase in efficiency or output make us even less competitive than we are against the Chinese who have no such requirements to hamper them.

• The changes would have to be paid for. With already slim margins it would almost certainly require an increase in our product cost. It is already difficult to compete with foreign competitors on a cost basis. We can't and won't produce product for free or at a negative margin.

• Negative impact. We would have to invest precious assets in equipment that actually negatively affects productivity.

• We would shift more of our production overseas.

• We would attempt to fully automate the noisy process so it would not need an operator who would be exposed to the noise.

• As we continue to spend money on new and existing compliance requirements the cost to do business goes up each year. It gets tougher to stay competitive especially with the overseas markets because you can't pass these costs on to the customers.

• It would cost us a lot of unnecessary money. We are a small company and it would be a hit to our bottom line for sure, but our competitors would have the same issues so we’d all lose money together at least.

• There is no return on that investment. We don't see hearing loss now, so why invest any money in it?
Our competition would be investing their money into projects that make them lower cost producers.

Significant distraction from what we need to do to stay competitive in a globalized manufacturing economy.

Implementing all feasible engineering and administrative controls would be a very expensive exercise that would have significant safety and financial consequences.

The great majority of the responses forecast an important negative impact on the responding company’s competitiveness.

In answer to another question on whether OSHA’s proposed new approach would cause the company to reduce its number of employees in the U.S., 70% of the respondents said “yes” and 30% said “no”.

In my view, the best way to quantitatively estimate the ultimate economic impact from a broad new requirement such as OSHA’s noise reinterpretation is to use a national economic forecasting and policy simulation model. The estimated industry-by-industry compliance costs from the new requirement are loaded into the model, and the model then predicts the particular industries that will be winners and losers and the overall impacts on GNP, employment and other economic variables of interest. We have not yet run such a model to estimate the impacts that would ensue from OSHA’s proposed noise reinterpretation, but I believe that we can reasonably extrapolate from the recent results when such a model was run for a comparable potential new requirement.

The REMI Policy Insight Model is one of the most respected national economic forecasting models that is used to estimate the aggregate economic impacts from significant new spending initiatives, whether the initiatives involve private industry compliance spending such as may be required by a regulation, or investment spending such as might be associated with a governmental stimulus program. The REMI model was recently run to estimate the impact of EPA’s proposed national regulation to tighten the air quality standard for ozone. EPA’s potential
requirement regarding ozone and OSHA’s potential requirement regarding noise are qualitatively similar: both affect primarily the manufacturing and transportation industries, both will have broad national impact, and both have costs estimated to exceed a billion dollars per year. The recent REMI run for EPA’s proposed ozone standard found that a net of about 8 U.S. jobs would be lost for every million dollars per year in compliance costs. Applying this factor to the compliance costs that we estimate for the proposed OSHA noise reinterpretation, we project a net loss of somewhere between about 10,000 and 220,000 U.S. jobs if OSHA’s noise proposal were to be finalized.

4. All this would be for relatively little benefit in terms of improved hearing protection for workers

I would like to make two points here:

- First, it does not appear that work-related hearing loss is a frequent problem now, under OSHA’s existing and long-standing noise regulation and enforcement policies.

- Second, it seems unlikely that OSHA’s proposed policy shift would significantly reduce the already low rate of work-related hearing loss.

The current rate of work-related hearing loss is low

OSHA’s noise standard requires an employer to operate a hearing conservation program if any employees are exposed to an average noise level exceeding 85 decibels. A hearing conservation program must include monitoring of ambient noise levels and employee noise exposures, provision of hearing protectors, annual audiometric testing of employees, specific follow-up activities if the annual audiogram shows indication of hearing loss, and more. The employer must provide hearing protection devices to all employees exposed above 85 decibels, and must both provide and require the use of hearing protection devices for all employees exposed above 90 decibels. And, as I discussed previously, the employer must also implement all feasible engineering and administrative controls to reduce exposures exceeding 90 decibels.
Among the companies responding to NAM’s survey, more than 90% have employee exposures exceeding 85 decibels and operate a hearing conservation program as they are required to do under the noise standard. I want to emphasize these two important characteristics of the vast majority of the companies that have responded to the NAM survey. These companies: a) Have relatively high noise exposures (employees exposed over 85 decibels); and b) Take measures to protect their employees by operating the hearing conservation programs that OSHA requires. These companies provide an ideal test for how well OSHA’s longstanding approaches are performing in protecting workers’ hearing. These companies have the relatively high noise levels that OSHA is concerned about, and they have been implementing the programs that OSHA mandates. What is the result in terms of hearing loss among the exposed workers at these companies?

The answer from the NAM survey is that these companies show very low rates of worker hearing loss. For the year 2010, 132 companies provided information on both the number of their employees exposed above 85 decibels and the number of employees that showed evidence of work-related hearing loss (a “Standard Threshold Shift” or STS). The percentage of these relatively highly exposed workers that had a recordable STS was only 0.59% (184 with STS out of 31,074 employees exposed above 85 decibels among the 132 companies that responded). This incidence of STS is very low.

This already low rate of work-related hearing loss is unlikely to decline much further with OSHA’s proposed policy shift.

Most companies in my case studies (and additional companies in the NAM survey) reported that the feasible engineering and administrative controls they would implement under the proposed OSHA policy shift would not be sufficient to reduce current exposures exceeding 90 decibels to below 90 decibels. PPE would continue to be required for these employees, despite the additional engineering and administrative controls. Under current OSHA requirements and policy the rate of work-related hearing loss among highly exposed workers is low and depends substantially on the efficacy of PPE — this situation would change little if OSHA changed its
policy as proposed.

**Summary of Conclusions**

1. The proposed OSHA noise interpretation would affect a large number and very broad range of American businesses and their employees.

2. The costs for American businesses to comply with OSHA’s proposed new policy would be very high.

3. OSHA’s proposed new interpretation would have substantial negative impacts on U.S. jobs and competitiveness.

4. All this would be for relatively little benefit in terms of improved hearing protection for workers.

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Thank you for the opportunity to participate in this hearing.
## Estimated Cost/yr of OSHA’s Proposed New Interpretation of Feasibility for Noise Standard

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<th>Percent of &quot;Line&quot; Workers Needing Controls Because of Ambient Exposures &gt;90 dBA</th>
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<th>Estimated Total Cost for OSHA Policy (in $Billions/yr)</th>
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