

# OSHA'S PROPOSED ERGONOMICS STANDARD: ITS IMPACT ON SMALL BUSINESS

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## HEARING BEFORE THE SUBCOMMITTEE ON REGULATORY REFORM AND PAPERWORK REDUCTION OF THE COMMITTEE ON SMALL BUSINESS HOUSE OF REPRESENTATIVES ONE HUNDRED SIXTH CONGRESS SECOND SESSION WASHINGTON, DC, APRIL 13, 2000

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# CONTENTS

|                                      |           |
|--------------------------------------|-----------|
| Hearing held on April 13, 2000 ..... | Page<br>1 |
|--------------------------------------|-----------|

## WITNESSES

|                                                                                                         |    |
|---------------------------------------------------------------------------------------------------------|----|
| Jeffress, Charles N., Asst. Secretary of Labor for Occupational Safety and Health, Dept. of Labor ..... | 4  |
| O'Shaughnessy, Laura, Corporate Secretary, Revere Copper Products .....                                 | 29 |
| Landon, Brian, Owner, Landon's Car Wash & Laundry .....                                                 | 31 |
| Kremp, Charles, President & CEO, Kremp Florists .....                                                   | 33 |
| Russ, Leonard, Administrator, Bayberry Care Center .....                                                | 35 |
| Saxon, Edward, President, Conco Systems, Inc .....                                                      | 37 |
| Woodbury, Jennifer, Esq., McDermott, Will & Emery .....                                                 | 52 |
| Nowell, Jackie, Director, United Food and Commercial Workers Int'l Union ....                           | 54 |
| Halprin, Lawrence, Esq., Keller & Heckman .....                                                         | 56 |
| Mirer, Frank, Director, UAW Int'l Union .....                                                           | 58 |
| Cheffer, John P., Chairman, American Society of Safety Engineers .....                                  | 60 |

## APPENDIX

|                                                                         |     |
|-------------------------------------------------------------------------|-----|
| Opening statement:                                                      |     |
| Kelly, Hon. Sue .....                                                   | 72  |
| Prepared statements:                                                    |     |
| Jeffress, Charles N .....                                               | 74  |
| O'Shaughnessy, Laura .....                                              | 88  |
| Landon, Brian .....                                                     | 99  |
| Kremp, Charles .....                                                    | 104 |
| Russ, Leonard .....                                                     | 116 |
| Saxon, Edward .....                                                     | 156 |
| Woodbury, Jennifer .....                                                | 165 |
| Nowell, Jackie .....                                                    | 172 |
| Halprin, Lawrence .....                                                 | 176 |
| Mirer, Frank .....                                                      | 190 |
| Cheffer, John P .....                                                   | 209 |
| Additional material:                                                    |     |
| OSHA's Proposed Ergonomics Standard: Its Impact on Small Business ..... | 263 |
| Letter from Hon. James Talent to Hon. Charles Jeffress .....            | 266 |
| OSHA followup .....                                                     | 278 |





## OSHA'S PROPOSED ERGONOMICS STANDARD: ITS IMPACT ON SMALL BUSINESS

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THURSDAY, APRIL 13, 2000

HOUSE OF REPRESENTATIVES,  
SUBCOMMITTEE ON REGULATORY REFORM  
AND PAPERWORK REDUCTION,  
COMMITTEE ON SMALL BUSINESS,  
*Washington, DC.*

The subcommittee met at 10:35 a.m. in room 2360 of the Rayburn House Office Building, the Honorable Sue Kelly, chairwoman of the subcommittee, presiding.

Chairwoman KELLY [presiding]. Good morning. Today the Subcommittee on Regulatory Reform and Paperwork Reduction is meeting to discuss the Occupational Safety and Health Administration's proposed ergonomics program standard. I am going to call it OSHA from now on, because you all know what OSHA is.

OSHA released the proposed rule and accompanying material for comment by interested parties on November 23, 1999. The material for comment was voluminous and included a 300-page Federal Register notice and an 1100-page economic analysis. Despite more than a thousand requests for an extension of the comment period, OSHA maintains that comments would be due on February 1st, 2000. With only five days left in the comment period, OSHA then extended the comment deadline by 30 days to March 2d, 2000.

One of the concerns that I have with OSHA at this point, Mr. Jeffress, I have to just say we didn't get your testimony until almost 6:00 o'clock last night, so I had to stay up very late to have a chance to read it. I really am very concerned about the fact that it didn't get in here on time. There is a committee rule that it should be here earlier, and I think you know that.

Mr. JEFFRESS. I apologize to you for that being late.

Chairwoman KELLY. I think this may be, perhaps, indicative of OSHA's procedures, where it is a normal operating standard of being a little late here, despite the fact that the invitation letter and the committee rules require that all testimony be delivered 48 hours in advance of the hearing. OSHA didn't get it to us until last night, so I really am concerned that, if we ask you to come back, and if you are willing to come back, Mr. Jeffress, that OSHA will come back within our committee rules and get that 48 hours in advance to us so that I don't have to stay up until midnight to read it.

Any Chairman would ask the same of you. I hope it is not indicative of how OSHA plans to conduct the rest of the proceeding implementing the proposed standard.

OSHA has made it abundantly clear that you intend to issue a final standard by the end of the year. In response to the notice of proposed rulemaking, OSHA received some 7000 comments. In addition, many organizations, small business owners, union representatives, and individual workers have agreed to testify before public hearings being held by OSHA on the proposed standard. Obviously, there is a great deal of interest in the proposed standard, especially considering the amount of effort that is needed to submit written comments to a Federal agency or appear at a hearing.

I am going to go back to your late testimony. It is a big effort on the part of people to get here to submit their testimony. I had the testimony from these folks who are testifying 48 hours in advance, but you are here in Washington, Mr. Jeffress, and I didn't get it. So, I think it is important that small business owners who generally have more significant things to worry about, like operating their businesses than filing comments with a Federal agency on a proposed rule, be treated with due consideration by OSHA.

This interest really has been confirmed on the part of small business in this ergonomics rule. The interest has been confirmed in my discussions with a lot of the small business owners in my district. I have to say that they have been coming up and talking with me even as I walk down the street in my village.

The small business owners, as we will hear today, strive to provide the safest working environment for their employees. Now, all of a sudden, they are being told by OSHA that they have to do more. These small business owners certainly would do more if they knew what to do.

The proposed standard, although written in plain English, is difficult to understand and may leave far too much discretion in the hands of OSHA inspectors in assessing compliance. So, it is not surprising to find that many small business owners are confused over how they will comply and what costs of compliance will be.

Even if they are going to be able to comply, it is very important for OSHA to understand these concerns. It is one of the primary reasons for holding the hearing, to ensure that OSHA understands that small businesses are different from large businesses in terms of financial resources, technical expertise, and daily operation. OSHA needs to take that into account in developing a final rule.

Otherwise, I fear segregation. Workers for larger enterprises will get ergonomic protections, because their employers can figure out how to comply with the standard while employees of smaller businesses do not, because OSHA has abdicated its responsibility to draft a rule that actually provides scientific, identifiable workplace and engineering practice guidelines to substantially reduce or eliminate ergonomic hazards.

The proposed standard is one of the most far-reaching initiatives ever undertaken by OSHA or, for that matter, any Federal regulatory agency that is going to affect the vast majority of small businesses throughout the United States. As a result, I look forward to the hearing even though it may be very long. However, given the importance of the issue, it is critical that we in Congress devote the necessary time to understanding the ramifications of this regulatory initiative.

Let me just simply stop here and ask if anyone else—Mr. Pascrell, do you have an opening statement you would like to make.

I am going to call on Mr. Pascrell.

Mr. PASCRELL. First, I want to thank my good friend, Chairwoman Kelly, for holding this hearing today so we can examine the proposed ergonomic standard. Hopefully, this committee will be able to keep the level of bipartisanship that it always has in the past.

For the past few days again, I have been examining these standards, and I have heard the concerns of many sides. Some small business owners look at the OSHA proposal and are skeptical about how the standard will affect their business. They have asked what the costs will be. Legitimate questions. Who will be there to help them? Very legitimate questions.

I am truly confident that Assistant Secretary Jeffress will be able to alleviate those fears. That is what I am counting on this morning as we move away from the lock-step approach which we had just a few years ago. That is horrible. That is a bureaucracy which attains no objective, really, except frustration.

I think we are making progress here. Each year, 1.8 million workers experience injuries related to overexertion, repetitive motions. Six hundred thousand [600,000] are injured severely enough to require time off from work. These disorders cost employers between \$15 billion and \$20 billion.

If we can prevent these things from happening, it will be to the advantage of businesses all across America. If we can do it within cost, within reason, this is what we should be trying to do.

The evidence is that MSDs caused by ergonomics hazards are the biggest safety problem in our workplaces today, and something must be done about it. We should use this opportunity, therefore, to look at the pain and suffering being experienced by our workers, much of which can easily be averted. We are talking about real people who, I believe, need and deserve the standard to avert potentially crippling injuries. This is really an issue that hits home in my district, where there's 1100 manufacturing firms.

While I surely do not want to see them overly burdened by the government, God knows they are already. Those firms do employ 57,000 people, all of whom must be protected against MSDs.

This threat of injury is out there, and what OSHA recommends are common-sense solutions that will make a difference in their lives. The proposal is not designed, as I see it now, to create massive penalties and paperwork, because, if it was, I am not going to support it. To me, it looks to create a scenario where the problems of ergonomic injuries are abated rather than prosecuted. We are doing in this area what we have attempted to do in the environmental situation, working together to move away from prosecution to abatement of problems together.

I would like to recount the example of a New Jersey door assembly plant, where a consultant was informed by employees of wrist discomfort and pain from the repetitive motion caused by tightening the screws with a regular, straight screwdriver. Pretty elemental. Among other recommendations made by the consultant in his report to the employer, it was suggested that pistol-grip screw-

drivers replace the straight ones at an increased cost of \$25 per screwdriver. The employer implemented the recommendation, and it resulted in a dramatic reduction in injuries, especially wrist problems associated with the operation.

The proposed rule we examine today is a significant step toward ensuring the health of millions nationwide. Hundreds of companies who have implemented changes in ergonomic design have saved money, increased productivity, and they pay less in workers' compensation costs. I hope that is an objective of everybody in this room.

In conclusion, I think balancing the safety of workers and maintaining the viability of small business is a goal that, with proper communication and interaction, can be achieved. We would be terribly remiss today if we focus solely on the impact this proposed rule will have on our business. We must look closely and, in my view, strongly support the benefits and protections that this rule will give to our workers. The aims of OSHA's proposed rule are laudable, and we should not lose sight of that. I am hopeful that we will be able to find common ground, which we did in the environmental area. We must do so here. So, I would like to thank my friend, the Chairwoman from New York, for being so accommodating in setting up the hearing. I look forward to the testimony. Thank you.

Chairwoman KELLY. Thank you very much, Mr. Pascrell. I was happy to move the hearing so that we could accommodate your schedule. Mr. Manzullo has informed me he does not have an opening statement.

So, I am going to move directly to the first panel, who will be the Honorable Charles N. Jeffress, the Assistant Secretary of Labor, and the Administrator of OSHA. I am interested in hearing from Mr. Jeffress on his views concerning small business compliance, the cost thereof, and the alternatives that will be considered in reducing the potentially adverse consequences on small businesses.

Mr. Jeffress, we are going to go directly to you.

**STATEMENT OF MR. CHARLES JEFFRESS, ASSISTANT  
SECRETARY OF LABOR, ADMINISTRATOR OF OSHA**

Mr. JEFFRESS. Thank you, Madam Chair. I am happy to be here with you.

Let me call your attention to a new publication in the past two weeks that OSHA has produced for small businesses, Questions and Answers for Small Business Employers, with information on OSHA, how it operates, what to expect from us, and where to go for help. It is a part of our continuing effort to reach out to small business, to assist small business to protect their workers.

Our goal here is to keep people from getting hurt, the same goal the businesses have. I think they have a common goal, and, to the extent we can promote it and educate people through materials like this, we seek to do that.

Work-related musculoskeletal disorders, which I am going to call MSDs for simplicity's sake, are the most widespread occupational health problem facing our country today.

As Mr. Pascrell said, nearly two million workers suffer MSDs on the job. More than 600,000 have to lose time from the job as a result of these injuries. While the median number of days lost is seven, the most severe injuries of this type can put people out of work for months, and even permanently disable them.

In addition, from the employer's point of view, not only are people being hurt and made less productive, one out of every three dollars that they spend on workers' compensation goes for MSDs. Not only is this a burden for America's workers in terms of ergonomics, it is a major burden for American businesses. As Mr. Pascrell said, the direct costs attributable to MSDs are between \$15 billion and \$20 billion each year, and every year total costs ranging upwards to \$60 billion. Reducing the total on workers as proposed through this ergonomic standard will also reduce the financial burden on American businesses.

As businesses throughout the country have proven, good ergonomics is good economics. Thousands of employers across the country are proving that everyday.

The human dimension of this problem is striking. Now, let me give you a couple of examples. Ursula Stafford, a 24-year-old paraprofessional in the New York City school district—She was assigned to assist a paralyzed student who uses a wheelchair. The student weighed 250 pounds. Ursula weighed 122. She received no training on how to lift the student, which she had to do to assist the student to go to the bathroom, for example. Nor did her employer provide any lifting equipment. Ursula worked only two days before seriously injuring her back on the third day. She had a herniated disc and spasms in her neck. Today, she wears a back brace. She endures constant pain. She has been told she may not be able to have children, because her back cannot support the weight of a pregnancy. Compounding this tragedy is the fact the Ursula's predecessor was hurt in exactly the same way. Under the requirements of our proposal, Ursula's employer would have been required to fix this hazard after the first injury occurred, and she might never have been hurt.

Then there is Walt Frazier, a 41-year-old poultry worker. For nearly nine years, Walt worked as a live hanger in a chicken processing plant. He stood beside the processing line, stretched over a barrier bar designed to contain the chickens, grabbed the chickens by the legs, and then stretched upward to hang the chickens onto the shackles. He repeated this process once every three seconds. That is 10,000 times a day, 50,000 times a week, two and a half million times every year. Finally, in 1998, barely able to lift 20 pounds and unable to perform many daily household chores, he agreed with his doctors' recommendations and had the first of four surgeries in an attempt to repair his damaged hands. In addition to severe hand problems, Walter has lower back pain and severe and chronic arthritis in his hands and shoulders.

Another worker lost her job. Mary, a nurse in Oregon. She sustained a back injury. She worked on light duty for a year. Then, her hospital told her to find another job, because they did not have anything for her to do. Today, she works at different part-time jobs in different locations and can no longer provide patient care.

Workers shouldn't have to suffer like this. Many businesses, both large and small, have already demonstrated the value of ergonomics programs.

Enid Memorial Hospital's small nursing care facility in Oklahoma instituted an ergonomics program focused on back injury prevention. They presented a program to staff through lectures, videos, hand-outs, demonstrations. The facility purchased mechanical lifts and made them available throughout the establishment in '97 to '98. This practical ergonomics program cut their rate of work-related injuries by almost 75 percent. They reduced the number of associated lost workdays by over 85 percent.

Another example. A 25-person lumber yard in Ohio developed checklists for use by each of their employees in evaluating the ergonomic appropriateness of their personal protective equipment, their mechanical equipment, and their overall workplace. The lumber yard completely redesigned their work stations in 1994. As of July of last year, they had not had any lost time injuries since strengthening their program.

Another company, Ultra Tool & Plastics, a New York plastics product manufacturer, implemented an ergonomics program that cut injuries by 70 percent, reduced lost workdays by 80 percent by their solutions they put in place. This is a small employer purchasing ergonomic chairs for production employees, providing back safety training, installing robot presses to eliminate the need for production employees to reach for parts, and making pallet jacks available for metal bins to allow height adjustments.

These are only a few examples among many that are available.

We published our 11-page ergonomics standard, which I have right here. That's the total ergonomics standard, the total rules that the employer has to read.

We published our standard in November. It is based on sound scientific evidence, including findings by the National Academy of Sciences that strongly supports two basic conclusions. One, there is a positive relationship between work-related musculoskeletal disorders and the workplace. Two, ergonomics programs and specific ergonomic interventions can reduce these injuries.

We are providing ample opportunity for the public to provide input on the ergonomics proposal. As the Chairwoman said, we have heard from more than 7000 stakeholders during our hundred-day prehearing comment period. We are now in the midst of nine weeks of public hearings on the proposal. During the hearings, we expect to hear from more than a thousand witnesses, including representatives of large and small businesses, small business owners, employee representatives, and individual workers, as well as physicians, ergonomists, occupational health nurses, and others. Not only was there a pre-hearing comment period and nine weeks of hearings, participants who have filed a notice of intent to appear will also have an additional 90 days after the close of the hearing to submit further comments. In total, the combined period which interested members of the public will have to comment on OSHA's proposal exceeds eight months. This period is in addition to the small business panel review process conducted under SBREFA, the opportunity for comment after that process is concluded, and the

more than eight years of dialogue that have occurred since OSHA issued its advance notice of proposed rulemaking in 1992.

Our proposed standard relies on a practical, flexible approach. It is not one-size-fits-all. It is an approach that can be tailored to individual companies. It is an approach that reflects best industry practices. It would require general industry employers to address ergonomics for manual handling and manufacturing production jobs, where we know the problems are most severe. It requires other general industry employers to act only when someone is hurt.

The proposal identifies six elements for a full program—management leadership and employee participations, hazard information and reporting, job hazard analysis and control, training, MSD management, and program evaluations. The ergonomics program need not cover all jobs in the workplace.

Only MSDs caused by a work activity that is a core element of an employee's job or a significant part of her work will trigger coverage. Because the proposed standard is only triggered when an MSD is reported, its protectiveness relies heavily on workers' willingness and ability to raise problems when they occur.

Evidence shows that employees are reluctant to report symptoms if doing so might cause them to miss work and lose pay. Therefore, we have proposed that workers whose injuries prevent them from working could receive 90 percent of their net pay and 100 percent of their benefits to eliminate any economic loss as a result of their injuries. This proposal is roughly equivalent to the two-thirds of pre-tax pay of gross pay that workers receive under most state workers' compensation programs. But, this provision is not about worker pay. It is about injury prevention. It is designed to encourage early reporting and intervention, which is to the worker's benefit and the employer's benefit. We have included similar provisions in several other standards, including those on asbestos, cotton dust, formaldehyde, lead, methylene chloride, benzene, and cadmium.

We estimate that this proposed standard will prevent about three million work-related MSDs over the next ten years and save an estimated \$9 billion annually for American employers in terms of lost production, administrative and other direct costs. The total benefit for American businesses far outweighs the estimated \$4.2 billion annual cost of the program.

As requested by Mr. Pascrell and Ms. Kelly, we paid close attention to the unique needs of small businesses as we have developed this proposal. We have drafted the 11-page proposal in a question and answer format, as you requested, that is written in plain language. The proposal also exempts businesses with ten or fewer employees from recordkeeping requirements. It extends the phase-in requirements for up to three years for implementing engineering controls.

In accordance with the Small Business Regulatory Enforcement Fairness Act, OSHA, the Office of Management and Budget, and the Small Business Administration convened a panel to review and comment on a working draft of the ergonomics proposal last year. We then made changes, both to our economic analysis and to the proposal after the panel's review and the input from small businesses. Those changes included refining of the work restriction provision that I just mentioned. We increased the cost estimates based

on what people told us. We added the quick-fix option. The draft that we provided to SBREFA panel employers said you have to put a full program in place if an MSD occurs. After listening to small businesses, small businesses said, "Gee, if I have one problem job and I can fix it right away and it doesn't give me any further problems, why, I don't have to do the full program." We listened. We heard that. We inserted the quick-fix option, so, if you identify a problem job, fix it. No problems. In ninety days, you are done.

You don't have to put the full program in place. In addition to drafting a standard that places a minimal burden on small businesses, we plan to provide extensive assistance to small businesses, as you requested, to assist with compliance—publications, checklists, training grants, information sheets that will help employers provide their employees with information on ergonomics. We also will use Internet-based materials, outreach sessions, and our free consultation program available through state agencies. Every small employer that needs help will be able to contact one of OSHA's state consultation programs for free assistance on-site to decide whether they need a program and what to do if they need one.

We are also undertaking extensive efforts to train our compliance staff. Our Training Institute already trains our compliance officers about ergonomics, since we have been addressing ergonomic issues for more than ten years. Consistent with our standard practice, whenever we promulgate a new standard, we will revise our courses based on the final rule and assure that all compliance officers who perform ergonomics inspections receive updated training.

MSDs have a very measurable impact on the lives and careers of American workers. Companies that have worked to prevent these injuries with sound programs have often improved their productivity, drastically reduced their workers' compensation costs, and improved job satisfaction. We believe that same opportunity for a safer workplace must be extended to other workers whose livelihoods and careers remain at risk. Preventable hazards too often mean the difference between a happy, healthy, productive worker and one whose life and career may forever be changed by the misery of chronic pain from a needless injury.

Madam Chairman, I will be happy to respond to questions.

[Mr. Jeffress' statement may be found in appendix]

Chairwoman KELLY. Thank you very much, Mr. Jeffress. I obviously have obviously a number of questions that I would like to ask, but I am just going to ask one right now.

I might ask a follow-up, but then I am going to let the other people speak and ask their questions before I go back to finish with my questioning.

As I said in my opening statement, no one denies that the injuries suffered by individuals that you cite are not a problem in the workforce. My concern is whether the rule that you are promulgating will prevent these injuries from Occurring. Telling small businesses that we have a problem but not telling them how to fix it leaves it up to them to figure out.

As a former small business owner, I have to tell you that I wouldn't necessarily be able to fix a problem and fix it correctly according to what your inspector might say, because I don't know how to fix it without some kind of expert advice and consultation



or something that is carefully delineated in what you are promulgating.

So, do you plan to tell small businesses how to fix a particular injury?

Mr. JEFFRESS. There are a number of ways we are going to address this issue.

What we heard when we met with small businesses and other stakeholders prior to issuing this proposal was every business is different. There is no one fix that will work for every business, so don't put a rule in place that mandates that everybody do the same thing.

We ask, then, how do we put a rule in place? What kind of rule should we have? We were told, "tell us the elements of a program that makes sense", which is what our rule now does based on the actual practice of businesses that have ergonomics programs in place.

The rule says there are six principles important to follow in establishing programs—getting leadership from your management, involvement from your employees, training your employees, analyzing your hazards and fixing them, giving medical treatment to employees who need it, evaluating the program. So, those principles are what's required by this rule. There is no one fix, because each business is going to be different.

So, the question that you asked, then, is, okay, the small business understands the principles. How do they get an idea of what fix works? We will be producing and have produced examples of solutions that work for different businesses. Our expert advisers on the Internet that we have on other subjects, for instance, allow a small business to hit on the Internet, ask about their particular business, what kinds of hazards can be expected, and how to fix those hazards. With respect to ergonomics, here is a booklet, for instance, that has been prepared by the Consultation Program in the state of California, that is available to small businesses and is an example of the kinds of information which you have just asked us to provide for small businesses. We have in here pictures of solutions that work. We have specific solutions for different types of workplaces. This type of information will be available in print form and over the Internet and in person through state consultants.

So, a small business employer who determines that they have problems and wants help can get specific advice, can get on-site help, but is required not to put any specific solution in place but to put a program in place that fits their workplace.

Chairwoman KELLY. I am going to ask a follow-up question here.

OSHA determined that this rule is significant under the Regulatory Flexibility Act.

According to SBREFA, OSHA is required to draft a compliance guide for use by the small businesses. When are you going to that? When are you going to get that drafted? I am going to ask you several questions here.

The final rule has to be issued for publication in the Federal Register, so small businesses have material to help them comply. Or, is that going to be done later? Is that going to be done after the rule gets promulgated, and shouldn't you be trying to develop a compliance guide along with this final standard?

Mr. JEFFRESS. Yes, we will publish a final compliance guide.

As you indicated, that guide has to give guidance on how to comply with the final rule.

The final rule is now up for hearing. We are listening to people. We will be making modifications to our proposal based on what we hear to improve the rule, so the compliance guide cannot be written finally until the final rule is in place.

The final rule has a three-year phase-in for engineering controls for small businesses, a two-year phase-in for job hazard analysis.

We are already publishing, as I say, lots of advice on how to put ergonomic solutions in place and what works. The specific compliance guide that we are developing will be issued after the final rule is issued.

Chairwoman KELLY. Well, I have looked through this. I hope you are going to give people more than something like this.

One of the things that I find disturbing about this is that you have lifted that 11-page guide that you have offered to people. You say all they have to do is read that, and they will have a clear understanding of what it is you are trying to do. If I understood you correctly, that is what you said.

Mr. JEFFRESS. I said to read this to determine if they are covered by this rule and what it is they are required to do.

Chairwoman KELLY. Well, on page 1077 of your Economic Analysis, you note that the preamble has additional definitions of key items in the regulatory text. So, somebody reads that 11-page rule and your own analysis doesn't support reading just 11 pages is going to give anybody the full information that they need.

I want to know if you want to comment on that.

Mr. JEFFRESS. Yes, ma'am. I would suggest to you that the practical application of rules like this is being done every day in workplaces across this country. Earlier this week, I was in two workplaces in Illinois, NCS, Incorporated, in Rockford and at Dayco in North Aurora, Illinois. In both of those cases, meeting with the owner of the businesses, I talked to them about how do you identify these problems.

How is it you figure out that you've got a problem that needs addressing? Their comment to me was this doesn't take any expert. In the case of Dayco, the person was applying a rust inhibitor to a flywheel, had to get up underneath a conveyer, and squeeze her handgun like this, and then get on top of the conveyor and squeeze again like that. He said it is pretty clear that is a problem for us. It is a problem for that employee. They fixed that problem for \$200. They fixed that problem and prevented injuries to their employees. That's the kind of thing that employers are required to do. That is the kind of thing employers can do, and that is the thing they are doing without having to read thousands of pages of information.

Chairwoman KELLY. Mr. Jeffress, I am sorry to keep going, because I really want to let these other people go.

I do have a whole lot of questions for you. This is just the beginning. Sorry about that, but this raises so many issues, and, as a small businesswoman, I care ardently that people really get it right, just as you do.

I want to make sure that workers get protected, but I also want to make sure that the small businesses understand what it is you

are trying to get them to do. You just said that it doesn't take any expert, is what you heard, for them to define what needs to be done. On the other hand, how do we know from what you have written so far, and from what I understand from all of the things that I have read, I don't know, as a small businesswoman, that what I do is going to meet the criterion of your inspector who comes in.

That's the rub. That is the real rub, is when your inspector comes in—every inspector. It is going to be a little like, if you will forgive me, the IRS. When they come in, they are going to play “aha, I got ya.” Some of them will, because that is just the nature of human beings. I am very concerned for the small businesses who get caught in that trap. That is all I am going to say on that, because we can go back to that a little bit later. But, I am raising a cautionary flag to you, sir, that, when you do your training for these people, that they understand that is not the government's attitude.

Mr. JEFFRESS. I assure you consistency is important to us and every compliance officer calls things the same way.

But, what is most important to us is reducing injuries and illnesses. It's not the “gotcha.” It's not the violations of the rules we are looking for. We are looking to help employers protect their employees. That is why our compliance officers are out there.

Chairwoman KELLY. I hope you put those words in large-type on the wall.

Thanks. I am going to go now to Mr. Pascrell.

Mr. PASCRELL. Mr. Jeffress, we are facing a philosophical abyss here. That depends if we want to take you back five years or you want to go here. But, I think we are going to get there. I think we will get to the center eventually.

To those who believe that we can do all of these things through self-examination—I believe in self-examination. No question about it, but I also believe that, through the state of the art, through science, we can help the worker who is on the job without bankrupting the company so that he is not on the job any longer. This is what your objective is, I hope. Is that correct?

Mr. JEFFRESS. Yes, sir.

Mr. PASCRELL. I've got to tell you, though, I am very frustrated at rules that exist and are created by us and Federal agencies, and there's no way to monitor these things.

I mentioned to you before new laws and new rules that went into effect about our fire departments throughout the United States of America. There's 32,000 fire departments. You promulgated a rule—OSHA did in terms of fighting fires, that, whenever this went to multiple alarm, when two men or two women were in regardless, two had to be outside, one monitoring the situation. That rule was promulgated over a year ago. Seventy percent of the departments are not complying.

You could have all the rules in the world. You can have all the laws in the world, which leads me to believe that the best thing that we can do is make sure we try—we are all finite beings—to get it as right as possible in the beginning. So, don't be too quick, and I will say this in a declarative way. Don't be too quick to jump to put this rule into effect, to hear from a lot of folks.

I believe there should be a standard, but we have graduated from the fact of how many times can we allow the employee to raise his arm. Come on. Every person is different. Every person brings his own being to the job. Every person is unique. It is tough to deal with a standard, but that we should have a standard, that there is a threshold. That there is a plan to avoid or shrink the possibilities of injury is what we should be after.

I will support you on that if I know that you have taken into account the things that you are about to hear today.

Now, I've got two examples. In Clifton, New Jersey, part of my district, Union Camp, which is not a small business, was very dissatisfied with the high levels of back injuries experienced. I might add that the workers who experienced the back injuries were not pleased, either. [Laughter.]

Mr. PASCRELL. Despite the company's training program on manual lifting, in its effort to reduce carton heights, injuries continued to occur. The company decided, because of lost time, dollars spent, that automatic pallet positioners represented the best solution. The equipment enables workers to keep working at waist level. Workers fill the pallet. The top of the positioner automatically adjusts so the work height remains the same, reduces lifting and other awkward motions. The impact at Union Camp has been remarkable. Productivity—and we have only witnessed an increase in productivity in the American worker in the last three years—the American worker is doing his job. Productivity increased—We didn't have that productivity increase, by the way, in the '80's. We have it now. Productivity increased as car impactors no longer needed to bend, stoop, or reach. Workers can now load a pallet in 40 percent less time and less fatigue. Good stuff. Suits your purpose.

You can use that model in other places, and I am sure that is what that booklet that you held up, I hope, is all about. How many of these success stories have you found, and how did you incorporate them into where we are at this point?

Then, I have a second smaller business I want to talk about.

Mr. JEFFRESS. In preparing for the proposal for the seven to eight years after we issued the advanced notice, before we issued the proposal, we held stakeholder meetings around the country—all around the country so people could come talk to us about things that worked, such as the Union Camp proposal and what they did in their workplace. We also held best practices conferences, where people came and reported on the solutions that were working for them, that were reducing injuries and reducing Workers' Comp costs.

After listening to those proposals, those ideas, those actual practices that made a difference, we digested, what are the essential elements of these, because no one proposal would fit every workplace. What are the essential elements of these? We arrived at these six principles, fed them back to people, and are asking, in the course of this hearing, are these the right principles. Are these the right ways to guide the development of ergonomics programs?

They are based on the actual practices of hundreds of employers that came to the stakeholder meetings and told us that this is the way we do business. So, we did meet with folks like Union Camp. We did learn from them. We did incorporate into our proposal the

kinds of solutions, the kinds of principles they followed in adopting those solutions.

I would also point out that the kind of solution you mentioned at Union Camp is not unusual. Businesses are finding these solutions. At Mr. Manzullo's district recently, I had a meeting with the Zenith Corporation folks. They had people carrying heavy metal pieces from a table over to a machine. Carrying that was an issue for them, but there's a back problem. The owner of the business looked at it and said, well, why don't we put wheels on the table so you can wheel the whole table over there, and they don't have to carry it from one place to another? That is what they did and solved the problem. Those kinds of solutions are out there.

Our proposal is built on the program that helps people identify those solutions, not specifying which one to follow but specifying a process for arriving at those solutions.

Mr. PASCRELL. Before I get to the smaller business, which is really a concern of ours—all of us here—when I said that we have some philosophical problems here—and I used the example of the environment before—They are parallel issues in my mind, okay? That is how I am thinking, anyway.

We seem to be moving in government from a prosecutorial approach to these things to abatement. I have to be assured that that is where you are coming from. I think this is critical for us, that you are going to help businesses and you are not going to bog them down in paperwork and bureaucracy and nothing is accomplished. I mean, I wouldn't mind if something was accomplished. Do you know what I am saying?

Mr. JEFFRESS. Yes, I do. In response, we are moving in the direction you are suggesting we move.

One of the ways we are doing that, OSHA's standards used to specify exactly what an employer had to do—put that fire extinguisher 34 inches off the floor. Thirty-six inches or 32 inches, you are not doing what the standard says. Put it 34 inches off the floor. That is not productive. That is not conducive to safety and health.

We are moving to performance-based standards that says to employers, as to ergonomics, put a program in place that fits your workplace to solve the problems you have. That's the kind of performance-oriented approach that I think is important in putting that approach in place. Our goal here is to reduce injuries and illnesses, not to see that a block is checked or a piece of paper is written, but to reduce injuries and illnesses.

We are increasingly providing compliance assistance materials. As a matter of fact, President Clinton—His last three budgets to this Congress has proposed dramatic increases in assistance to businesses on much more of a percentage increase for compliance assistance than enforcement, because we are trying to reach out and teach. OSHA would like to be as well known for our education as we are for enforcement. We believe that is an important way to help reduce injuries and illnesses in this country.

Mr. PASCRELL. You would agree, though, that the conclusion is going to be much better if we can do this thing together in a partnership rather than you come in and tell somebody that. We have gotten complaints from one worker, two workers, and this is what you need to do.

The only time you are talking—the only way you are going to spend some money is if you are going to make the workplace safer. Are you stating that for the record?

Mr. JEFFRESS. Mr. Pascrell, yes. The only need for employers to invest in safety and health is to protect their workers.

That is what OSHA rules are designed to achieve. We would always rather do it in a cooperative manner and a partnership. Let me hasten to add, though, that I make no apology for using strong enforcement means when it is necessary to get someone's attention. But, having gotten someone's attention, the way to teach people to work more safely then is through education partnerships.

That is the way we strive to make our workplaces safer.

Mr. PASCRELL. Thank you, Madam Chairman.

Chairwoman KELLY. Thank you very much, Madam Chair. Mr. Manzullo has asked to have one question before we go to vote. We have been called to a vote. I am going to allow him to do that, because I think he has other things he has to do.

Mr. MANZULLO. Thank you. I really appreciate your coming to my district.

The purpose of that was to show you that the plants were quite capable in solving their own problems, which OSHA can do based upon, you said, 11 pages. These are the 600 pages of regulations and instructions regarding ergonomics in the Federal Register.

My question is this. My brother has a restaurant, and this is how you wash dishes. Somebody there comes in. This is how you scrub pots, and, if somebody develops an injury there, how are you going to stop that injury? He does not have an automatic dishwasher.

Mr. JEFFRESS. I am going to say that my children tell me that the dishwashers are far superior.

Mr. MANZULLO. But it costs about \$40,000. He can't afford it. How is he going to solve that problem? Tell me how you are going to solve it.

Mr. JEFFRESS. We are going to solve the problem of dishwashers. Has he had dishwashers with repetitive motion injuries?

Mr. MANZULLO. He has not had that, because they come and go, but sometimes his dishwashers are there for periods of time.

Mr. JEFFRESS. If he has not had an injury, this standard is not going to trigger anything.

Mr. MANZULLO. What happens if he has an injury?

Mr. JEFFRESS. If he has an injury, he has to look at what is there in that job that can be fixed.

Mr. MANZULLO. How does he fix that? It is a simple question.

Mr. JEFFRESS. Until someone is hurt, there is no requirement to do anything and for years he has operated that restaurant and had no one hurt.

Let's not hypothesize it. That solves a problem that doesn't exist.

Mr. MANZULLO. This standard that federalizes workers' compensation laws and encourages lawsuits. It is a very simple question. What happens when a person reports an injury because of washing dishes? A very simple question, the type of questions that at least 900,000 businesses are going to have to ask, because they are required to have a plan.

How do you stop that type of injury?

Mr. JEFFRESS. I think what Mr. Pascrell pointed out is the guidance we are trying to use is let's solve real problems.

This man has never had an injury. There is no problem to solve.

Mr. MANZULLO. What it amounts to is you can't stop that type of injury. It is an issue of an injury that will occur, and you can't fix that type of injury.

Mr. JEFFRESS. It is not an injury, Mr. Manzullo. When there is an injury, we have to work with them to solve that.

Chairwoman KELLY. Mr. Jeffress, if I may ask, we are going to have to leave, because we have to go to this vote. Just hypothesize. If there were an injury. I think that is really what Mr. Manzullo was asking. If there were such an injury, how would you, under this new rule, tell someone—that restaurant owner—to fix it?

Mr. JEFFRESS. Anytime someone is hurt by an MSD, what we would expect is for that employer to look at what are the risk factors in this job that have caused that injury. If there are risk factors in the job that are causing an injury, they would need to be addressed.

Chairwoman KELLY. How would you address them is really what Mr. Manzullo is asking.

Mr. JEFFRESS. At this point, Madam Chairman, the hypothetical example has no injury.

Chairwoman KELLY. I asked you to suggest by saying—let's have a hypothetical. Let's suggest that there are injuries like that. What would you do?

What he is trying to point out is, I believe, that the lack of flexibility, the lack of real defined solutions for businesses to follow may lead us all into a swamp that we don't want to get into.

We want to protect those workers. We just don't want to get into the swamp.

Mr. JEFFRESS. The whole purpose of this standard is to address real problems, because there are real people out there. There's 600,000 people every year suffering injuries in these jobs, losing time from work, that need help. There is no injury. We are not trying to solve hypothetical problems. We are trying to solve real problems.

Mr. PASCRELL. Madam Chair, we are trying to abate a situation, not be prosecutorial to the witness.

Mr. MANZULLO. Come on. We want an answer.

Mr. PASCRELL. Madam Chair, I have the floor. Number two.

I would think, in that situation, which is a legitimate situation that you put forth, that the people whose business it is would come up with some kind of a plan.

Mr. MANZULLO. What is the plan?

Mr. PASCRELL. I don't know what the plan is. Maybe they become ambidextrous at knowing how to wash the dishes. The point is that they would come up with the plan, not OSHA, and I think we should keep this in mind as we move along.

Chairwoman KELLY. With that, I am going to take a brief—we are going to have a ten-minute break here, so we can go and vote. We'll be back.

[Recess.]

Chairwoman KELLY. I am going to call the committee back to order here.

In the absence of Mr. Pascrell who had the floor, I am going to go ahead, Mr. Jeffress, and ask a few of the other questions I had.

One of our panelists raises the issue of pre-existing conditions and conditions that are unrelated to work. That is one of the serious things that I think we must consider with this rule before the rule is finalized. How do you address these?

Mr. JEFFRESS. It is very important to us that this proposal be read as addressing work-related problems. The rule is designed to only be triggered if there is a work-related musculoskeletal disorder.

The issue of things that happen off the job, have been happening for years. Employers have had to make decisions ever since workers' compensation has been in place about whether injuries are work-related or not.

This rule doesn't change that. This proposal doesn't change what is considered work-related or not considered work-related. So, the decision that employers have been making for years for workers' compensation purposes about whether things are work-related is the same type of decision they will have to make in the future.

So, the rule is only intended to address work-related injuries. It is not intended to address things that are not work-related, and I share your view that we need to draw a sharp line there and assure that people read this as only applying to injuries that occur in the work environment.

Chairwoman KELLY. That I understand. My concern is how does an employer know. You probably know if you have listened to any kind of testimony from this committee that I am a small businesswoman. My kids, my husband, we are all small businesspeople.

I know that, upon occasion, and my husband is a building contractor and folks take the tools that he has provided them and the safety things he has provided them, and they will work for him five days a week. But, then, they have their own sideline job, and they will go out on the weekend and do their own job for themselves. They may injure themselves on that weekend job, come back on the job, work a couple of hours for my husband, and say. Oops, sorry, I hurt my back. How is my husband to know, because it is a work-related injury. It's just not my husband's problem. It is their own problem, because they worked out on their own.

Mr. JEFFRESS. My point, Madam Chair, is that this rule doesn't affect that. This rule makes no changes in that. He has that problem today. He will have that problem tomorrow. This rule won't solve that problem or make it worse.

To make that determination as something work-related—did it occur on my job or did it occur on somebody else's job—what you have been doing and your husband has been doing in the past you will keep doing.

You'll look at, what kind of injury does this person have. That person recently has gotten that injury on my job. Is there something on my job that is likely to cause these types of injuries? Are there other things this person was doing that I know of outside of work that might have contributed to the kind or caused the kind of injury this person has? Those are the kinds of questions that I presume you have been asking in the past, that you will keep asking in the future.



This proposal doesn't add to or reduce that requirement or change the way in which you would do that.

Chairwoman KELLY. Let me just rephrase this then. Let me just take it one step further.

If the thing goes that far, my husband has got a workmen's comp board to take this thing to. But, with this new rule, someone could come in from OSHA and assess a fine and tell my husband he has to pay this person who injured himself, not on my husband's job. While all of this is being tracked, my husband has to pay 90 percent of the salary. If he is a union person, that would include stamps and benefits and vacation, and all the rest of the stuff that is built into a union-paid person.

My concern is that that takes money out of the income stream for my husband's business. He is going to have to pay that person the money, and suppose the adjudication goes against the worker, because people are honest finally and they find that the worker injured himself on another job. The worker then has to pay my husband back. The chances of my husband getting paid back are probably nil.

You know that. This is the swamp I am talking about. This is such a gray area here. There's a heck of a lot of people like my husband out there. Not just building contractors but lots of other people.

I don't want to see them hurt. I want that worker to be safe.

When they are on my job, my son will go along to the business and make sure that they've got their goggles on, they are wearing their boots, they are doing whatever they have to do to put their safety clips on. Things like that.

But, if they are out there working for themselves, even though that equipment is in the trunk of their car, they won't put it on for themselves, because they don't want to. It is an inconvenience, so you've got a real messy situation.

That swamp is out there, and I just simply want to call to your attention that that is there. I think that is what the crux is of a lot of the testimony we are going to hear today from the small businesspeople here.

I am just simply concerned that you stop, you think, and you address this kind of a situation, because that will take from the bottom line of a business profitability, I can tell you from my own experience. Profitability in small businesses isn't great. We make some money. We make enough to live on, to feed our kids, but I tell you, what we have if we are a small businesspeople we plow back into the business. That is the nature of the business. So, you need to make sure what you are doing doesn't cut into our bottom line.

Mr. JEFFRESS. Again, the decision on this is whether something triggers the standard goes back to the employer's determination. The employer makes that determination if there is some uncertainty.

The employer—many employers do, and I suspect you do on occasion use a physician that you have confidence in to make a determination about the injury. The employer in this standard can rely on the determination of the physician that the employer has chosen in deciding whether this is work-related.

There are many other OSHA standards where the possibility exists for OSHA compliance officers to second-guess employers. We try not to do that. There has been a suggestion in the rulemaking hearing that there be some appeal mechanism—some way of determining whether something is work-related, some physician review, if you will, rather than relying just on an employer's determination or just on one physician's determination.

We are open to that. We will be exploring that. Again, the purpose of the hearing is, where there are difficulties presented, if people can come forward with solutions that will help us to improve the standard, we will do that.

Chairwoman KELLY. I just want to say there is no question, in the example I gave you, that the injury is work-related. It is just not on my job. That is the problem, and I don't know how we would work our way out of it. It is a real sticky-wicket right now. I am just afraid this is going to make it worse.

We want people protected, but I just want to make sure that, if there is an injury, that we are able to ascertain where that injury came from—it didn't come from somebody going off and playing rugby on the weekend and coming back on the job.

Again, I am going to hold my questions, and I am going to go to Mr. Thune.

Mr. THUNE. Thank you, Madam Chair. Let me just say that I appreciate your objective and your goal of workplace safety.

That is something that we are all interested in here. We are obviously also very concerned about how to achieve that in a way that minimizes the disruption on, particularly, the small business sector, and I represent a state which has a large number of small businesses.

They are all small businesses, with a couple of exceptions, and farmers and ranchers. We are very much concerned about the impact this is going to have on them.

I guess, from just my observation—and, granted, it is not an in-depth one—but the vagaries that are involved here are going to impose a tremendous burden on a lot of small businesses in trying to determine compliance.

You have indicated that small businesses of fewer than ten employees are going to be exempted from the recordkeeping requirement. But, it would appear to me, that they are going to have to do something. If an inspector comes by, they are going to have to do a whole lot of recordkeeping to ensure that, when that inspector comes by, that they can prove that they are in compliance. It would be a smart business practice, I would expect—and I would expect most small businesses—to have very strong concerns that, if, in fact, they are audited at some point, that they are in compliance and are, therefore, going to be subject to a lot of the recordkeeping requirements, in any case.

I am just curious what provisions you would contemplate in a rule that would assist those small businesses in complying with the standard.

Mr. JEFFRESS. The kind of assistance that we expect to provide are, again, publications of actual solutions that have worked for different businesses.

The Internet-based programs that people can call up and inquire about the hazards that apply to their businesses and what solutions have been used.

For smaller employers, my first recommendation is always the free, on-site consultation that is available. It is funded by OSHA and available through state agencies—usually state labor departments—whereby, if an employer wants assistance, they can invite a consultant to come in. The consultant charges no fees. There are no penalties for anything the consultant finds. The consultant is expected to help the employer identify what the hazards are and what some solutions are to fix those hazards. There are 25,000 of those consultations done across the country every year. The President has asked for more money to increase the consultation staff so we can do even more of those in the future. That would be my first suggestion to the business that has a problem.

If they don't have a problem, obviously, there is no need to ask for assistance. But, if they have a problem or think they have a problem, we can provide free, on-site assistance.

We will provide assistance through our publications. I would also encourage people to use their trade associations. The National Federation of Independent Business has something on their Web site about ergonomics and what you should do as a small business. If you think you have a problem and want to address the kinds of problems you have, these kinds of reference materials are available not only from the government but from trade associations and other people to assist small businesses to resolve their problems.

Mr. THUNE. In the proposed standard, you exempt construction, ag, and maritime. My assumption is, at some point, you are going to have some sort of standard that will apply to those industries.

I guess I am wondering what kind of a standard you might be recommending for agriculture, for construction? What basis and scientific data would you use for that recommendation?

Mr. JEFFRESS. The types of MSDs that are occurring in maritime and construction and agriculture are not terribly different from the MSDs that are occurring other places. So, in terms of the injuries and the health effects of the science, if you will, of the MSDs, I think that is pretty well documented. What is less well documented is what solutions will work in those different applications.

With respect to construction, we have asked the Construction Advisory Committee of OSHA, that has employers and employees on it, to look at what solutions work, to help identify solutions, to document solutions that resolve the hazards in the construction industry. Any movement forward on our part will depend upon the kind of recommendations that we get from that Advisory Committee, the kinds of solutions that are documented there.

With respect to maritime, there is also a Maritime Advisory Committee for the National Institute of Occupational Safety and Health. It also has a two-year study on the way, particularly to address what kind of solutions work in the maritime industry. So, what kind of action OSHA takes in moving forward there would be based on the specific documentation of solutions that work in that industry.

At present, we don't have anything going forward addressing solutions in agriculture. That would be an area that the same kind of work would have to be done on.

Mr. THUNE. I assume that, if, in fact, you got to that point where you were going to propose some regulation, that you would also seek input from those who are in the business of agriculture. There are a lot of unique demands on people who work in that industry. I would expect that it is going to be very difficult, I would think, to ensure that, just from an inspection regime, to ensure that compliance is there and that the regulations are being applied in a uniform way.

I am curious to know the comments that you are receiving from small businesses. You, I think, mentioned having received 7000 comments from small businesses already, yet you are attempting to implement a rule by January of this next year. How can you consider those comments and come up with a good rule in that short of a time frame?

It seems to me, at least, that the period for a consultation and input from small businesses are being overlooked in terms of what it is going to take to fashion something or craft something that takes into consideration all the unique dynamics of the various businesses. How do you apply this in a uniform way, and how do you eliminate some of the vagaries that are associated with this?

Mr. JEFFRESS. Prior to ever issuing the proposal, as I mentioned earlier, we had years of meetings with businesses and input from businesses and employees on what types of programs work, what kinds of solutions work.

Then, prior to issuing the proposal, we published a draft and had the SBREFA process where we had 21 representatives of small businesses. It had the Small Business Administration involved and the Office of Management and Budget involved in looking at, given our draft proposal, what kind of impact that would have on small businesses. That process ran for two months where there was an intense review by small business representatives of what had been proposed, and comments following that process. As I say, we modified our proposal in several ways based on the input we got from small businesses.

Now, by March of this year, as you point out, we had 7000 comments total from small and large businesses and employee groups, and others. From March through May, we will be taking oral testimony and then 90 more days of written comments from people who participated in the hearings. That gives us a long time between March and the end of the year to analyze those comments to look at the suggestions for improvements that are made and make modifications to our proposal before it becomes final.

Mr. THUNE. Your assessment right now as to cost, I understand, is escalated. It is up to about, what, \$4-plus billion?

Mr. JEFFRESS. 4.2.

Mr. THUNE. A lot of the trade associations, I think, are suggesting it is going to be much higher than that. You know, it just seems to me that, in going through this process, that the cost that is going to be imposed on, particularly, the smallest of businesses is going to be excessive enough that it is going to drive a lot of them out of business.

I would hope that we could find a way that would, again, accommodate some of the unique dynamics of businesses—in my case, really small businesses—who are going to be hardest hit by this.

We are going to hear from a lot of groups today, I think, large and small. We are going to talk about the financial and economic burden that is going to be imposed and the issues about, again, the vague nature of the regulation. How are you going to apply it in a uniform or equal way? I just think there are a lot of questions that are still unanswered. I think that it is something that we are going to need more time to deal with.

It seems to me, at least, that the timeframe that is being imposed here, even though I know you said that you've got ample time to do it, is inadequate for the task that we have at hand.

But, I see my time is up, Madam Chair, so I will yield back to you.

Chairwoman KELLY. Mr. Thune, just so you know, I am going to hold the record open. If you have additional questions that you would like to submit, or if you would like to just stay and we have some more time, I will be glad to accommodate you with those. We will hold the record open for five days following the hearing.

Mr. JEFFRESS. Madam Chair, I will be happy to respond to some of the questions if you would like me to.

As you pointed out, Mr. Thune, OSHA did listen to the kind of comments that we got through the SBREFA process and revised our economic assumptions and did almost double the cost estimate that we proposed for this rule. During the hearings, we will hear, as you have already seen from other associations, other employers, about costs. We will also look at those assumptions, and, where we find that there is validity to them, we will, in fact, revise our economic assumptions.

But, I would hasten to point out to you that many of the assumptions that we have looked at so far are suggesting that there have been some fallacies in some of the reports that are out there. For instance, the Food Distributors International study that projected a \$26 billion cost for their industry proposed that, in order to implement ergonomics programs, their industry would suffer a 25 percent decrease in productivity, that they would have more people doing the same jobs, and that the ergonomics programs would decrease productivity.

In fact, they didn't cite a single employer that put in an ergonomics program in place that had decreased productivity. When we looked at employers in this industry, in fact, productivity increases.

If you look at Sysco Food Systems of Houston that put ergonomics programs in place in their place of business following an OSHA citation and action by the company there, they achieved a 70-some percent reduction in injuries and illnesses, a savings in money, and an increase in productivity. I think what you will find is that, when people put these ergonomics programs in place, that, rather than decreasing productivity as food distributors have projected, there will be increases in productivity. Certain businesses, Dayco that I visited in North Aurora had a significant increase in productivity when they revised their lines.

I think the same thing is going to be true of other studies, that we will find assumptions that we question. For instance, the American Meat Institute—They said that our estimate of costs for business was very low. They thought their costs should have been ten times what we estimated for business. When we looked at the assumptions in the study, we had based our costs on a 17-person business—a small business, if you will. They had based their costs on a 150-person business, a business almost ten times as large. Their costs were eight to ten times higher. Not particularly surprising, given the size of the business that was being analyzed.

So, we will go behind just the numbers and look at the assumptions, and, where the assumptions will improve ours or give better estimates than our estimates, we will make modifications, as we demonstrated with the SBREFA process. But, where the assumptions are based on misunderstandings or based on fallacious assumptions, we will talk about those, analyze those, and give our comments back so that people understand why we didn't accept their suggestions.

Mr. THUNE. If I might, Madam Chair, I would just say to that I think I am sure that we will hear, too, from groups, that there is a lot of anecdotal evidence out there about the impact that these sorts of things have and, again, I would say because some of the stuff comes to our attention in our state.

Primarily, we deal with small businesses, but we had one that came to our attention here recently. There was a regulation. The city had a gravel pit north of town from which they were going to get gravel. It was above ground, but, because it was a gravel pile, it was considered to be under the mining wing, or whatever, of OSHA. Therefore, they had to put in a porta-pottie out there eight miles north of town, which the guy never used, at a substantial cost and also had to train him in CPR even though it was one person, so, if he ever had to administer CPR on himself——

[Laughter.]

Mr. THUNE. My point is that there are a lot of circumstances where you are talking about small business situations that I don't think fit very well within the parameters of a lot of the rules that are fashioned here in Washington.

But, thank you.

Chairwoman KELLY. Thanks, Mr. Thune. Mr. Moore.

Mr. MOORE. Thank you, Madam Chair. You kind of described the rulemaking process here, the proposed rule, and the fact that there are hearings coming up over the next several weeks and months, and that further consideration will be given to information you receive during those hearings.

I guess my question to you is can you give any assurance to people who may wish to testify at those hearings that, in fact, they are not wasting their time, that, in fact, consideration will be given to any good points that are raised that have merit during those hearings, and that OSHA would be willing to further amend these proposed rules if meritorious information comes to your attention?

Mr. JEFFRESS. I think OSHA has a history of taking seriously what is said at hearings on OSHA rules since the first rulemaking we have done.

If we look at the previous hearings that OSHA has done, the final rule that comes out during those hearings is usually modified, sometimes significantly, by the kind of information that comes in at the hearing. I can look back at virtually every rule that I can remember in OSHA's history and think about the changes that have been made to those rules following the comments that people provided at hearings.

So far, in this rule, as a result of the SBREFA process, we have made modifications. We have put in a quick fix provision. We have put in an incremental fix exception. We clarified work-relatedness. We changed our economic assumptions. So, I think we have a history of accommodating good suggestions and recommendations when they come in. I can assure you, and as for the people who have come to these hearings, that we will continue that process. We will take their advice to improve this rule and put it in place.

Mr. MOORE. I heard you mention the quick fix, and I didn't hear all of your testimony, but I have reviewed briefly your written testimony here. What other kinds of accommodations, if any, does OSHA have to work with small businesses, especially to secure compliance and not just impose punishment for violations?

Mr. JEFFRESS. First, there are a couple of other things in the rule.

One I should mention is the incremental fix. When people read this the first time, they felt, well, I've got to put a whole program in place and do everything that is feasible right away. We clarified that by saying. No, no. You've got a problem. You have a fix that you think works, put that fix in place. Only if that fix doesn't work do you then go on and put more and more fixes in place.

So, we tried to clarify that incremental fix. Even should we adopt this final rule and find some employer who is not in compliance, the way OSHA procedures work, if it is a small business, should there be a penalty, small business is eligible for up to a 60 percent reduction in any penalties simply based on the size of the business. If they haven't had previous problems with OSHA, they are eligible for another ten percent reduction. If they are acting in good faith, they are eligible for another 25 percent reduction. So, in terms of a small business that is trying to do the right thing, even should there be a violation and that would be a violation that could hurt someone, the small business would be eligible for up to 95 percent reduction in any penalties that are out there. So, we did go to significant efforts to try to recognize good faith, to try to give small businesses credit for what they do to make their workplaces safe.

Mr. MOORE. Mr. Thune asked the question and made reference to a situation back in his district involving an employer with one employee and a remote job site. You heard that. It was kind of humorous the way he asked the question. Even you laughed. But, seriously—and he does have a good point here, I think, and I want to ask the question this way. If the situation is as Mr. Thune has described, how can an employer be expected to comply with some of these OSHA requirements, that they are not the violations or noncompliance?

Mr. JEFFRESS. The example he gave where somebody had to be trained in CPR, even though there was no other employee to be administered CPR to, OSHA would never cite in that situation. I

would be happy to be corrected if someone has a citation. But, I believe that kind of hypothesis is not something that we would cite.

Is the rule written such that it would suggest to someone that they should give that person CPR training? It may well be. It may well be something that we would have to rely on the discretion of the compliance officer or the area director to exercise good judgment in that situation. That is always a defense that the employer has in terms of any citation or potential citation by OSHA is what is feasible for that employer to do.

Mr. MOORE. What kind of paperwork requirements will there be, especially for small employers?

Mr. JEFFRESS. For small employers under ten, there is a specific exemption from recordkeeping. So, there would be no paperwork requirements at all. In terms of an employer, as Mr. Thune was suggesting, just out of habit or in order to defend themselves, they might want to keep some paper. As I have talked to employers about what they do when they put solutions in place, first, they have a record of the injury—that someone was injured. They have to have it for workers' compensation purposes as well as in OSHA 200 logs if they are an industry that requires them to keep those logs. So, that requirement is there. If they put in a fix, then they have some record of what they paid to buy the part or to make the change to put that fix in place. So, there is no new record that would be required in order to show—you know—you had somebody hurt and they show what they did to fix the problem.

We are not talking about generating new records here. There is a requirement that people do a job hazard analysis if there is a hazard at a job that is hurting someone as to how they determine what is going to be fixed. In talking with employers about that, most employers, if someone is hurt, they do write up what caused the accident. In that write-up, they frequently identify what the cause was. That write-up could suffice as a job hazard analysis. So, we are trying to go to lengths to assure that there's not extra paperwork required. These are things the prudent employer would otherwise be doing.

Mr. MOORE. Thank you, Mr. Jeffress. Thank you, Madam Chair.

Chairwoman KELLY. Thank you, Mr. Moore. Mr. Jeffress, you raised a question in my mind.

It is not clear to me, if there is a fine determination, who makes the determination about the reduction in the fine? The same person that assessed the fine?

Mr. JEFFRESS. There is a formula that is in our manual for compliance officers that specifies employers of what size, a given size, what amount of reduction they have. In terms of history, if there have been no serious violations in the past three years, there is an automatic ten percent. In terms of good faith, the compliance officer doing that assessment, there is a formula that is in our manual that the compliance officer follows. The area director, of course, ultimately signs off on the citations.

Chairwoman KELLY. But the compliance officers themselves are responsible for making those reductions in the fine.

Mr. JEFFRESS. Again, the compliance officer is responsible for the reductions automatic for size. It is automatic for history. The good



faith is an assessment of the compliance officer, approved by the area director.

Chairwoman KELLY. That sounds like you have got that fairly well defined. It is fairly well laid out. It is an automatic process, and I think that is part of what I have my problem with.

This ergonomics rule is that there are a lot of things in that that aren't laid out as thoroughly. I wish we could get them laid out. I've got a couple of questions that I wanted to go back to.

In your testimony, you cite the Enid Memorial Hospital. They have an ergonomics program. I am wondering if you would supply the committee with a copy of that program. Could you do that for us?

Mr. JEFFRESS. I'll be happy to give you the information we have from Enid.

Chairwoman KELLY. You state that the program cut work-related injuries by 75 percent. Seventy-five percent to me means, if you had four people injured, you now have three people who aren't. I really would like to see some hard numbers, not percentages. I started life as a research scientist, and I have to tell you I early on learned how you can play with the percentages. I would sure like to see some hard numbers on some of this testimony that you provided.

Mr. JEFFRESS. There are numbers available. I would cite the Xerox Corporation plant in New York submitted information to the ergonomics hearing. They document what they spent on their ergonomics solutions. Within Xerox, they spent \$3.4 million. They also document their savings as a result of those solutions. The savings they document are over \$7 million. That kind of data is available. We'll be happy to provide it to you.

Chairwoman KELLY. I think that is wonderful for Xerox, but, you know, if you talk about somebody who is a small business, you are talking about people with not that many employees. It is going to be harder for us to document it. So, if the Enid Memorial Hospital has some figures and they are, in fact, a small business, I think it would be good for us to see them.

I want to say that this is probably the sign of a compulsive or a sick mind, or something. I went to a Washington Capitals hockey game the other day, and I really had a good time. But, I have to tell you I was sitting there looking at the hockey players on the ice, and I was wondering whether or not the ergonomic standard is going to cover them. If so, then what happens to our hockey games? You can translate that to any other major sport—baseball. People get hit with balls. They get hit with bats. What about the stickwork on a hockey game? I mean, how is this going to affect something like our professional sports?

Mr. JEFFRESS. As you point out, the injuries in our professional sports are not related just to ergonomics. There are lots of other problems in professional sports as well.

I had to address this in North Carolina when I ran a program down there with some of our minor league teams, when they showed up as having high rates of injuries, and wondered what they should do about it.

OSHA wondered what we should do about it. But, in going out and visiting with the sports teams, we discovered that those people

who were suffering the injuries all had contracts, were independent contractors and not employees, so OSHA had no jurisdiction. [Laughter.]

Chairwoman KELLY. I have just been told by counsel that NHL players are, in fact, employees.

Mr. JEFFRESS. We may well have to look at that.

Chairwoman KELLY. And they do have MSDs, and you are going to affect them. I am not going to be happy if you do something to the Washington Capitols.

Mr. JEFFRESS. Perhaps we could help them.

Chairwoman KELLY. Bill is talking about the Devils up here, and there's a few other teams from New York we like. But, this, again, is a parameter that I wonder if you have actually thought through in terms of this rule.

Mr. JEFFRESS. In terms of professional sports teams, as I say, our general approach to them has been that they are not employees that we address. To the extent that we get complaints and folks want help or there are things we can do, we will be happy to provide assistance to anyone who asks for our assistance.

But, in targeting workplaces for inspection and where OSHA focuses our inspection resources, we look at those workplaces with the highest injury and illness rates. We have focused our inspections on those plants and those businesses where we think we can make a difference in reducing injuries and illnesses. I think you would be happy with the way we are focusing our inspections and reaching those employers with the highest rates, where people are being hurt and losing time from the job.

Chairwoman KELLY. Somewhere in my background and some of the schooling I have had, it included some Constitutional law. I would submit to you that you've got to put together a rule that applies to everybody equally, so you cannot exclude my hockey players from your rule.

Mr. JEFFRESS. I haven't suggested doing that, but I would point out, Madam Chair, that we have excluded construction and agriculture and maritime. There is good reasons for us to apply rules as necessary where they are needed.

Chairwoman KELLY. You are going to give them a buy on a compliance with the standard?

Mr. JEFFRESS. No, construction, agriculture, and maritime we will come back to and look at when we have more information on those.

Chairwoman KELLY. I am still going back. This is hitting—I mean, we are going perhaps too far for it. But, the hockey team is going to have to comply. You put this rule in place. The hockey team is going to have to comply, and I think that—I am concerned about your rushing into something that you haven't got all of the pieces put together on.

Let me just ask. In another part of your testimony, you mentioned Sysco Foods.

Mr. JEFFRESS. Of Houston. Sysco is a franchise.

Chairwoman KELLY. How large is that group?

Mr. JEFFRESS. Again, it is just a Houston distributor that I was talking about. It is probably still a relatively large employer with hundreds of employees.

Chairwoman KELLY. So that really doesn't affect our small business concerns?

Mr. JEFFRESS. The larger businesses keep the records and can document their cases better, as somebody pointed out. So, a lot of information we have on costs comes from larger businesses. But, in terms of the solutions, the solutions are just as effective in small businesses as they are in larger businesses.

Chairwoman KELLY. Do you have any records on the cost from small businesses? Do you have any estimates of what it is going to cost, and can you provide them to this committee?

Mr. JEFFRESS. Yes, in producing our estimates of the costs, we did stratify by certain sizes of businesses. We did surveys at businesses to ascertain the costs. Much of it is in our economic analysis. We have surveyed over 300 different industries. We can provide you that economic analysis, that kind of information, if you would like.

[Information may be found in appendix.]

Chairwoman KELLY. On page eight of your testimony, you state that OSHA allows the hearing participants to question each other in the hearings that you hold. I think that is really very fair and probably a very productive exchange. I am wondering if you would allow the panelists that we have following you to question you.

Mr. JEFFRESS. You always do a very effective job of questioning me.

We have submitted the OSHA panel to two days of questioning on this rule, and we were happy to provide that. We then had experts provide it by OSHA on the area of ergonomics. Each of those experts was subjected to questioning and the public who wanted to question, including most of the organizations represented in this room, I suspect, had people there to question the OSHA panel and the experts provided. So, there has been a fair amount of give and take in answering by OSHA the questions.

I don't have the time today to sit down and respond to those questions, but I assure you that, letter after letter after letter, we are responding to many of the questions that people have been asking.

Chairwoman KELLY. And you will continue to do that, I hope?

Mr. JEFFRESS. Yes, ma'am, we will.

Chairwoman KELLY. I misspoke before when I said I would hold the hearing open for five days.

I intend to hold it open, actually, for 14 days, so I want to make sure people do have a chance, that I have a chance to submit more questions to you.

Will you have some staff that will stay here, though, to hear some of these folks?

Mr. JEFFRESS. Yes, there are four people from the Labor Department who will be here to listen to the rest of the panelists.

Chairwoman KELLY. On page ten of your testimony, you state that ergonomics programs need not cover all jobs in the workplace.

Now, this is one of the things that I find troubling about what you said. You say nor are all MSDs covered, just those caused by a core element of an employee's job. Who decides, because this is very, very loose language? Who is going to decide these standards? You don't have descriptive guidelines for every single job.

We keep inventing new jobs, because we are small businesses, and we are entrepreneurs and we keep coming up with new jobs. So, you can't do it that way. So, who is going to decide which MSDs are going to be covered when an inspector comes in? Who is going to decide that an MSD is, in fact, caused by a core element of the job?

Mr. JEFFRESS. The employer decides whether it is a covered MSD or not, and the employer decides is there a core element of this job that caused this. The employer decides what kind of fix to put in place to respond to the hazard.

Chairwoman KELLY. I have one last question I am going to ask. One of the small businessmen who is here today is going to testify that repeated trauma injuries are down among all industries in the United States by 24 percent since 1994, without any legislation, without any regulation.

That has just happened. How do you explain that?

Mr. JEFFRESS. Overall, injuries and illnesses are down by 24 percent.

MSDs are, in fact, down, as well. The last number I saw was 17 percent. But, injuries and illnesses are down overall, and MSDs are down overall, but MSDs are not going down at any faster rate than injuries and illnesses all together. They remain a third of all injuries and illnesses and the single biggest cause of injuries and illnesses. There are still 600,000 Americans every year losing time from the job because of these injuries and illnesses. I am delighted that the rate, after going up at a 30- or 40-degree angle for eight or nine years, has, the last three years, started to come down. That is a sign that things are improving. As I say, injuries and illnesses over the last six years have been coming down. But, the fact is there are hundreds of thousands of Americans being hurt.

The fact that there are only 30 percent of American businesses that have ergonomics programs out there right now suggests to us that there remains a need for this rule.

Chairwoman KELLY. Thank you very much, Mr. Jeffress. There's obviously a lot more questions I will have, but I appreciate very much your patience with being here as long as you have.

I thank you very much, and I am now going to go to the second panel.

Mr. JEFFRESS. Let me just ask you to tell Mr. Manzullo we have got an ergonomist to come to work with him on his dishwashing problem. Thank you, Madam Chair.

[Pause.]

Chairwoman KELLY. The second panel is made up of five small business owners who are going to testify about their operations and how the proposed standard will affect them, what information they really need, an ergonomic standard to protect their employees.

I am very glad that Mr. Jeffress has some staff here to stay and listen to the testimony in both the second and the third panel.

With that, we are going to begin with Ms. Laura O'Shaughnessy.

Ms. O'Shaughnessy is here on behalf of the Revere Copper Products. Ms. O'Shaughnessy has a very impressive bio, and I am very happy to have you speak here today. Ms. O'Shaughnessy, if you would like to begin, please, feel free to do so.

**STATEMENT OF MS. LAURA O'SHAUGHNESSY, REVERE  
COPPER PRODUCTS**

Ms. O'SHAUGHNESSY. Thank you for inviting me to speak here on behalf of small businesses, particularly for Revere and the National Association of Manufacturers. The National Association represents 14,000 manufacturers, of which more than 10,000 are small businesses. Small manufacturers specifically are affected by this, as we have been discussing this morning.

I would like to illustrate three specific points of the difficulties of compliance with this rule—Number one, how ambiguous the kind of standard is—the proposed standard; Number two, the relative newness of the ergonomics profession; and Number three, how the two of these affect small businesses, in general, and Revere in particular.

Safety—Just to give you a little background on me and why I have the place to speak as I do—has been the main focus of my professional career and my academic career. I have a Master's in Engineering based on human factors engineering and consider myself a safety advocate and ergonomist. I could have at one point been working with Mr. Jeffress and OSHA, and I considered that.

But, instead of doing that, I found that I had the skills to take the theory and put it into practice and, by doing so, apply those principles of ergonomics and safety into an effective manner in protecting the worker and consumers. I have done that through various companies and now through my work at Revere as a corporate secretary and a board member. I am able to do it there, and I also volunteer for child safety, and I am a mother. So, I am very interested in safety and ergonomics all over.

I am not an opponent of standards and regulations. Not at all. I work to write them. I have worked to improve them. I have been in charge of enforcing them at different companies, and I think they do have a place. However, all of the standards with which I have worked have one thing in common. They are based on something that is measurable, something that is empirical, some research.

I remember, back when I was in graduate school, I was working—I think it was H.R. 3160 then. That has been over ten years ago. That just illustrates how hard making this regulation has been, that ten years ago it was still in draft—the proposals.

It is not very different today. We have not come any further on the ability to measure it.

There are certain risk factors that OSHA asserts, which I agree with, by the way, having to do with force, repetition, posture, temperature, vibration, rest periods, and so on, which bring up the ability to assess risk for a musculoskeletal disorder. However, the difference between MSDs, or ergonomics problems, and other types of safety issues are the measurements.

I can measure how much is in the air. Mr. Jeffress cited in his testimony things like benzene and lead and asbestos. Those are very measurable. The risk factors that we discuss for MSDs are not necessarily measurable, nor do we have an algorithm that can add up the variables associated with all these factors to come up with some kind of risk, some kind of measurement of the injury, or any

kind of costs we have discussed so many times, especially with your particular case with construction.

How do I know where the injury came from? You don't, and that is a great problem with this regulation. It is a great problem with all safety injuries. You really don't have a way. If you can't determine the cause, how can you eliminate that cause? That is one of the bigger problems I have with this regulation.

There is one thing, I think, that OSHA is definitely clear on, and we all agree on. We want to protect our workers, and that can be a problem. I found, just in an industry publication—an ergonomics, human factors and ergonomics society journal that just came out this month, an article entitled Work Organization, Job Stress, and Work-Related Musculoskeletal Disorders. Hmmm. It turns out that these three authors have come to believe that stress is the primary cause of the symptoms associated with many upper extremity work-related musculoskeletal disorders. Others disagree. They say that in their very first paragraph.

Now, the interesting thing I would point out besides the disagreement in the very first paragraph is that this article was submitted in 1993 and has been rewritten three times, and just approved in 1999 to be published in 2000. If it takes that long for experts to come up with facts, and still the first fact that they assert is that there's disagreement, we are in trouble.

Back to the proposed standard. This proposed standard leaves an excess of an open-ended burden on the employer not only to identify any potential hazard and the cause, but to remedy this and create an effective program.

Unfortunately, what the standard does not do is supply any clear program guidelines or any solutions. Employers are left guessing what OSHA wants them to do, where they should apply any fixes, and which jobs should be addressed.

This leaves us on the losing end of the musculoskeletal disorder battle. Ergonomics is a real puzzle, and I think it has been for a long time.

There is a need for a regulation, but I think it needs a lot more work, and specifically it needs some work as far as addressing the risks and what the measurement is going to be and how to develop a program. A more appropriate arena in which to spend funds and allocate resources to address this problem is defining quantifiable methods and a clear process, as I say.

The proposed standard is not without merit, however. An ideal standard must do two things. Most importantly, it must outline a clear, effective program and elements which, although Mr. Jeffress listed six things, the existing OSHA standards list almost exactly those same things. We don't have any changes in the proposed standard—the elements. It does not tell us how to apply them and apply them effectively. Many companies have effective programs for safety as it is and apply those to ergonomic issues. Why add another standard just to increase the levels of ambiguity and create a preferential class of injuries?

Further, this current proposal does not provide a manner to create and manage a successful in-house ergonomics program. Instead, this standard is going to require employers like Revere Copper Products—as higher, costly consultants make changes—to

make a program that might be a fly-by-night, empty, flashy program just in order to meet what their version of the standard is—which may not meet what OSHA’s auditors believe the standard to be.

Chairwoman KELLY. Ms. O’Shaughnessy, I am sorry, but I am going to impose the five-minute rule on the panels, and, if you can summarize, it would be helpful.

Ms. O’SHAUGHNESSY. Certainly. To summarize, my three points were the problems with the standard are the ambiguity—current level of ambiguity—the newness, and the naivete of the ergonomics profession in general—the two of these impacting small businesses which do not have the resources to understand the regulation and apply them effectively to meet the standard and not the imposed fines. Those are my three points. Misspent time as well as resources and increased paperwork will limit the ability of companies such as Revere to successfully reduce these risks.

Chairwoman KELLY. Would you like to insert the cited material into the record?

Ms. O’SHAUGHNESSY. I don’t think that is necessary. However, I would like to insert one change to my statement, if I may.

Chairwoman KELLY. We can do that. That is fine.

Ms. O’SHAUGHNESSY. I think it is very appropriate right now.

It has to do with our mission statement at Revere. I put in a shortened mission statement in the interest of reduced paperwork, if you will. But, I would like to tell you our mission statement is to be the best in the world at what we do and have fun doing it. This means using to the fullest extent the talent of all Revere people working as a team in a safe—that is our most important—environmentally sound and ethical manner to achieve absolute customer satisfaction through superior quality and reliability.

Thank you.

[Ms. O’Shaughnessy’s statement may be found in appendix.]

Chairwoman KELLY. Ms. O’Shaughnessy, we thank you very much. Just so you know, the boxes on the table are there because they have lights on them. They will be green. When they flip up to an orange, that means you have one more minute, and, when they go red, that is the end of five minutes. So, for the rest of you, I really would like to try to keep within the five-minute rule. The hearing is long anyway, and I am just trying to move it on. Next, I would like to go to Brian Landon. Mr. Landon is the owner of Landon’s Car Wash and Laundry in Canton, Pennsylvania. He is here for the National Federation of Independent Businesses. We are really happy to have you here. Thank you for coming.

**STATEMENT OF MR. BRIAN LANDON, OWNER, LANDON’S CAR WASH AND LAUNDRY, CANTON, PENNSYLVANIA**

Mr. LANDON. Good afternoon, Madam Chair. Well, as you mentioned, my name is Brian Landon. I am owner and operator of Landon’s Car Wash and Laundry in Canton, Pennsylvania. Besides the services part of my business, my business also includes the re-manufacturing, installation, and service of equipment related to the car wash industry.

I have been a small business owner for almost 25 years. Currently, I have three employees—one full time and two part time.

I am a proud member of the National Federation of Independent Business, as you mentioned. With three employees and gross sales just over \$200,000, I am fairly typical of the 600,000 NFIB members.

It is my pleasure to offer comments on OSHA's proposed ergonomic standard.

In opening, I would like to say that I have a strong commitment to my employees' safety and health. This is a commitment not routed in rules or regulations but in the unique relationships that exist in a very small business—relationships that come about by working side by side with my employees at the car wash, at the laundry, in the shop, and in the office, working in an atmosphere where there are no strict job descriptions and daily tasks are often shared and traded between myself and my employees.

My employees know that I will provide them with whatever support, be it information, supplies or equipment, that is necessary to create a safe workplace and to protect their health. I am typical of many very small businesses whose employees are family and friends. It is these personal relationships, not rules or regulations, that drive my concern for their health and safety. I am proud to say that we have never had an injury, accident, or health hazard occur at my business. The proposed rule ignores these unique characteristics of very small businesses.

As a three-employee business, I don't have a safety and health officer. I cannot assign the task required by the rule to a management team or a manager, or even one of my employees. The full burden would fall on me. This would have a detrimental effect on my productivity. It is my productivity on which the success of my small business and my employees' jobs depend.

As always, the overall cost of compliance would fall heaviest on my small business and other small businesses like mine. The rule does include a recordkeeping exemption for very small businesses. This exemption, under the guise of helping very small businesses like mine, is a non-exemption, since no small business owner, when faced with the threat of an inspector zeroing in on the requirements of this rule, could ignore the necessity of recordkeeping. Plus, if I were to avail myself of the quick-fix provisions of this rule, I would lose any recordkeeping exemption, such as it is.

I am extremely concerned with the regulatory burdens and associated costs that the requirements of the proposed rule would place on me and my small business—costs that have already begun—simply in my need to try and understand the proposed ten- or 11-page rule and accompanying 260 pages of clarification, a task which OSHA estimates should take one hour and to which I have already spent over 20 hours. This is just to become familiar with the rule, a task which is not yet completed.

As a matter of fact, on March 22nd, I testified before the OSHA Ergonomics Panel. During the question and answer period, the Panel could not tell me whether the remanufacturing I do at my business would or would not subject me to the rule. If OSHA is uncertain whether a small business would be covered by the rule, how should a small business know?

In closing, there are several factors relative to small business that the proposed rule does not take into account—One, the very



unique nature of small businesses and the unique way they provide for the safety and health of their employees; Two, the risk of musculoskeletal disorders in a small business is extremely low; Three, the burdens and costs of compliance would fall heaviest on the smallest of small businesses such as mine without significantly increasing workplace safety.

It seems to me, relative to small business, that the proposed standard is a solution looking for a problem. Therefore, I strongly urge the agency to withdraw the ergonomics rule.

Thank you for the opportunity to comment, and, at the appropriate time, I will be happy to answer any questions.

[Mr. Landon's statement may be found in appendix.]

Chairwoman KELLY. Thank you very much, Mr. Landon. Next we are going to go to Mr. Kremp.

He is here for the Society of American Florists, and Mr. Kremp, as a fellow florist, I really empathize with you, and I am glad to have you here testifying.

#### **STATEMENT OF MR. CHARLES KREMP, SOCIETY OF AMERICAN FLORISTS**

Mr. KREMP. Thank you. Good afternoon. Chairwoman Kelly and members of the committee, my name is Charles Kremp. I am here representing the Society of American Florists, which is the national voice of the floriculture industry that represents, really, all segments of our industry. Most of those members are small, family-owned businesses like my own.

With your permission, what I would like to do is just submit my written testimony for the record and then just briefly summarize parts of it here.

Our family has served the Philadelphia area for many years since 1946. I was in business with my brother and my father until '81 when I went into business for myself.

Now, along with my wife, I have four sons, who are in the family flower business. We currently employ 43 full-time employees and 43 part-time employees in six flower shops and one small greenhouse in the Philadelphia area.

OSHA's ergonomics proposal, I believe, does nothing to instruct me on how to specifically protect my employees from MSDs in the workplace. I have a strong commitment to a safe workplace. Our family works in the trenches. We know how the jobs are done. We work side by side with our employees.

I believe our record demonstrates how we protect our employees. I looked at our workers' compensation claims report over the last several years and found that, when we take out automobile accidents, there were only nine injuries. Four of them required compensation, and only one was related to an MSD. The other five injuries were mostly slips and trips.

We have employees who are in their 70's who have said to us that they can no longer do the jobs that they were hired to do. But, they are good workers, and we want to keep them, so we found other places for them, and they are happy and we are happy.

One of my immediate concerns with OSHA's proposal is the time and cost for me to understand and implement the program. I, too, do not employ a safety expert, so this burden would fall upon me,

as Brian had mentioned with his firm. I also have spent several hours trying to understand this document, which is 310 pages long, where OSHA says that they estimate one hour per business cost. I must be a very slow learner. Trying to comply with this rule will divert my time and my attention from pursuing the more proven efforts to maintain a safe and healthy workplace, and those efforts are already effective with our people.

OSHA's proposal covers any employer whose employees work in manual-handling jobs. These kinds of activities involve many jobs in a typical retail flower shop. Unlike large employers or employers with union contracts, each job's core element is not specifically defined.

The regulation does give some examples of manual-handling jobs. However, the definition is very vague. Because of these activities that I just described, I think I would automatically be required to implement those first three elements of the ergonomics program.

However, we do all of this now—lead, interact with employees, identify hazards, and all of this without regulations. The problem is the way we operate now may not satisfy the OSHA inspector, yet it achieves the goal that is intended.

The first element, the management, leadership, and employee participation, if I didn't do this already, I couldn't succeed. In a small business, there is no filter to prevent management from knowing of problems. As already mentioned, I work side by side with and know each of the employees very well. They are not faceless numbers. Problems of all sorts are discussed. Suggested course of actions are developed and implemented. The problems are brought to management's attention and acted upon immediately, because we are working together.

The hazard information and reporting element has instructions that are incredibly broad and vague. I prefer to know absolutely if and when I am in compliance. OSHA's goal should be to identify specific problems with known solutions that are effective and proven, because that is what we do now in our business, and that is how we stay in business.

The work restriction provision is troubling to me, as are the provisions that mean we have to change our facilities. We don't control all of our facilities. We rent space, and we don't have the control over those facilities and could not control them if we needed to.

In conclusion, our company is very concerned with safety and the health of our employees. If OSHA were to set forth an affirmative rule showing me how I can protect my employees from MSDs in the workplace, I would most certainly embrace it.

This rule will have a negative impact on our business with no guaranteed benefits.

I appreciate the opportunity to offer the comments, commend you for holding this important meeting. If I can answer any questions later, I would be happy to. Thank you.

[Mr. Kremp's statement may be found in appendix.]

Chairwoman KELLY. Thank you very much, Mr. Kremp. We are going to move on now to Mr. Russ. He is Administrator of the Bay Care Center in New Rochelle, New York, and he is here for the American Health Care Association.

Thank you, Mr. Russ.

**STATEMENT OF MR. RUSS, ADMINISTRATOR, BAY CARE  
CENTER, NEW ROCHELLE, NEW YORK**

Mr. RUSS. Thank you, Madam Chairwoman. Good afternoon, ranking member Pascrell and members of the Subcommittee.

Just as a casual aside, I bring to you, Madam Chairwoman, the warmest regards from other health care providers in your home district. We have always felt that you have been able to champion that delicate balance between the needs and aspirations of health care providers, their dedicated workforce as well as the patients we serve.

I am the Administrator and partner in my family's business, Bayberry Care Center, in New Rochelle, New York. Bayberry is a 60-bed, skilled nursing facility employing 50 full-time and 30 part-time professional and nonprofessional staff, most of whom are direct caregivers.

I am here today, as you mentioned, representing the American Health Care Association, a federation of affiliated associations representing more than 12,000 nonprofit and for-profit nursing facilities, assisted living, residential care, and intermediate care for the mentally retarded and sub-acute care providers. AHCA's member facilities employ more than 1.2 million workers, the majority of whom are front-line caregivers.

First, I just want to make two broad points. I want to tell you that the imposition of these regulations would surely result in the diversion of scarce resources from recruitment and retention of caregivers in the tightest labor market we have ever experienced. This would divert our desperately needed resources away from wages and benefits and towards regulatory compliance, an area which remains clearly ambiguous—which may sound like an oxymoron but that is something we have had to wrestle with.

Second, the standard will also create a barrier between patient and caregiver, and ironically but not surprisingly conflicts with the Health Care Finance Administration's own regulations, which is the primary regulatory agency governing the quality of life of our patients.

AHCA and its members recognize and emphasize the importance of employers protecting workers from recurring or exacerbating pre-existing MSDs. Long-term care employers like myself care deeply about the health and welfare of our employees. We realize that the health and well-being of our patients is tied directly to the health of our caregivers. Indeed, we know that the physical well-being of our caregivers is actually essential to the delivery of the optimal quality of care.

Recognizing that the potential physical challenges associated with caring for the frail and the elderly, my facility has worked to reduce injuries to our caregivers for many years. I would like to share some of those elements of my program with you.

For more than the last two decades, we have used mechanical lifts. The most commonly known is a Hoya lift. These are used to elevate and transfer the most physically challenged patients. There are many types of such lifts on the market, and most operate according to the same basic principle of positioning a resident securely in a seated position on a canvass sling that is cranked and elevated mechanically. The frame of the device is mounted on

wheels enabling the transfer of the patient to a desired location where the resident is lowered and released. Our caregivers are also given back braces for use during lifting and transferring, which most employees use routinely.

I found it somewhat ironic, in listening to Assistant Commissioner Jeffress, who pointed to the facility in Oklahoma and the inordinate success they have had in their voluntary program of compliance. We, too, have had incredible success. In fact, we have never known or experienced any MSD injuries at all.

It is ironic that, given the track record of the double-digit percentage reduction in these MSDs that he, himself, pointed to, that we would now have to go into an ergonomic standard when we are making such incredible progress on the voluntary side with the existing programs. What we need, perhaps, from OSHA is guidance. What we do not need are new guidelines.

The lift and transfer of patients from bed to a wheelchair, from the bed to the bathroom, are events that occur repeatedly throughout the day. They are an integral part of the resident's care and the safety of the caregiver.

Now, when the resident is admitted to the facility, we are required by Federal regulation to assess that resident and every aspect of their activities of daily living. One of the key things that we are required to do by Federal and state regulation is to ask them how they would want to be lifted if that is what they need. If they prefer to be lifted by caregivers—and most of them do prefer that, preferring, of course, the intimate and warm contact with another person and not wanting to feel dehumanized by the possibility of being lifted by a mechanical device—we have to adhere and honor their requests. The regulations of the Health Care Financing Administration are designed to protect residents' dignity. If a caregiver were to follow that, they would possibly be in violation of OSHA's regulations.

More than anything, this paradox illustrates an overall dilemma that we face in long-term care, which are layers of conflicting regulations promulgated by different Federal agencies which are either unaware of or indifferent to each other's mandates. This is where Federal standards work at cross purposes. HCFA requires caregivers to follow the residents' requests, but OSHA imposes ergonomic standards favoring mechanical lifts. There is no resolution. I was asked to tell you whether I believe the current programs for my facility will grandfather me into OSHA's ergonomic standard. The honest answer is I am not really sure.

Chairwoman KELLY. Mr. Russ, I am sorry, but the five minutes is up. Could you please summarize?

Mr. RUSS. I sure can. To put in simple terms, to equip a 120-bed facility with moderate or heavy acuity including state-of-the-art resident-lifting equipment would cost approximately \$30,000. Long-term care is in a financially fragile position. It is a simple reality that business cannot ignore the costs of regulation. With almost ten percent of all nursing facilities right now in bankruptcy, the desperately needed resources to comply with this ambiguous regulation simply are not there. We are not, like other businesses, able to raise prices. We are paid for largely by Medicare and Medicaid. Unless the government is prepared to finance and fund this un-

funded mandate, there is absolutely no way that we are going to have the resources to do so.

Our first priority is the health and safety and dignity of those for whom we care, and our providers are committed to that.

[Mr. Russ' statement may be found in appendix.]

Chairwoman KELLY. Thank you very much. We have been called for another vote.

We have a few minutes. In that time period, I would like to call on you, Mr. Saxon.

You are our last witness on this panel, and, if you can manage to fit this in five minutes, we can get your testimony in and still get to our vote on time.

Mr. Saxon is President of Conco Systems of Verona, Pennsylvania, and he is here for the National Small Business United. Welcome.

**STATEMENT OF MR. EDWARD SAXON, PRESIDENT, CONCO  
SYSTEMS, VERONA, PENNSYLVANIA**

Mr. SAXON. Thank you very much, Chairwoman Kelly, ranking member Pascrell, and members of the Subcommittee on Regulatory Affairs and Paperwork Reduction.

Thank you. My name is Ed Saxon, President and Chief Executive Officer of Conco Systems, Incorporated, in Verona, Pennsylvania. My family in Conco Systems employs approximately 80 people in our efforts to provide condenser-related tools and services to the fire generation industry. I am also here representing the National Small Business United, the nation's oldest small business advocacy organization, and SMC Business Councils of Pennsylvania.

I respectfully submit this testimony regarding the impact of OSHA's ergonomics rulemaking on behalf of the NSBU and SMC.

The promulgation of a mandatory workplace ergonomics standard is a substantial concern to all small businesses. Small business will be significantly and adversely affected by this standard as it is currently written. As a small business owner, worker, workplace safety and health is a vital concern to me, but I do not feel that the ergonomics proposal as it appears now is the best means of addressing this problem. Thus, I am, as is NSBU and SMC, strenuously opposed to the promulgation of final ergonomics standards in its current form.

I urge OSHA to take a step back, gather all the relevant information, comments, and research, to re-evaluate the ergonomics proposal. Barring that, I ask the Congress to intervene to protect small business from an improperly promulgated ergonomics standard.

Let me share a cautionary tale from my own business, Conco Systems. In October, 1990, Conco hired a part-time employee as a general laborer and pump mechanic. In November of '92, this employee began to complain of pain in his right wrist. The pain was originally diagnosed as a possible slight carpal tunnel syndrome. Surgery was a possibility. This employee went for further testing, and it was found that CTS was an incorrect diagnosis. The patient was sent to a neurologist for further examination.

At that time, November of '91, this person's workers' compensation claim was denied as a result of a diagnosis that the problem

was not CTS and could not be traced to any work-related incident. The patient-employee continued to pursue his claim even after being laid off as a result of reduced workload. Some years later in July of '94, this former employee's workers' compensation claim was approved, granting him medical expenses and back wage benefits to February, '92, plus penalties and interest, even though he had left the state and removed himself from the workforce. On January 11th, 1999, the case was closed on appeal reversing the July, '94 position, claiming that this employee was responsible for restitution, which, of course, never happened. This former employee made it perfectly clear that he had no intention of returning to work, either at Conco or anywhere else.

Not only are these injuries hard to diagnose and trace to any specific incidents, work-related or otherwise, they are often impossible to evaluate in an effective manner. To place the burden on the small business employer to resolve problems that medical professionals nor workers' compensation courts cannot determine is not fair.

If the current proposed ergonomics regulation were in place when this incident occurred, this single incident would have required Conco Systems to investigate this pump mechanic's job and find ways for him to perform the functions without further aggravating his injuries, at great expense and time. It clearly would have potentially opened the door to further claims by other Conco Systems employees, although the so-called claim was shown to be unrelated to the workplace and the workers' compensation award reversed by the courts. Nonetheless, the so-called claim was made and accepted at one level of the workers' compensation program. This would likely be significant enough a situation to have triggered the currently proposed ergonomics standard at Conco.

What this one example illustrates, an example that is, no doubt, duplicated almost every day across this country in many small businesses, is the potentially devastating impact that a poorly thought out ergonomics standard with loose definitions and overly easy triggers and harsh repercussions can have on honest, productive small businesses like mine. I know that many of my fellow panelists will go into great detail as I have in the written statement. So, I will leave the detailed critiques and suggestions to my submitted written testimony.

Let me conclude by stating clearly that, as a representative of National Small Business United and SMC Business Councils, as a small business owner, I strongly urge OSHA to reconsider the release of their ergonomics standard without a more complete review. I also encourage Congress to take the action to stop them if they do not.

In summary, I really don't believe OSHA should be in the insurance business providing benefits to injured employees. The standard addresses existing conditions, not only ones caused but aggravation on existing conditions.

None of the testimony of Mr. Jeffress was relevant to small business, and, with regard to Mr. Pascrell's statement on the pollution analogy, let me say that there are no longer hardly any small foundries left in the United States as a result of that program.

Thank you for your time.

[Mr. Saxon's statement may be found in appendix.]

Chairwoman KELLY. Thank you very much, Mr. Saxon. You came right in right on the dot. That was very impressive.

Mr. SAXON. Us small business guys are efficient and operate well under pressure.

Chairwoman KELLY. Way to go, Mr. Saxon. We have been called for a vote.

I am going to take a short ten-minute break. When we come back, we will go directly to the questions for the panelists. Then, we will move on to the third panel. Thank you very much.

[Recess.]

Chairwoman KELLY. Thank you very much. I am just going to continue to go right on here.

I am going to start with my own personal questioning with you, Ms. O'Shaughnessy. You are evidently an expert in this field, although you don't want to be called an expert since you say the field is so young.

But, given your knowledge of the field, you say you couldn't tell your employer what constitutes compliance for the proposed standard. What if you went to another job? Can you come up, tell them, another manufacturer, how to comply with the proposed standard?

Ms. O'SHAUGHNESSY. To clarify that, I believe my statement was we could figure out how to comply with our interpretation of the standard. But, that is not necessarily equal to OSHA or the specific auditor's perception or interpretation of the standard, and that is a major issue.

Chairwoman KELLY. I am sorry if I mischaracterized it. That is exactly what you did say.

Ms. O'SHAUGHNESSY. I think I could at my current employer. I could help them interpret it and apply it effectively as well as a new employer.

Chairwoman KELLY. You think you could?

Ms. O'SHAUGHNESSY. I do, because I have a background in it.

I don't mind being called an expert, because it is a new profession. It is constantly growing and learning and changing. It wasn't an insult as much as a fact. I think I could. I have legal advisors. I have the background—academic and practical background. Not every small business has that.

I think I would have some difficulty complying with it, and, in the event of an audit, I would have difficulty working with that particular auditor and their personality, which comes into play with the regulation.

If I am going to have difficulty complying with it, 90 percent of small businesses are going to have difficulty and will not be able to comply with this.

Chairwoman KELLY. If you were going into, say, Mr. Landon's business—now, I shouldn't say you.

But, suppose someone went into Mr. Landon's business and started to just talk with him about compliance, and they didn't have your background. What I am driving at here is you stated in your testimony that there is a large number of charlatans and snake-oil salesmen that are selling ergonomic advice. I think that is an important point, and, if you got one of those folks going into

Mr. Landon's business, how can he protect himself from that sort of thing?

Ms. O'SHAUGHNESSY. It is very difficult, and I think one of the things we have to caution ourselves with as we go out and find consultants—which small businesses have to do to comply with standards—OSHA's free consultants are not always available.

We are not necessarily comfortable using them. Many times we get a consultant with a flashy program that speaks very well to a group, has very nice graphics and slogans. However, they just have enough knowledge to be dangerous. Having enough knowledge to be dangerous and not enough knowledge to be effective can be a real downfall.

Chairwoman KELLY. Well, Mr. Landon, we caution you then. Get somebody who has got some real expertise in the field. [Laughter.]

And, obviously, according to Ms. O'Shaughnessy, this is going to be a little more difficult than one would think.

One of the things that OSHA mentions is that one way to avoid all of the problem is being able to utilize the so-called quick fix. How easy would it be in your business, since I know you have large pieces of machinery, to reconfigure your shop floor to do a quick fix? Would it be possible to do it at all?

Ms. O'SHAUGHNESSY. It really depends on the level of the hazard.

If we are talking about a broom handle, of course, that would be easier. If we are talking about moving the entrance of a machine so what is fed in is at a different height for differently-abled or different-heighted people, that can go into tens of thousands of dollars. Doing something like that is going to be prohibitive under budgetary constraints, time constraints, business constraints, customer constraints, where we are really going to reap the benefits of making those changes and not necessarily because of the difficulty of finding the actual cost, and fixing the problem.

Chairwoman KELLY. One of the things that occurred to me when you talked about someone feeding a machine is that there is usually a fairly big difference between the size of a woman and the size of a man. If you have a factory that is running, manufacturing 24 hours a day, seven days a week—as plenty of them do—and you have a man feeding something into a machine, and a woman with a much smaller stature comes to take over in that job, how easy will it be for someone to look at this from an ergonomics standpoint and make sure that either the man or the woman don't fall into the MSD problem, if there has been a demonstrated problem at that machine?

Ms. O'SHAUGHNESSY. How easy would it be to find the problem, or how easy would it be to fix it? To fix it would probably be very easy, because you can find all kinds of mechanical and engineering means to do it.

The cost of those may mean that you cannot do it immediately or that you remove that employee, which kind of negates our whole intent of protecting the worker, because we are removing the worker. Finding a feasible fix is not so easy. A lot of these machines are over 50 years old, if you will—fixed heavy metal, heavy industry machines, and are not changeable. So, this will bind our hands considerably.



Chairwoman KELLY. Thank you. I am going to jump to Mr. Landon.

Mr. Landon, have any of your employees ever requested a change in their work environment based on musculoskeletal problems? If so, how did you handle it?

Mr. LANDON. No, they haven't, and I need to go into that a little deeper. I have just one full-time employee whose range of duties cover the gamut and can change drastically from one day to the next. But, no, I have not.

Chairwoman KELLY. I am interested, on page two of your testimony, you note that you have already spent 20 hours reading the proposed standard and the preamble. Congratulations. Have you read the economic analysis in which OSHA assesses various workplace controls for correcting ergonomic problems? Or, did you simply surrender after trying to wade through the preamble and the rule?

Mr. LANDON. "Wade" is a good choice of words. I did attempt to read some of the economic analysis. I have mentioned I am not a safety expert. I am also not an economist. I have to say that most of it was Greek to me.

Chairwoman KELLY. This is it. You don't feel you have a real grasp of it.

Mr. LANDON. No.

Chairwoman KELLY. As a small businessperson, it is going to take you hours to try to understand this. Is that what you feel? It would take any of us in small business probably the same amount of time.

Mr. LANDON. Absolutely, and, as I mentioned, I have spent a great amount of time already and have not yet been able to fully understand the rule and, particularly, even understand whether or not I am going to initially come under the rule that is not that clear. I don't have a clear answer to that yet.

Chairwoman KELLY. I want to go to something that I tentatively raised with Mr. Jeffress. I am going to follow up in some of my line of questioning with him.

I want to talk about that with you. As a small businessperson, you pay workers' compensation. Who determines—Just for the record, who determines whether an injury is covered under workers' compensation?

Mr. LANDON. My experience, since I have not had injuries—I really have to honestly say I don't know the answer to that. I would assume it would be the physician who examined the employee.

Chairwoman KELLY. Who would determine whether the injury triggers fixing the job or the worker restrictions?

Mr. LANDON. As the rule reads, it is the employer's responsibility. Again, besides not being a safety expert nor an economist, I am also not a health care professional, so it would be a pretty tough call for me.

Chairwoman KELLY. So you don't feel you have the expertise?

Mr. LANDON. No, I don't.

Chairwoman KELLY. Do you feel this is a pretty heavy load that is falling on your shoulders?

Mr. LANDON. I feel it would be a tremendous burden. I can see huge portions of my time being taken up trying to comply with the rule, taking me away from far more productive uses of my time.

Chairwoman KELLY. If the standard is issued, what do you think it should include to make sure that you could cost-effectively implement it and ensure that you are protecting not only yourself, since you work with your workers, but your workers, also?

Mr. LANDON. I am not sure I could suggest a modification to the rule that would fit very small businesses such as mine. To go a little further on that point, one thing I think the rule doesn't take into account is the unique characteristics of very small businesses such as mine and how we currently deal with health and safety based on these personal relationships that exist in our business.

My employees are, all three of them, either family or very close friends. These are relationships that don't exist in larger businesses. OSHA has done nothing to allow for that difference between very small businesses and larger businesses.

Chairwoman KELLY. But you would work with them, I assume, and you just would automatically protect them and take care of whatever injury they might experience, and try to work to correct it on your own.

Mr. LANDON. Absolutely.

Chairwoman KELLY. I am going to just go on to my questions for Mr. Kremp.

I was really fascinated, Mr. Kremp, when I read your testimony about the experience you had with the worker with the MSD injury. Do you mind describing that injury that was suffered by your employee and talk about the time that was missed?

Mr. KREMP. Could you tell me just which injury? I wonder if that was in my testimony, because we really haven't had any serious MSD injuries.

Chairwoman KELLY. I'm sorry. I see where it is. It is here.—Over the past several years, our problems have been negligible, in fact, only nine injuries. Only four of the injuries required compensation, and only one was related to musculoskeletal disorders. Now, that is from your testimony, actually, sir. That is on page four.

Mr. KREMP. Yes, and I believe that these were—There was a strain when someone lifted a box. We reported it, but it was not serious enough for them to feel they needed compensation. The way that this was handled was that our employee reported to my son that he had strained his back lifting this box and he didn't need to go to the doctor. We said. Take it easy and see how this works. We reported it, as we have to with any injuries on the job. Within a couple of days, he felt better. He worked for us for several years and has since that point. So, he was accommodated in that we told him to take it easy and don't do any lifting and let it get better.

Now, the injury may have been caused by some activity that was beyond the workplace or it may be that, at that one time, he did something in a manner in which he should not have. But, it was a minor injury that repaired itself in the normal course of healing. We accommodated it. We accommodated it in the normal way that we do business.

A similar situation happened with another employee, where they twisted an ankle when they were setting up a display. We did the

same thing—allowed him to have activities at work that would not make this position more severe.

We have had situations where the workers themselves would help each other. For instance, we have an elderly gentleman who was not able to lift large boxes—and they are not that large. A woman that works for us helped him. I remember seeing this so clearly—helped him carry them in.

So, I think that the situation is such in a business where no one wants pain. A businessperson doesn't want pain for their employees. They don't want it for themselves, and the procedures are in place to prevent pain, and those procedures start out with common sense.

Chairwoman KELLY. Mr. Kremp, having some familiarity with the florist business, I am very interested in asking you this next question, which is how easy is it for you to find floral designers? And, no, I am not yet applying for a job.

Mr. KREMP. Open for a draft. I understand you are off next week or Easter week.

Chairwoman KELLY. I am pretty fast, Mr. Kremp. I have learned.

Mr. KREMP. You wouldn't have to twist my arm. In most small businesses now, especially with the fact that it is a tight labor market, we are able to attract employees because we are able to provide them with a job they like to do. So, we have a lot of people to come to us to be floral designers, because that is really what they want to do.

Now, when they come to us and that is what they want to do, it is unrealistic to think that, if they have some kind of an injury, that we are going to say. Okay, now you are going to be a truck driver, or you are going to work in the greenhouse. There are very specific tasks that people like to do, and so that is another part of this provision that really doesn't reflect reality. Reality should be in being able to give to workers the jobs that they like to do.

Chairwoman KELLY. How easy is it to find a floral designer on a temporary basis?

Mr. KREMP. It is next to impossible. For us to have floral designers, we have to start when they have people come in to do odd tasks and then train them over years so that we will have them. We hire people now to wrap and to do trimming of plants so that we can train them over years, so that, maybe in two years, we will have a floral designer.

Chairwoman KELLY. What happens if one of your floral designers goes out? How do you cover that right now?

Mr. KREMP. That person who is trimming plants becomes a floral designer much more quickly. We all just have to fill in, and a lot of it, quite honestly, is with the management, as I said earlier. My four sons, one daughter-in-law, my wife, and myself are in this business, and there is nothing in the business that we don't do ourselves, and so we have to fill in on those jobs.

Chairwoman KELLY. Would this law make any difference in the way you handle your employees and the way you are able to handle these situations?

Mr. KREMP. It would make such a difference that it would completely change the way that we do business. I am in a unique position that I have four sons that can share the load of these manage-

ment tasks. I am representing— As I said, there's 16,000 retail florists in the Society of American Florists. Most of those companies, there's one owner and a couple of employees. What would discourage these people—other people from going into business is that, instead of being a florist, they are going to have to be a safety expert and a bureaucrat and going on doing things that are not close to the business.

The situation in small business today is such that these problems are being taken care of because of what was said earlier. We care about the people we work with, and what is being put upon us now are tasks that many would not like to do and will discourage people from going into business.

Chairwoman KELLY. Thank you, Mr. Kremp. I am going to go to Mr. Pascrell to ask questions of this panel.

I thank you all very much. Mr. Russ, I am going to ask you a couple of questions in a few minutes.

Mr. PASCRELL. Thank you, Madam Chairlady. First, I think we need to clear up, once and for all, that there is nothing in the regulations that says that any company has to hire a safety officer. Some of you have referred to safety officers in your testimony, and some of you have said—Two of you have said that you may have to go out and hire a safety officer because you feel that the rule is complicated or ambiguous. Somebody used that word. But, there is nothing in the rule which in any manner, shape, or form can be construed to mean that you are mandated to hire a public safety officer.

Now, look, I am an easy person to get along with through the Chair. Very easy. But, you know, you cannot have selective memory and stack the deck without looking at the entire regulation.

You don't want to do that, because I am trying to be very objective and very open-minded. But, I am telling you now, if there is or there has not been any MSD at your workplace, you will not be affected by this OSHA standard rule. Call it whatever you want. And, I am going to repeat that again.

I am going to ask each and every one of you, and I want you to answer for the record, please, through the Chair, do you have, Mr. Landon, an MSD complaint at your workplace—any of the five that you have—four or five places, locations? Yes or no.

Mr. LANDON. The answer to that question is no.

Mr. PASCRELL. Mr. Russ, do you have, at any of your places—and you are including the whole Association, or just where you work in New Rochelle, New York—do you have any complaints against the company—the corporation?

Mr. RUSS. Against my facility? I don't have any formal complaints right now.

However, I have had people complain about—

Mr. PASCRELL. The weather and things like that?

Mr. RUSS. About things that might, under this standard, be construed as MSDs.

Mr. PASCRELL. But you haven't had a complaint as such?

Mr. RUSS. No, and I can expect that I would.

Mr. PASCRELL. Excuse me, what does that mean, you could expect that you would?

If this rule—If it were going into effect tomorrow morning, you could expect the complaint pretty soon afterwards?

Mr. RUSS. I would think so, absolutely.

Mr. PASCRELL. Explain that.

Mr. RUSS. Because we have people doing manual things, doing lifting, they will often complain. I think my back hurts. If there is an opportunity for such remedies as work protection, which is to possibly collect 90 percent of your salary while not working, for up to six months, I can assure you that many of our employees could theoretically, and possibly very well expectedly, take advantage of that.

Mr. PASCRELL. Mr. Russ, the answer to the question, therefore, is no. For you to imply or for me to imply that, because a rule or a standard goes into effect, that everybody is going to jump on the gravy train, to me, is part of the problem for us to clearly see through the fog at the objective that we all want.

Mr. RUSS. With all due respect—

Mr. PASCRELL. Excuse me. To protect the workers. You said that yourself. Isn't that your objective?

Mr. RUSS. Absolutely.

Mr. PASCRELL. Then we are on the same thing.

Mr. RUSS. That is particularly why we state that we don't need this rule to protect the workers.

Mr. PASCRELL. It doesn't even apply to you so far.

Mr. RUSS. But it could well.

Mr. PASCRELL. Mr. Saxon, have you had any MSD complaints at your workplace?

Mr. SAXON. Yes.

Mr. PASCRELL. Would you just briefly—

Mr. SAXON. The one that I detailed, and we have occasionally a sore back problem.

Mr. PASCRELL. So you would have to—Let's say, if this rule was in effect, you would have to put some plan into operation to indicate that you would prevent this from happening in the future as it is now? As the rule stands now or as a proposal.

Mr. SAXON. Sure.

Mr. PASCRELL. Let me ask you a question. When the complaint was made to you or to your corporation—your company—did you think about putting something into effect or finding ways that maybe we could alleviate the conditions that produced the pain, or whatever? Or the injury? Did you think about that?

Mr. SAXON. Not with regard to the case that I detailed in here, because the perusal of the job and the review of the job, and our knowledge of the job, was that that didn't cause that injury. We did put into consideration alternative workload for that individual. Before that guy, and since that guy, nobody having that job has ever had the complaint.

Mr. PASCRELL. Thank you very much for your honesty, Mr. Saxon.

Now, next, Mr. Kremp, do you have any MSD complaints in any of your shops?

Mr. KREMP. Yes.

Mr. PASCRELL. You explained before, basically, one of the situations and what happened.

Mr. KREMP. Yes, and I am sure that, over the course of many, many years, there have been other times when someone has pulled something or turned in a funny way so that they have had what would be described as this. I have been in the business for 40 years, and I know, over that time, I have had that happen to me. So, yes, that has happened.

Mr. PASCRELL. OSHA, Mr. Kremp—and correct me if I am wrong, Madam Chairlady—OSHA does not instruct anybody how to protect the workers in the workplace. They can give you information, but they do not instruct, so there is really no mandate except if there is a complaint made against your business or my business. Then, they are asking you to put a plan together that would try to avoid this in the future. What is so demonic about that?

Mr. KREMP. I think that is a stronger term than I would use. I think that it is impractical, and the reason is that, as I read through the proposal, I found out that I am not really qualified to make some of the recommendations, in which case I would need to have the expert come in in order to come up with a solution that would satisfy the needs of OSHA. So, that is why I think it takes it from where we do things as we now do them, which is react to an individual where there is a problem and say. You know, you shouldn't be lifting that.

Mr. PASCRELL. I would think, Mr. Kremp, that some part of the standards or some part of the rule needs to be a little bit more flexible. I would even say that, but we are not talking about if there is a complaint. We are mostly talking about a proactive plan. This is my perception. This is my reading of what OSHA is projecting, a proactive plan that will avoid those problems for you in the future. But, OSHA is not giving you that. They are saying you will have to come up with it in your own business, which is better for you, isn't it, than if they imposed?

Mr. KREMP. It wouldn't be in certain cases.

Mr. PASCRELL. They are not the experts in the florist business.

Mr. KREMP. But I am not an expert in carpal tunnel syndrome.

Mr. PASCRELL. Nor am I.

Mr. KREMP. That is one area that really concerns me. I would love to have somebody tell me how to prevent that from happening to me, because I don't want that to happen to me.

Mr. PASCRELL. You asked a very legitimate question, and I believe OSHA, from what I have questioned them about before this meeting, what I have read, what I have heard today, has an obligation to provide to you, as to every other business community, some help in getting that information.

I believe they have that obligation, and the question that I asked or was about to ask two persons ago was have any of you used, Mr. Saxon and Mr. Kremp, the local—the state free programs that are available in all 50 states and have been available for many years? I ask that question rhetorically.

Mr. KREMP. I would be happy to answer. We didn't, because we had an OSHA inspector come in and made recommendations. We went through, and we followed all of those, and I think what has happened over time, because there is such a program, is we are conscious of hazards, and I think that is fine.

Mr. PASCRELL. I think that is important.

Mr. KREMP. But, with this, we need to have a specific course of action to follow, because it's areas that we know nothing about.

Mr. PASCRELL. Mr. Kremp, you sound like a very conscientious businessman. I don't say that to pander to you. I listen to what you have to say, but we are not going to win this battle to bring some sanity to the process of regulation by going to either extreme. What we need to do is find some common ground that you can live with that is not going to break the bank. I understand that, but, where the message is very clear, all employers—not just Mr. Kremp who is very conscientious—all employers have an obligation to their workers. Now, I think, within that common ground, we can find some rules that we can agree with. That is my opinion. I may be wrong.

Mr. KREMP. I think we agreed right away, and that is to definitively tell us how to take care of the problems which we are faced with.

Mr. PASCRELL. Thank you, Mr. Kremp. Appreciate that. Now, Ms. O'Shaughnessy—

Chairwoman KELLY. Will the gentleman yield? I think it is important to put on the record that all manufacturers are required to implement portions of this rule immediately, whether there is an MSD or not. I think that is important to put in the record, because manufacturers, in particular, have been singled out to have to comply with the rule whether there is an MSD or not. They don't have to wait. They just have to comply, and there is nothing in the rule that indicates, even from our talk with Mr. Jeffress, how they do that, so I think that is important to note.

Mr. PASCRELL. It is very important, but, again, the question of complaints is at the very axis of this entire regulatory process. No one is asking anybody to go out and spend money now to put in all different kinds of apparatus if there's no complaints.

I don't see that in the rule. I don't see that anyplace in the rule. I do not see where the person who owns a company, who owns a business, has to spend any money now to predate the problem if there are no problems.

Now, whether the rule goes into effect with manufacturers at a different period of time than would ordinarily be, that is another question. We are not finished with the rule, and, as you heard OSHA say, they are not finished with the rule.

All I can say is no complaints, no problem. And, let me ask you that question. Do you have in your business an MSD complaint?

Ms. O'SHAUGHNESSY. We are quite a bit larger than most of my other panelists. We have almost 500 employees at one location, and, yes, we have plenty. Thirty-five percent of our injuries are what you could loosely consider a soft-tissue injury or a musculoskeletal disorder. What that translates to, in 1999, we had over 40 workers' comp cases and over 20 OSHA recordables.

Keep in mind, for nine years running, we won the Copper Development Association safety award, which meant that we had the best safety record in the industry. So, we are excellent performers in the field of safety. We have had huge successes in lowering our workers' comp, OSHA recordables, and to tell us that we need to have a totally new program just for ergonomic injuries that we are

treating exactly the same as every other injury—effectively we are treating that—I think is out of the question.

Mr. PASCRELL. If we duplicated what we already are doing, I would agree with you. I said that two hours ago, but the question is the standards by which you are judged, for which your company got the award, may be inclusive, and may not be. I think you can understand that, and there may be things that they looked at or didn't look at that should be considered.

I am not questioning whether you deserved it or not. That is not what I am saying at all. What I am saying is, the next panel that is going to come on, you are going to hear folks that are representing the workers.

I know your answer is not going to be to them, if I may be so bold to anticipate, that you ought to depend upon the company to do the best it can and just assume that it is doing the best it can, because what you are doing is one thing. What all companies are doing may be another thing altogether.

Ms. O'SHAUGHNESSY. With all due respect, I take offense at you saying I am not representing my workers, because it is of the utmost priority—the safety of every worker's safety in my plant and in my offices. That is where we begin and end.

Mr. PASCRELL. I didn't say that, nor did I imply that.

Ms. O'SHAUGHNESSY. I represent the workers. I want to protect their safety, and what we choose to do is involve every single worker in all of our resources in order to treat every hazard, whether it is for a musculoskeletal disorder or a slip and fall, or a crushing injury, no matter what, and treat them the same and have our recordkeeping and our hazard analysis, and our abatement issues treated all the same. We have been effective, and we represent other manufacturers, I think. I don't think too many are far different from us.

Mr. PASCRELL. I don't question what you said one second.

That is not the issue. The issue is can we have a universal rule?

First of all, it doesn't fit everybody. We know that, but can we have a universal rule that is somewhat flexible, that can basically prod the process and make sure that folks are responding to the employees that work for them.

Let me tell you something. We are not going to get away with no regulation. It isn't going to happen, so isn't it best that we work together to come up with something that we can live with? Or, do you want to insist on fighting the fight you cannot win? You can't win it. There's going to be a regulation. Don't we want to have input into it? I would think that that is what we want to do.

Ms. O'SHAUGHNESSY. In response to that question, on page eight and page nine of my testimony, I specifically addressed that question because I think that is an excellent question.

If we are going to have a regulation, I suggest several appropriate areas in which to allocate our funds and our resources, including defining quantifiable methods for assessing the risk and measuring an injury, and rehabilitation and so on, in addition to outlining clear and effective program elements which the standard lacks of right now, and providing the manner to create and manage a successful in-house program, not putting an excessive burden of consultants, and so on, on us as an employer.



Mr. PASCRELL. On page five of your testimony, you state that OSHA's WRP provision will increase the number of fraudulent workplace injury claims.

That is on page five of your testimony. Are you with me?

Ms. O'SHAUGHNESSY. You might be talking about a different—

Mr. PASCRELL. In the last paragraph.

Ms. O'SHAUGHNESSY. Not to mention an increase in fraud? Yes.

Mr. PASCRELL. Okay, that is what you say.

Ms. O'SHAUGHNESSY. I am with you now.

Mr. PASCRELL. You say that it will increase the number of fraudulent workplace injury claims.

That is a pretty broad statement, Madam Chairlady. We don't know what those workers are going to do.

Ms. O'SHAUGHNESSY. We do.

Mr. PASCRELL. Oh, you do. Let me finish the question, if I may. On what evidence do you base this statement?

Ms. O'SHAUGHNESSY. Past history.

Mr. PASCRELL. Tell us about it.

Ms. O'SHAUGHNESSY. I have worked at many companies, from looking at animal caretakers in genetics testing facilities to wire- and cable-making to consumer products manufacturing. I don't remember who said it, but knowledge of a class of injuries increases the occurrence. Did you ever hear of carpal tunnel before ten, 20 years ago?

You can't tell me it didn't exist at the turn of the century in much greater percentages and much greater numbers than we have now. However, we didn't have any instances of carpal tunnel until we had the name of it and the knowledge of it.

The same thing is going to happen, and it will create a greater knowledge of the injury. Therefore, as I state also on page five, OSHA's plan will give 90 percent to 100 percent of pay to workers who claim musculoskeletal injuries.

Mr. PASCRELL. This is a very good part of this testimony.

I find it very fascinating and interesting, because—I'm sorry, I thought you were done.

Ms. O'SHAUGHNESSY. No, I wasn't. In New York state currently, workers' comp cases are approximately two-thirds. It is not that difficult to diagnose any type of injury as musculoskeletal injury and, therefore, get 90 to 100 percent of your pay as opposed to two-thirds of your pay for a simple workers' comp. Now I am finished.

Mr. PASCRELL. Thank you. I think we have a serious problem here. I'll be very honest with you, because the many industries that I have reviewed, where there is repetitive activity and where there is a major problem, I am not concerned about what it is called, I am not concerned about the nomenclature, I am concerned about whether there was injury or pain.

What you call it is secondary and that it was caused by work. People simply assume that this was part of the job. Now, we have grown. The state of the art has grown. What we accepted 20 years ago we don't accept now. Your job, my job, we try to make things a little bit more easy in an imperfect world. Couldn't I just as easily say that OSHA's WRP provision will increase the number of employers who will discourage their employees from reporting workplace injuries? Couldn't that be the case, also?

Ms. O'SHAUGHNESSY. It could, but there is an increase in fines and ramifications against employers for not reporting if they are found out during an OSHA audit or a walk-through or a free consultancy visit, and so on.

Mr. PASCRELL. It works both ways is my point, okay? That is why we must work together to come up with a rule that we can live with. We can't fight it and think that it is going to go away. Then, we won't have to worry about these repetitive injuries.

Chairwoman KELLY. If the gentleman will yield, I don't think these people are really feeling as though they are fighting the rule. What they are trying to do is trying to have some input so that this rulemaking mechanism works for them to help them protect their workers. I don't mean to disagree with you, my friend, but I do think that the whole point of this hearing is to let them have a voice in this rulemaking process, which they might not otherwise have had.

Mr. PASCRELL. Madam Chairlady, let us disagree then. It doesn't in any manner, shape, or form decrease my respect and my admiration for you. But, that is not what I heard from three of those testifying today. They don't want the rule. You ask them. Thank you.

Chairwoman KELLY. Thank you very much, Mr. Pascrell. Being a small businessperson, having had a couple of small businesses and having my family in it, I do understand, Mr. Kremp, Mr. Russ, Mr. Landon. I know that you are there working on the floor with your workers.

Anything that comes out of this rulemaking process is going to help you protect yourselves, because you are very intimately involved in doing the business that you are in. I think, Mr. Pascrell, that that is really the point of what, at least, I am trying to understand here—is how we can help these folks protect themselves and their workers at the same time without having a rule that is so large in scope that it undercuts their bottom line, undercuts their ability to do what they need to do in order to stay in business.

But, more importantly, it doesn't allow them to protect themselves without having to go through a great many steps that might not be necessary for these people. They need something, but they need something that addresses their concerns as small businesspeople—really small businesspeople.

Many of the examples that we have heard today come from large businesses, not small. It is important that we stay focused on the small business.

That takes me to you, Mr. Russ, because I did have one question I wanted to ask you.

OSHA assumes that businesses are going to be able to pass along the increased costs of any proposed standards onto their customers. That may be true for an ordinary industry, but aren't the rates that you receive for patient care in your business set by the Health Care Financing Administration and the states?

Mr. RUSS. Yes, they are.

Chairwoman KELLY. So your ability to pass along any of these costs is simply blocked off by another agency.

Mr. RUSS. Absolutely, unless there were some concurrence on the part of other Federal agencies, namely, the Health Care Financing Administration, which would independently recognize this as a dis-

tinct cost and then add it to the rates at which they pay us. There would be no other mechanism to absorb these costs. Only a very small fraction of patients in nursing facilities today pay their own way. There's a variety of reasons for that, but primarily because Medicare—and primarily Medicaid—are the primary payers. That is the system we have to live with. This unfunded mandate provides no mechanism for any kind of recognition of the costs that we are likely to incur.

As a result of this—and, you know, it would be presumptuous to assume that not every facility would be affected by this, because, even as a protective measure, in order to potentially avoid claims, we would have to purchase the number of lifts, as I described to you, that would not only conflict with existing regulations—because HCFA precludes us from using it on patients who don't want them—but it opens up the possibility that we would have to make an enormous capital investment and would probably be in violation of other OSHA regulations, from a practical standpoint.

Sometimes we don't see the forest for the trees. If you were to actually mandate that every patient should be lifted with a mechanical device, there would have to be, literally, probably one of these monstrous entities for possibly five or six patients. Each one of these devices is an enormous entity. We have no place to even store these things. If you would put them in the hallways and the corridors, you would be in violation of life-safety code and other OSHA regulations. If you were to put them in the patients' rooms, you would be in violation of certain OSHA regulations as well as regulations of the Health Care Financing Administration. No one has thought out the actual practical implications of having to do this.

Chairwoman KELLY. Thank you very much, Mr. Russ. I just want to question one more thing, where, again, it seems to me that you are caught with agencies controlling things that you have no choice over. You brought up the instance of mechanical lifts, but aren't you mandated by law to offer that choice to patients? They get to choose whether or not they want to be lifted by personnel in your institution or they wish to be taken on a mechanical life.

I would also want to point out, having worked in hospitals a number of years, that there is a certain dehumanizing aspect to being lifted by a mechanical lift. I don't care how heavy or light the patient is. It is rather dehumanizing to the patient to have a mechanical lift being used on them. It also is not necessarily the best way, but aren't you caught by that?

Mr. RUSS. Absolutely. Not only is it dehumanizing, most patients are fearful of being lifted by anything—I mean, the whole point of all the HCFA regulations that we have encountered over the last ten to 15 years has been to enhance the quality of life of residents and the patients we serve. That is all generated through education and increased bonding and closer relationships with the caregivers. This creates a barrier between the caregivers and the residents.

From a practical standpoint, any good, caring facility lifts and transfers patients not just once a day. It is not just to get the patient out of bed in the morning and into bed at night. We take patients out of the wheelchair at every meal and put them in regular chairs to enhance their dignity so they don't have to eat lunch in

a wheelchair, who want them to eat in a regular chair like people who are not handicapped. So, we would have to be using these lifts in a way five, six, seven, eight, nine times a day. It is practically, from a practical standpoint, impossible, because there is no way to situate them in a dining room to that extent.

Chairwoman KELLY. Excuse me, sir, but it is also mandates by law that you not do that with the patients. Is that correct?

Mr. RUSS. Well, it is not mandated that we do not. We have to offer the patient a choice. We educate the patients who are competent and those representatives of those patients as to the pros and cons of a lift, just as we do with other aspects of care. However, if they elect to decline that, we have to honor that request by law.

Chairwoman KELLY. That is exactly what I was driving at. You must honor that request by law.

Mr. RUSS. Correct.

Chairwoman KELLY. So you are another one of the businesses caught between agency rules.

Mr. RUSS. Correct.

Chairwoman KELLY. I thank you very much. At this point, I thank the panel. You have been extremely patient, and I really appreciate the fact that you came to testify today.

I know that there are many other things that we would like to ask you, and I am sure there are other things you would like to say to us, so, again, I am keeping the record open and we will, hopefully, continue the dialogue. Thank you so much. I am going to excuse this panel, and we will have the next panel.

[Pause.]

Chairwoman KELLY. I thank you all very much. We have Jennifer Woodbury here from McDermott, Will & Emery, Jackie Nowell, who is the Director of the OSHA Office for the United Food and Commercial Workers International Union. We welcome you. John Cheffer, Chairman of the National Governmental Affairs Committee, the American Society of Safety Engineers. We have Frank Mirer, the Director of the Health and Safety Department from the UAW International Union, and we have Mr. Lawrence Halprin from Keller & Heckman, Washington, D.C.

I do thank you all very much for your enormous patience. I hope it has been an interesting experience for you sitting here listening to these two different panels.

With that said, I am going to begin with you, and I am going to welcome you back, Jennifer. We are glad to have you here, and we are glad to have you on that side of the table testifying, so please go right ahead.

**STATEMENT OF MS. JENNIFER WOODBURY, MCDERMOTT,  
WILL & EMERY**

Ms. WOODBURY. Thank you so much, Chairwoman Kelly. It is my pleasure to be here. I am Jen Woodbury with the firm of McDermott, Will & Emery in our Washington office, as part of the OSHA group.

I am very happy to be here today. I found the hearing illuminating, and, hopefully, what I have to say here today will add to that.

I would like to clarify, first of all, I am testifying on my own behalf as opposed to my firm.

I would like to note—I am going to paraphrase my testimony to keep it within the five-minute period. But, I would like to request that my entire statement be entered into the record.

Chairwoman KELLY. Thank you very much.

Ms. WOODBURY. I have been practicing OSHA law for a few years now. But, when I started, my knowledge was probably equivalent to what some of the small businesses have to deal with. So, you can imagine how overwhelmed I was when I learned what I would have to learn. These are the CFRs for OSHA only. There's something like 1200 pages here, and it is pretty intimidating.

I am a lawyer, but, when I started, I didn't know anything about it, and so I had to leaf through all this. So, you can imagine what small businesses have to deal with. It is unbelievable.

So, what I would suggest to you is that any rule that is promulgated here—we are talking about OSHA—has to be clearly objective in nature so that small businesses know exactly what they are supposed to do in order to prevent injuries. That is the goal, so small businesses can know what they are supposed to do. It has to be objective; it has to be measurable; and it has to be understandable. I think what you heard here today is that the rule isn't all of those things, and that is what the problem is.

The problem that exists is what OSHA terms and really bolsters about the rule as being flexible. What flexible means is that small businesses have their own opportunity to determine what is important for their business.

I believe that is what Congressman Pascrell was going to. A flexible rule can be very good, because it helps the small businessperson put into practice things that work for that business. But, the problem is that flexible can also mean vague and ambiguous.

My testimony goes into several examples, but I would just like to talk about one very briefly to stay within the five minutes. One of the key provisions of the OSHA ergonomics proposal is that employers must materially reduce MSD hazards. Well, all of us could come up with different interpretations of what "materially" means, so, of course, you want to look to the definition. Unfortunately, the definition is not going to help us very much, because here is what it says, "To materially reduce MSD hazards means to reduce the duration, frequency, and/or magnitude of exposure to one or more ergonomic risk factors in a way that is reasonably anticipated to significantly reduce the likelihood that a covered MSD will occur."

Now, I want to be really clear. I think that, if we went around the room, there is no way that all of us, or maybe even two of us, could agree on what those three terms—reasonably anticipated, significantly reduced, or likelihood—mean. I don't think there is any way that we could come to one solid, absolute determination of what those terms mean. We have heard from some pretty respectable small businesses. I bet they couldn't even all agree, even as respectable as they are.

But, despite this fact, no matter how reasonable your interpretation is, what this proposal says is: "my interpretation wins, because I am the OSHA inspector." That is what the small businessperson

is dealing with. It is not that they hate the rule, in many instances, anyway, or that they don't want any rule, or that rules don't work. It is that they can do their best, and they will still be cited.

I heard Assistant Secretary Jeffress state, "Well, we'll have to rely on the reasonableness of our OSHA inspectors." That doesn't make anyone sit very calmly in their chair, knowing, "Well, I have no idea, really, what the inspector is going to say, but, boy, I am sure they'll be reasonable." That doesn't work, so I would suggest that that is a major problem with this proposal.

Another major problem is that the proposal asks the employer to determine what a "covered MSD" is. In other words, did the injury occur at work or did it occur in an off-work activity, such as tennis-playing or gardening? We are expecting the employer not only to make that determination but to know that the employee engages in such activities. That is a problem. At the OSHA hearing—One of the attorneys in my OSHA practice group at the firm asked a Georgetown physician how he would make such a determination, and, indeed, there was no definitive answer given.

I will close by saying that the most important thing I can get across is that company ergonomics programs absolutely can work. They can work when they are well-founded, but, without any objective measures, I would be concerned that this proposal will force small businesses who have a limited amount of money to spend on safety to spend that money trying to comply with an ambiguous and vague rule. That is going to be a problem. I thank you so much for the opportunity to testify here today and would be happy to answer any questions that you have.

Thank you.

[Ms. Woodbury's statement may be found in appendix]

Chairwoman KELLY. Thank you very much. Next, we are going to hear from Jackie Nowell, whom I saw doing a lot of head-shaking out there. So, I hope this has been an interesting experience for you, Ms. Nowell, but I am looking forward to hearing your testimony.

**STATEMENT OF MS. JACQUELINE NOWELL, DIRECTOR, OCCUPATIONAL SAFETY AND HEALTH OFFICE, UFCW INTERNATIONAL UNION**

Ms. NOWELL. Thank you very much, Chairwoman Kelly. It has been a long time since I have been up on the Hill, so, yes, a lot of head-wagging.

My name is Jackie Nowell. I am the Director of the Occupational Safety and Health Office at the UFCW International Union.

Five minutes goes very fast. Let me give you a little background. Then, I would like to actually comment on some of the issues that were brought up by the last panel.

We do represent 1.2 million workers in the U.S. in retail, food, meat packing, poultry, food processing, warehousing, health care, garment and textile, footwear, and chemical industries. Included in this are over 400 small employers in virtually every state in the country.

We strongly support OSHA's proposed ergonomics program. We have been actively working on this issue for 20 years. We began educating our members, seeing that there was a lack of programs

and fixes out there in our industries. We filed OSHA complaints in the meat-packing, poultry, and catfish industries. We worked closely with the Department of Labor to develop red-meat guidelines issued by then Secretary of Labor, Elizabeth Dole. In 1991, we petitioned OSHA for an emergency temporary standard along with 29 other unions. In '92, Secretary Lynn Martin of the Department of Labor agreed with the unions' information supported initiation of 6(B)(5) rulemaking under the OSH Act to address ergonomic hazard. This standard has been ten years in the making, and it is long overdue.

The UFCW has many programs in our plants with full union participation that are working to reduce MSDs.

I am going to highlight three points quickly. Mr. Jeffress very clearly talked about these things being real.

Let me tell you about Carolyn Shebora, who is a cashier at a grocery store in Alexandria, Virginia. She had bilateral carpal tunnel surgery and is fearful that it is coming back. Her company fought her workers' compensation claim for one and a half years. She had worked for them 27 years. She was devastated by that.

To highlight what was said on the last panel about these conditions having been around forever, there has been an enormous change in the way we do work in this country. Just two industries—the poultry industry alone, 91 birds a minute, is what they will allow that line to go. If you think about word processing, secretaries used to do everything in the office, which gave them a lot of variety of tasks. Now, when you look in an office, you have word processors dedicated to doing nothing but keying all day long. So, when we talk about these things are new, they are new, but they are a result of changes in industry.

Point two—many industries we represent have recognized the problem for more than 15 years and developed programs. One meat-packing industry plant, I can tell you, reduced its workers' comp costs by nearly 60 percent, reduced turnover by 75 percent, and recouped all of their investment in the first two years of the program. The numbers of MSD cases were halved, and the number of surgeries fell 40 percent. I could give you other examples and will be glad to put them in the record.

I was going to talk about the retail industry, because I thought there were going to be some grocery stores here.

Let me switch to the health-care industry, and I would be happy to put in the record the research that has been done in nursing homes on back injuries. Back injuries are their biggest problem. They come forward all the time and tell you folks that. They have more lost-time injuries than construction has. The lift-assist equipment that is out there now is no longer mechanical. It is electric, and, in terms of who do you lift with that equipment, you lift residents who are not able to help the health-care provider—the aide—do that work. You do not use those lifts on everybody. They don't work on somebody who can assist you in the lift.

So, just to get that in the record—There is a lot of information out there that has been developed by unions, trade groups, and associations that will be tremendously helpful to small business. I note that, on the table here, the National Association of Convenience Stores has put in their testimony that they have stuff avail-

able and they represent all small business. The Food Marketing Institute says that they represent—More than half of who they represent are single-store entities and they have on their Web site lots of information to help small business.

Workers are being hurt. The examples that Charles gave, that I just gave, are but examples of hundreds of thousands of workers in the U.S. who are developing MSDs. I could also have told you about two more. You can see these workers when you go into your neighborhood grocery store, for example. They come from small plants and large plants, union plants and non-union plants. The point is it doesn't matter where they worked. They need help.

Chairwoman KELLEY. I am going to have to ask you to sum it up. The red light is on.

Ms. NOWELL. I will note that others have gone beyond the red light.

While we note that there are some differences between small and large businesses, we believe the standard is flexible. It is programmatic rather than specification-based, meaning it is a flexible set of requirements that small business will be able to adapt to its establishment. But, if small business believes that OSHA needs to clarify the rule for them, then they should be informing OSHA of specific provisions that will assist them.

Thank you for the opportunity to speak with you about this matter.

[Ms. Nowell's statement may be found in appendix]

Chairwoman KELLEY. Thank you very much. We are next going to move to Mr. Halprin.

#### **STATEMENT OF MR. LAWRENCE HALPRIN, PARTNER, KELLER AND HECKMAN**

Mr. HALPRIN. Madam Chairwoman, members of the committee, my name is Lawrence Halprin, a partner in the law firm of Keller and Heckman.

I appreciate the opportunity to be here today. As you can tell, there are more issues than we can ever take the time to talk about.

I will try to address some of them. This rulemaking is different from any prior rule the agency has ever attempted to promulgate. For prior rules—Mr. Jeffress mentioned lead, for example—Causation of the harm was established. The harm's are due to exposures—to a lead exposure, which is unique to work. You are not going to find lead in a typical home. Exposures are measurable. The agency has established what it considers to be permissible exposure limits, which set safe limits and unsafe limits.

None of that is present in this situation. The agency hasn't identified the harm in any meaningful way. You've got to look at an OSHA recordkeeping system to figure out what the harm is. It is not a medical definition. OSHA has come up with a procedure for saying something is an abnormal condition that in any way was caused, contributed to, or aggravated to any degree in any way by work. Once the employer cannot prove that was the case, it ends up on the log. Then, Mr. Jeffress comes along and says there's 600,000 of them. It is not terribly meaningful. To give the example that you talked about today with the worker who came from another job, I asked during the hearings. I asked the OSHA panel



whether a standard—this standard—would be triggered by an employee who reported to work with a non-work MSD, then aggravated that injury performing the work he performed for many years without any problem. The answer from the Associate Solicitor for OSHA, the highest attorney responsible for OSHA matters, almost verbatim was. Yes, you take the worker as you find them.

I think that is absurd. The same thing would happen if that worker had been working two jobs and injured in another one. This agency has absolutely no reasonable limits on the scope of this rule.

An MSD is defined—my reading of this—so broadly that, if you have a little muscle discomfort which results in stiffness which limits your ability to touch your toes, which you normally would be able to do, you have restricted motion under this standard. An employer has then got to determine whether he has got to take the employee off the job long enough so that they can recover sufficient flexibility to touch the toes.

There is something wrong with a standard that does that. It is not based on simply the 600,000 allegedly lost workday cases. It extends beyond them to anything else that, under the OSHA rule, is considered a recordable musculoskeletal disorder. I should mention that the rule in place today for recording musculoskeletal disorders is being substantially expanded and being incorporated into this rule so that the data will probably actually go up, because now OSHA is expanding the universe of things that are going to be covered. So, we have got an agency that goes beyond its own impairment of health to regulate things that don't fall into that category.

We've got a situation where they can't even define what the problem is, in a sense medically, if they use these assumptions and presumptions of work causation. That is what we are dealing with. Now, back to some of the research.

I realize it is controversial, but OSHA must demonstrate that there are a significant number of employees who are exposed to hazards at unsafe levels by properly quantifying the risk. In this case, we think it is disingenuous for OSHA to say that it has performed a scientifically valid risk assessment in light of what has transpired in this proceeding. This is not an academic debate. If the research doesn't demonstrate that what OSHA proposes is going to work, whether it is not an effective way of doing it, whether it is going to impose burdens on employers that they shouldn't be on employers in the first place, something is terribly wrong.

In this case, OSHA and NIOSH selectively relied on a body of outdated and inadequate studies. This is based on testimony from medical experts, obviously.

I am not an expert in medical areas. According to BLS, the MSD rates, as was previously mentioned, are already declining at a rate of 24 percent over the four-year period we have talked about. OSHA projects a 50-percent decline in MSDs from this rule over ten years. So, actually, OSHA isn't projecting any better benefits than seem to be the trend, based on what is happening through voluntary programs currently in effect.

OSHA excluded from its consideration, as you heard previously, the entire body of persuasive scientific evidence supported by writ-

ten statements and testimony from people I believe to be some of the world's most outstanding medical experts, that the vast majority of covered MSDs are not caused simply by workplace exposure, to bio-mechanical factors. But, there are other considerations involved. Even NIOSH has acknowledged that, within the general population, non-occupational causes of low-back pain are probably more common than workplace causes. However, what OSHA would do would be to have this person come into work, and, if the employer doesn't catch them—and I will stop here—and stop them from aggravating the injury, then all of a sudden the injury is aggravated. The standard is triggered.

I could go on, but I am out of time.

I appreciate the opportunity. Thank you.

[Mr. Halprin's statement may be found in appendix.]

Chairwoman KELLY. Actually, we have a timer up here, so we know exactly how far everybody does run over.

You didn't do too badly. Next, we have Dr. Mirer. Dr. Mirer, we would like to hear from you. Thank you very much for being so patient.

#### **STATEMENT OF DR. FRANK MIRER, DIRECTOR, UAW HEALTH AND SAFETY DEPARTMENT**

Dr. MIRER. Dr. Frank Mirer, Director of UAW Health and Safety Department. I represent the UAW here today, but I want to start by telling you that my late father was a small businessman. He ran a union shop in a business in New York City. I spent many Sunday afternoons with him helping out getting work ready for Monday.

I want to tell you, from personal experience, there is no reason why a small business owner or manager can't do ergonomics, can't understand this proposed rule, can't use our new knowledge to protect and retain employees. Frankly, if the employer associations would concentrate on technical support and education for their members, instead of what they are doing, especially here today, workers and employers would be a lot better off.

Ten years is not rushing into anything. The ten years this has taken is a long lag, particularly in relation to people being hurt everyday.

That is what is happening out in the world. With due respect to Ms. O'Shaughnessy, ergonomics is based on biomechanics and physiology, two quantitative disciplines. Biomechanics uses the same physics that an engineer would use in designing a building or an airplane. It is a quantitative method. Two observers will agree on the biomechanical stress on a body part. They can rank exposures with great precision. They can rank exposures before and after modifications of a job.

The simple checklist systems that are being put in place all through industry are based on those biomechanical and psychophysical model results, which have been validated dozens and hundreds of times over in the scientific literature.

It is not for a lawyer to say that they don't believe it. The scientific consensus was peer reviewed externally to by NIOSH and other agencies. It. that was confirmed by the NAS.

There is a continuum of stresses, related to the continuum of health effects. The science is there. There is no question about it.

The second point, is triggering mechanisms. Let's talk about what triggers into an ergonomics program. A worker complains of pain or injury to his employer. The employer selects the health-care provider to which the employee goes.

The health-care provider determines whether this matter is work-related or not work-related. The health-care provider keeps other medical information confidential from the employer, the same way that the employer's medical information ought to be kept confidential from the employees. If it is determined to be work-related, then the employer analyzes the job. If the job does not contain risk factors for any musculoskeletal disorders, that is the end of it. No risk factors, no abatement, no other action. Also, the health-care provider selected by the employers is the one who determines whether the employee is at increased risk, and gets a restriction.

Now, work removal protection has been in OSHA standards since 1978, when the lead standard went into effect. OSHA determined then, that medical provisions, where an employer was required to honor a restriction, also needed to protect the employee. We see no reason why this standard should be different.

We have heard a lot of complaints about the plain language of the rule. This rule was reviewed by a SBREFA panel. They made 36 recommendations to OSHA regarding the standards. OSHA responded to each one of them and made changes in the regulatory text, the explanation, and the economic analysis. This responsiveness is, quite frankly, now being turned against OSHA, because every complaint we have heard today is about the plain language, about the flexibility in determining the exposure assessment methodology about permitting management to defer exposure assessment until injuries are there.

Quite frankly, every one of these is a recommendation that industry, especially small business, made to OSHA. They were taken, and now they are here.

The question of whether everybody has had their say, first of all, with due respect to the committee, if we were following the OSHA model, the first thing that would have happened here is we would be questioning you as to the basis for your position. You would have to answer those questions on the record. Then, we go to the rest of the proceeding. It has been grinding on before OSHA in Washington. I just came back from Chicago. We presented testimony from 14 or 15 local union representatives who are doing ergonomics successfully in plants, large and small, and offices all across the country.

The bulk of analysis of risk factors on the job in the auto industry is being done by hourly workers off the floor who have had a training course in how to analyze risk factors. We have done this in plants, large and small. It is effective. Their ability to do this analysis is validated, and, quite frankly, I see no reason why a manager or an employer or an owner of a small business would not be able to do everything that our workers off the floor can do.

Thank you very much.

[Dr. Mirer's statement may be found in appendix.]

Chairwoman KELLY. Thank you, Dr. Mirer. I appreciate your ending when you did, being brief.

Mr. Cheffer, we have yet to hear from you. Thank you for being so very patient.

**STATEMENT OF MR. JOHN CHEFFER, CHAIR, AMERICAN SOCIETY OF SAFETY ENGINEERS NATIONAL GOVERNMENTAL AFFAIRS COMMITTEE**

Mr. CHEFFER. Good afternoon, Chairwoman Kelly, members of the Subcommittee.

My name is John Cheffer, I am a professional engineer, certified safety professional, and Chair of the American Society of Safety Engineers National Governmental Affairs Committee. ASSE was founded in 1911 and currently has almost 33,000 members. It is the oldest and largest Society of safety professionals in the world. We are dedicated to the protection of property, people, and the environment on a worldwide basis.

My testimony today focuses on how ASSE views the proposed ergonomics standard and how it could affect small business. It is also appropriate to point out that, throughout my professional life, I have personally worked with hundreds of small businesses on safety and health issues, including ergonomics.

ASSE wants to be clear on the following point, and that is that the Society is a supporter of OSHA, as we believe the agency maintains a national focus on the importance of occupational safety and health, and there is a need for a functional and understandable ergonomics standard that enables all employers to recognize problems and learn how to solve them. However, ASSE is concerned that the flaws in the proposed rule, such as the single incident trigger, its interference with established state workers' compensation programs, and the rule's complexity with respect to small business entity compliance, may result in the rejection of the entire standard.

Therein lies our concern, that the employees who would most benefit might be harmed. That is the precise reason why ASSE is the only organization that wrote an alternative proposal for OSHA's consideration with respect to small business issues.

With respect to small business issues, a key question involves the cost and complexity of performing an ergonomic analysis. We believe OSHA has provided insufficient information to enable any small business owner or operator to understand the ergonomic issue and proposed standard or to determine what actions must be taken in order to identify and correct ergonomic hazards.

ASSE is at a loss to see how a small business employer without specialized training will be able to use the standard to prevent work-related musculoskeletal disorders. We suggest the current proposal is much too complex for the average employer to use as a tool to address ergonomic issues.

ASSE believes that the agency has underestimated the costs associated in implementing and maintaining compliance with the standard. The agency gives the perception that ergonomic evaluation and of controls are not that difficult to understand and are inexpensive to implement.

However, ergonomics and cumulative trauma disorders are very complicated technical issues. Most ergonomic problems cannot be corrected through low-tech solutions such as having the employee

stand on a box or propping up a computer monitor with a phone book, as ESHA has suggested.

ASSE asked OSHA if it conducted any studies or research on how many small businesspeople can work in NIOSH lifting formula. The agency does not appear to have adequately studied this issue. For example, while the NIOSH formula tables and assessments are specifically referenced in the preamble, we do not believe that the typical small businessperson will be able to learn of this in the hour of training allotted in the preamble's cost estimate. Later in the preamble OSHA acknowledges that more training may be necessary, depending upon the specifics of the operation, but, this additional training is apparently not factored into the cost estimates.

ASSE recently completed a survey of our members and other safety professionals on the issue of consultation. A total of 4500 safety professionals were surveyed. While we readily acknowledged this is not a scientific evaluation, it does give an excellent snapshot of the cost considerations. Our data indicates that the average hourly billing rate for an ergonomic audit or evaluation is approximately \$108.00 per hour for each consultant. This is an across-the-board average, and costs would probably be higher on the East or West Coasts.

The basic problem with cost projections is that there are so many variables involved in performing a quality ergonomic evaluation, including the size and nature of the workplace and the workforce. The time required to conduct an evaluation at a small business involved with material handling or manufacturing would certainly be more extensive than an audit in an office setting.

The fixes could be much more costly as well. Along with the initial consultant's visit, there would be cost associated with report preparation, follow-up consultation, potential revisions to an action plan, and implementation of the recommendations.

Based upon our data and experience, the OSHA time estimates in the proposed rule are inaccurate with respect to implementation of a work-related musculoskeletal disorder prevention program. With respect to the cost of correcting ergonomic hazards at a small retail or service business, ASSE cannot give an overall estimate because of the variety of work environments. However, I have personally worked on issues which have run anywhere from \$15.00, a small charge, such as changing table legs, to completely re-engineering a work process which costs thousands of dollars.

Each situation is different. That is the key difficulty with assessing the impact of OSHA's proposed ergonomics standard. There is no one-size-fits-all approach to ergonomics, and our core belief is that it is impossible to provide a one-size-fits-all cost average.

Another issue is whether OSHA could have identified successful ergonomic intervention controls. In January of 1997, ASSE had an opportunity to work with OSHA on a very successful conference titled "Ergonomics, Effective Workplace Practices and Programs." There were approximately a thousand participants representing both the private and public sector. The conference focused on different approaches to ergonomics. The results were excellent and would have been useful for OSHA to point to some of these intervention strategies in the proposed rule's preamble for consideration

by interested stakeholders. Such examples could show how ergonomic hazards have been effectively and efficiently addressed in the workplace by employers.

In summary, although ASSE's overall experience with OSHA has been very positive and we believe that a standard is needed, OSHA should not finalize the rule as drafted in the 1999 November proposal. OSHA should find an alternative method for protecting U.S. workers from work-related ergonomic injuries—

Chairwoman KELLY. Mr. Cheffer, I am going to interrupt here and ask you to summarize.

Mr. CHEFFER [continuing]. On impacting small business, and I think that is as good a summary as I can do.

[Mr. Cheffer's statement may be found in appendix.]

Chairwoman KELLY. Thank you very much. I want to thank all of the panel.

There's a couple of things. I think, Ms. Nowell, you pointed out in your meat-packing case just exactly why it is a good idea that we have some rule affecting the ergonomics situation, because, obviously, the people who own that meat-packing plant, who found that they have lowered their injury level and there are workers who are retaining their jobs, and so on, obviously they were comfortable helping to work with the workers to make sure that they stayed on the job.

It takes a long time to train a worker, as we heard in the other panel. You don't want to lose them, so I think your case was very well made.

I am glad to hear that, but I want to go—just one thing that Dr. Mirer brought up. You were talking about the trade associations being against this and speaking against this proposed rule. Are you aware that the Office of Advocacy of the U.S. Small Business Administration opposes this rule?

Dr. MIRER. I am not aware of it. I have been talking from our experience over in the OSHA hearings about all—a third of the trade associations that have appeared there have said they would do some technical assistance, do some training, present some information to their members on how to abate ergonomic hazards. I would guess about two-thirds of the remainder say that all they have done is essentially repeat the comments that are on the NAM Web site opposing the standard. So, some of the trade associations are stepping up to what they ought to do, helping their members protect their workers, and others are simply playing the regulatory game.

Chairwoman KELLY. Well, Dr. Mirer, there's got to be pretty good reasons why the Office of Advocacy in the Small Business Administration is opposing this rule. I think it would be good if you also had a look at those, because that may affect what your workers are involved in.

The other thing is that it points out something that was brought forth in the second panel. That is, too frequently, people who are regulated by Washington agencies are caught between agencies. There's a rule that says this, and there's a rule that says that. Nobody knows exactly where they stand, and this is one of the biggest problems I have in understanding this whole ergonomics thing. I don't see how this is going to go through without catching a whole

lot of people in a swamp of alternate agency rules and regulations. I don't see how that is going to happen. This is my grave concern.

It is important that we take care of our workers. Nobody wants to have them be harmed, but on page 11 of your testimony, you cite a whole bunch of examples of small businesses that have worked with the UAW to establish effective ergonomics programs. I want to know if you could supply the details of those programs to this committee staff so we could study them, and include them in the record. This might be very helpful for us. Can you do that?

Dr. MIRER. Certainly. We will provide our training materials.

With all due respect, about the conflicting regulation issue, I believe what Mr. Russ testified to was that, for those employees, those patients, who did not want to use the mechanical assist, that the employer would have to come up with an alternative. But, I was pleased to hear that he did have mechanical lifts. I was pleased to hear that the estimate of cost of equipping a facility, which I thought was actually surprisingly low—I was pleased to hear that, in an industry where 78 percent of the injuries are musculoskeletal, which leads many, many injuries, he was able to get his rate down to zero. I thought that was maybe the strongest testimony in support of ergonomics we have heard today.

Chairwoman KELLY. Dr. Mirer, he did it without any rule or regulation. He just did it.

Dr. MIRER. But, obviously, if you look at the experience of the industry as a whole, his competition is not doing it at all. In order to achieve the rate that they are seeing, somebody had to double the industry rate in order to get to the rates that they have.

Chairwoman KELLY. While you are taking your big stick and whacking those people, it would be nice if you didn't take the big stick to the people who are really willing and able and had conformed and done what they could to try to help their workers. That is a real concern.

I also wanted to ask you, sir, about the fact that say—and I really applaud you—I think your training program sounds very, very good. That 40-hour course and all the rest of it sounds really good. Can you give us an estimate on how much time is involved in addition to that 40-hour course that your people have where they have had training technique instruction, and they have been evaluated by the UAW staff and the University of Michigan and the job analyses? How much more time beyond that 40 courses—40-hour course is involved?

Dr. MIRER. The issue is what degree of sophistication.

Chairwoman KELLY. I am just asking about your course.

Dr. MIRER. I understand that, but, in the car companies where there are full-time ergonomic analysts, they have had several courses in addition to that.

In the smaller plants, the 40-hour course or even the shorter course is sufficient to be able to do the initial assessment of whether jobs have risk factors or not.

A simple checklist can be used at UAW GM. They go to various computer programs after they have finished with the simple assessment. So, the short of it is you don't actually need the full 40 hours in order to be able to do the kind of risk assessments you would for a dishwasher or a sewing-machine operator. If you were going

to do very sophisticated analyses of car assembly processes, you would need more. But, for the kinds of activities that are done in most small workplaces, you don't need the 40-hour course to do an effective ergonomics analysis.

Chairwoman KELLY. I am only asking you about your industry, the people that the UAW deal with.

It looks like a very good training program. You say you don't need the 40-hour course. What would be the average that your folks would have—would spend if they don't take that 40-hour course, and the other related people that you deal with under the purview of the UAW? What is the average that you would think that they need or that they are getting?

Dr. MIRER. Probably, for ergonomics committee members that are going to be doing analysis on an ongoing basis, a sort of—start with a one-day course.

Chairwoman KELLY. One day, eight hours?

Dr. MIRER. Yes, which enables them to use the basic job checklist.

Chairwoman KELLY. The rule, as I understand it, requires one hour.

Dr. MIRER. The one hour is for the employer to familiarize himself with the standard and with the three or four job characteristics that are listed in the standard.

Chairwoman KELLY. Ms. Woodbury, I can see you are shaking your head. Would you like to respond to that?

Ms. WOODBURY. If you turn your attention to page 66038 of the preamble, Cost to Train Employees, one hour of employee time per affected employee is the cost to train employees. This is just from OSHA's preamble, that 66038, and two hours of managerial time.

Dr. MIRER. You are talking about a completely different thing.

That is completely different. That is the training for the employee exposed on the job. I was talking about the training for the person who is analyzing the job in order to measure the risk factors and devise abatement methods. Those are completely different things.

Chairwoman KELLY. I am glad we are getting this cleared up. So, what would you think we should do about training the employees?

Dr. MIRER. An hour is adequate for the exposed employees.

Chairwoman KELLY. But you think at least eight hours, if you are going to have somebody who is doing the evaluations?

Dr. MIRER. I think the job analysis requires that amount of time.

Chairwoman KELLY. I am just going to go back to a couple of other questions.

Mr. HALPRIN. Excuse me, Madam Chairwoman. May I ask? As I understand from Dr. Mirer's testimony, the UAW has in many cases negotiated risk factor tables—correct me if I am wrong—with the employers. So, they are not sitting on a situation where they have to guess what the numbers are. They've got a list of tables. Either you are above, or you are below. If you are above, you've got a problem under their contract, and, if you are below, you don't, which is not necessarily something that OSHA would accept. Probably will in their scenario, but that remains to be seen. But, that is not the scenario that is available to a small employer. That is General Motors and Ford and companies like that.



For them to come out and provide that service is wonderful. If they would like to expand that to the other millions of small employers in this country, that would be wonderful. But, I don't think they have got the resources for that, either.

I am a little concerned about saying it is simplistic. They've got a negotiated number. In a sense, they have made a policy decision between their companies and their unions about what level of stress they think is appropriate for a worker to be able to handle, and they have made that on a negotiated basis.

Chairwoman KELLY. Thank you very much for your input. I appreciate that.

I am going to turn now to Mr. Pascrell. I am coming back to pick up a couple of questions that I have left, but go ahead, Mr. Pascrell.

Mr. PASCRELL. Mr. Halprin, do you agree or disagree with the assertion that there is an MSD worker problem in America?

Mr. HALPRIN. I believe there is a limited problem. It is drastically overstated by the agency.

Mr. PASCRELL. I don't want to put words in your mouth. Is that the reason why you thought that you questioned the authenticity of the 600,000 figure?

Mr. HALPRIN. Let me explain. I think you intended to mention repetitive motions. Repetitive motion cases are about 75,000. The other 575,000 are single-incident events.

Mr. PASCRELL. So you think that the first number, 75,000—the 75,000 figure—

Mr. HALPRIN. That is a more realistic estimate, a starting point for this problem. Now, whether those are caused by biomechanical factors or psychosocial factors, or some combination, that is what the debate is about.

Mr. PASCRELL. Well, you did say that what the worker brings to the workplace has a lot to do with this, too.

Mr. HALPRIN. Correct.

Mr. PASCRELL. That isn't to say that the job itself or the work entailed on the job precipitated or worsened the situation. I mean, that is a person-by-person evaluation, isn't it?

Mr. HALPRIN. I am not sure I understand the question.

Mr. PASCRELL. If there is a problem, regardless of what the number is, we do want to try to be helpful. If we are going to promulgate the rule, we want some results to avoid these problems in the future. You are not saying, are you, that you don't think the problem is such or has reached the point where we should have a rule?

Mr. HALPRIN. The problem has not reached a level or been established to a level that would justify a rule of this scope or this reach.

Mr. PASCRELL. What would you suggest?

Mr. HALPRIN. Going back to the science, getting some clear science. I would respectfully disagree with Dr. Mirer on what the level of science currently is and what it shows.

For example, there are a fair amount of data that show that employees' jobs—the physical aspects of the job don't cause the problem. But, the workers simply hate their job, or they hate their boss, or they have some other problem in life which compounds and brings out factors. As a result, they show symptoms for unknown reasons. Now, there are going to be some highly stressful jobs

which cause problems. They are limited. This rule does nothing to try to address and sort them out. It basically goes after everything and leaves the employer in a situation where it is totally up to an OSHA compliance officer to decide whether something is covered or not and whether the employer has done enough.

The agency has come up with—It almost looks like negotiated bargaining here. They have come up with a proposal which is so outlandish that I honestly feel the employer community has no choice but to oppose it. I think that is the general gist of what I am saying. It is too far out.

Mr. PASCRELL. So you are saying that the rule is too broad?

I want to clear up this one point, though. OSHA is not sending inspectors business by business to see what they have in place to prevent certain kinds of injuries. OSHA inspectors only go to a business where there has been a complaint to see whether there is a plan to prevent it in the future. Is that correct or incorrect?

Mr. HALPRIN. Partially correct. The other alternative would be to go to industries with higher than average—For example, lost work to day injury/illness rates, and, potentially, I don't know. The agency may consider a program based on somebody's musculoskeletal injury rate, which, again, like I said, I believe is inflated and, therefore, could very easily misguide OSHA compliance officers and send them to the wrong place.

Mr. PASCRELL. So, basically, when you come right down to this, there is a basic disagreement between yourself and Dr. Mirer as to whether or not the science is at the point that we can define what is a work-related injury within the category that we are talking about here today.

Mr. HALPRIN. Whether it is work-related, what the cause is, and if there are other factors, how to sort them out, how it is fair, is a matter of policy to decide what burdens are appropriate to put on an employer and which burdens are not.

Mr. PASCRELL. Let's take a specific industry then that has been a target or much has been written, much has been discussed—the poultry industry. Have you yourself taken a look at that industry to see what are the reasons why there have been so many complaints within that industry?

Mr. HALPRIN. No, I have not.

Mr. PASCRELL. Actually, it is industries such as that that precipitated the research—the ten-year study to get us to where we are today.

Mr. HALPRIN. Right. Now, that poultry industry, as I understand it, and some of the meat-packing, still have, although they are improved, the highest rates in the country. This standard would require that they be down to zero. Totally infeasible. That is what I am talking about, about over-reaching, unrealistic, and basically giving employers no choice but to say. Forget it.

Mr. PASCRELL. Let's take that meat-packing and poultry industry. What you are saying is that the rule as proposed at this moment in time, although we are going to see some other changes, we think, does not meet the task of solving the problem in the first place.

Mr. HALPRIN. Correct, it is too broad. It doesn't reach the problem. There are already meat-packing guidelines in effect, which

OSHA has in effect been enforcing. It is questionable whether this actual rule would require things that would do anything more than what is already in place on a voluntary basis.

Mr. PASCRELL. So without studying the industry as such, which you provided us, there is a problem. We really don't know what the extent of the problem is. This rule is not going to solve the problem. We need a much more specific rule to solve that problem for that industry.

Mr. HALPRIN. No, I did not say that.

Mr. PASCRELL. Then what are you saying?

Mr. HALPRIN. There are some industries with high reported rates. I can't tell you what all the reasons are for them. There are guidelines in place to address that industry. If OSHA were going to look at it, it would make more sense to look at industries that don't already have those guidelines in place and think about developing guidelines for those industries.

Mr. PASCRELL. So, in other words, what we need is a rule that pertains to poultry and a rule that pertains, maybe, to data entry, and a rule that pertains to machinists.

Mr. HALPRIN. Given the current state of the science, assuming those can be justified, yes. The agency does not have data, to the best of my knowledge—nobody does—that says how many times you can lift your arm or push it in a certain direction, with how much force, and how much twisting. That is the basis on which every one of these other health standards has been based on. The closest thing you might call to this is probably noise, where there is noise in the workplace, noise outside the workplace. But, there is a permissible exposure limit, and the noise has been demonstrated to cause hearing loss.

We just don't have clear causation here. We don't have numerical links. Basically, OSHA is saying. Go out there and guess and experiment, and, if we like what you do, fine. If we don't, we'll second-guess you. If you don't do it right, basically, be prepared for us to take some enforcement action. At that point, of course, they will issue a citation and tell you what they think you should have done, and you'll be put in the position of trying to defend it. If you are a small business, you can't afford to defend the situation, so, unless it is going to put you out of business, you roll over and do what OSHA says.

Mr. PASCRELL. OSHA doesn't want to put anybody out of business. You don't think that?

Mr. HALPRIN. I don't think OSHA has enough knowledge to know when they are going to put somebody out of business. As the Chairwoman mentioned, we can tell pitchers not to throw pitches for more than three innings. We can ban the curve ball. We can change the game. We can change the business.

Mr. PASCRELL. But we are becoming jocular here about a serious problem in the workplace in different places. This is serious business, and I am sure he is reading it seriously, too. It is easier to measure decibels than it is how many times I can go to the plate, and we know that. So, you don't really believe we can find some general standard that could precipitate what we should be doing in each of those industries. You believe they should be all taken separately as has been in the past.

Mr. HALPRIN. Correct.

Mr. PASCRELL. I don't totally agree with you, but I just wanted to clarify some things here. I am not against rule-setting. You believe that the rule that is being proposed will not correct the problem.

So, what you are asking for—

Mr. HALPRIN. It will be grossly inefficient. It is going to be counterproductive. All those things.

Mr. PASCRELL. So what you are suggesting is that it become even more specific.

Mr. HALPRIN. Provided the science is there to support it, correct, not just pull numbers out of thin air, which is what the agency does.

Mr. PASCRELL. Thank you.

Ms. WOODBURY. If I could comment on that. I think what we would be interested in is, if there is science—Mr. Halprin mentioned the noise rule with a dBA of 90. But, then, they allow the employer to use feasible means to get there. But, there is an objective getting it down to 90 dBA engineering controls using personal hearing protection. Here, we don't have that 90 dBA as a goal. I use the example of "materially reduce".

If we used that same criteria in the noise rule, would "materially reduce" mean 90, 85, 95, 80? We need an objective goal, so I think we agree that flexibility is good. But, we need a goal at the end of the rainbow, or else we are all going to be all over the map and there's going to be subjective differences in how the rule is enforced, and that is a big problem.

Mr. PASCRELL. My concern, Madam Chair, about that is that the more specific we think we can become the more intrusive we become within the business that we are trying to deal with. That is my concern, and I think it is a clear concern—To me it is. Correct me if I am wrong. What we might be suggesting is that we want these rules to be more activity-specific, that the standards be more activity-specific, and the solution be more activity-specific. Maybe, to me, that goes too far, having started out in support, generally, of what OSHA was trying to do. We don't want to chop ourselves here, but we do want to understand how we are going to come up with a rule—OSHA is going to come up with a rule we are going to have to live with. We cannot have it both ways.

Mr. HALPRIN. I would like to add one point. The logical approach would be to come up with some guidelines first and try them out first for a few years, not adopt a rule to include the entire universe in the U.S. industry.

Mr. PASCRELL. So you would say a pilot program?

Mr. HALPRIN. Makes perfect sense.

Mr. PASCRELL. It goes into effect, say, in January rather—and see how that works out over two or three years before you become industry-specific.

Mr. HALPRIN. If industry-specific turned out to make some sense.

Ms. WOODBURY. I would agree that a pilot program—

Mr. PASCRELL. Would the National Association of Manufacturers support that?

Ms. WOODBURY. I think you would need to ask them, but I think that, before we get to the point of saying a rule is absolutely nec-

essary, if we are saying to employers, well, you have to determine what a covered MSD is—because we don't really have the science in place to establish guidelines to help you do that—then the guidelines make perfect sense. The problem is not whether ergonomics or injuries are happening. It is how can we make sure that the money we spend and the things that we put in place are actually going to cure them.

That is the crux, and that is what guidelines can help do.

Chairwoman KELLY. Thank you very much. Ms. Woodbury, something occurred to me when I was reading your testimony.

Under this proposed rule, the worker who has an injury would be allowed to be out for six months with full pay or the equivalent of full pay while they are recovering from this injury. I just wanted to know if you can tell me what is the average maternity leave. It is about three months, isn't it?

Ms. WOODBURY. I have not had the opportunity to have that maternity leave. However—

Chairwoman KELLY. Let me enlighten you. I have.

Ms. WOODBURY. Somewhere around three months.

Chairwoman KELLY. It is about three months, and they don't take into account whether or not you have had a caesarian or any other kind of difficult delivery. It simply is three months. It is interesting to me that, in this rule, they are doubling that amount of time. Under the Family Leave Act, it is three months. It is interesting to me that, under this rule, they have doubled the amount of time.

If you have an MSD, I find it very curious that we would need six months to recover from something that could be considerably less traumatic than a difficult delivery involving a C-section. I think that was an interesting—You didn't bring that out in your testimony. But, you mentioned the fact that it was a six-month leave with full pay, and I think that is a very good point to focus on.

Dr. MIRER. Congresswoman Kelly, could I respond to that, please?

The situation with medical work removal protection is this. The employer is selecting the health-care provider. The employer's health-care provider determines whether the MSD is work-related and whether to place a restriction on the employee. It is a choice of the employers, somebody hired by the employer to do that.

The importance of work removal protection is that, if an employee goes back on an unabated job that has hurt him or her already, we can be virtually certain they will get hurt again. We can be virtually certain that the job will progress to further disability. So, the purpose of the duration is really the time it would take to fix the job that they were on before. But, in any case, this is an individual decision being made by the employer's health-care provider that they can't work the job.

Now, Mr. Kremp described exactly the way we would hope the process would work. He had an employee who was hurt. They found him something else to do that he could do. He had employees that were too old or they said advanced in age to do the tasks that they were originally doing. He found them something to do. We think that employers can accommodate this very well.

Out of the plant—You are disqualified out of the plant, that is another factor. In fact, we would like to see the full MRP/MPR framework that has been there with lead and cadmium and formaldehyde and methylene chloride put back into the rule rather than what we have there now, but that is the rationale.

Chairwoman KELLY. Dr. Mirer, there is one thing about the cadmium and all the rest of those things that you have listed. They are fatal. The MSDs are not necessarily fatal, and I think that is a very important point.

Ms. WOODBURY There is something else that you wanted to say.

I wanted to respond to Dr. Mirer's comment saying that it is the health-care professional's determination whether something is work-related or not in an injury. That is incorrect. What OSHA says is that it is the employer's decision whether something is work-related. So, the employer, who is not a doctor in most cases, would have to make a decision whether something is covered, whether it is work-related. That means that that employer would have to know what all of the employee's home activities are, whether he is a gardener or plays tennis, and would then have to make a determination. Is this related to gardening, or is it related to the job?

As I mentioned in my statement, one of the attorneys in my group during the OSHA public hearings asked a Georgetown physician how he would make such a determination. There is no definitive answer, yet OSHA is expecting the employer to make that decision in order to go forward.

I just wanted to clarify. Thank you.

Mr. HALPRIN. Can I add something to that?

Chairwoman KELLY. Yes, Mr. Halprin.

Mr. HALPRIN. Beyond that, because the standard is written to say does "cause or contribute." Then, you read the preamble and "contribute" means aggravate. It doesn't matter whether the gardening might have been the primary factor. The question is did work in any way aggravate it to any degree.

If the answer is yes, it is covered. Second, although it is the employer's decision, if the employee doesn't like the decision, they file a complaint with OSHA. OSHA comes in to conduct an inspection to see whether the decision was correct.

I can't say that is the most efficient way of doing things, but it is not as though it is the employer's absolute decision and there is nothing else that is going to happen if the employee files a complaint. The employer has got to go through an OSHA inspection about it and try to justify and document why they came to the decision they did. Then, of course, there is the problem that the standard, as written, doesn't allow the employer to have access to the information they need to make the decision. That is another issue.

Chairwoman KELLY. I thank you. I think that, obviously, honest minds can differ on this subject to a certain degree.

But, as Mr. Pascrell points out, we need to come to a thoughtful decision with this rule. There is a need for more information. There is a need for thought.

It is only, I believe, by working together, that we are going to come up with some kind of a decision on this rule that will be something that is enforceable and workable, will protect the work-

ers but also will protect the employers, especially those of us who are small businesspeople who must contend everyday on an individual basis with many rules and regulations that are promulgated by these agencies.

So often, many of these do conflict. I thank all of you very much for being here on the panel today. I really thank you for your patience and your willingness to speak forth and to be so strong in your opinions.

Thank you very much. Hearing is adjourned.

[Whereupon, at 3:15 p.m., Monday, April 14, 2000, the hearing was adjourned.]

*OPENING STATEMENT*

**CHAIRWOMAN SUE KELLY  
SUBCOMMITTEE ON REGULATORY REFORM AND PAPERWORK  
REDUCTION  
OF THE COMMITTEE ON SMALL BUSINESS**

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Good Morning. Today the Subcommittee on Regulatory Reform and Paperwork Reduction is meeting to discuss the Occupational Safety and Health Administration's (OSHA) proposed ergonomics program standard. OSHA released the proposed rule and accompanying material for comment by interested parties on November 23, 2000. The material for comment was voluminous and included a 300 page Federal Register notice and an 1,100 page economic analysis. Despite more than a thousand requests for comments, OSHA maintained that comments would be due on February 1, 2000. With five days left in the comment period, OSHA extended the comment deadline by 30 days to March 2, 2000. OSHA also has made it abundantly clear that it intends to issue a final standard by the end of the year.

In response to the notice of proposed rulemaking, OSHA received some 7,000 comments. In addition, many organizations, small business owners, union representatives, and individual workers have agreed to testify before public hearings being held by OSHA on the proposed. Obviously, there is a great deal of interest in the proposed standard especially considering the amount of effort that is needed to submit written comments to a federal agency or appear at a hearing. This is especially true of small business owners who generally have more significant things to worry about, such as operating their businesses, than filing comments with a federal agency on a proposed rule. This interest has been confirmed in my discussions with small business owners from my district.

These small business owners, as we will hear today, strive to provide the safest working environment for their employees. And now all of sudden, they are being told by OSHA that they must do more. These small business owners certainly would do more if they knew what to do. However, the proposed standard, although written in plain English, is difficult to understand and may leave far too much discretion in the hands of OSHA inspectors in assessing compliance. Thus, it is not surprising to find that many small business owners are confused over how they will comply, what the costs of compliance will be, and even if they will be able to comply.

It is very important for OSHA to understand these concerns and this is one of the primary reasons for holding the hearing – to ensure that OSHA understands that small businesses are different than large businesses in terms of financial resources, technical expertise, and daily operation. OSHA needs to take that into account in developing a final rule. Otherwise, I fear segregation – workers for larger enterprises get ergonomic protection because their employers can figure out how to comply with the standard while employees



of smaller businesses do not because OSHA abdicated its responsibility to draft a rule that actually provides specific identifiable workplace and engineering practice guidelines to designed to substantially reduce or eliminate ergonomic hazards.

The proposed standard is one of the most far-reaching initiatives undertaken by OSHA, or for that matter, any federal regulatory agency. It will affect the vast majority of small businesses throughout the United States. As a result, I look forward to the hearing even though it will be very long. However, given the importance of the issue, it is critical that we in Congress devote the necessary time to understanding the ramifications of this regulatory initiative.

The first panel will be the Honorable Charles N. Jeffress, the Assistant Secretary of Labor and the Administrator of OSHA. I am interested in hearing from Mr. Jeffress on his views concerning small business compliance, the costs thereof, and the alternatives that will be considered in reducing the potentially adverse consequences on small business.

The second panel is made up of five small business owners who will testify about their operations, how the proposed standard will affect them, and what information they really need in an ergonomics standard to protect their employees. I would hope that Mr. Jeffress or his staff could stay and listen to the testimony of the second and third panel.

The third panel is a balanced panel made of two witnesses from labor unions, two lawyers who represent business interests, and a representative of the American Society of Safety Engineers. I look forward to hearing the diverse views of this panel on the potential impact of the proposed standard on small businesses in both its operation and enforcement.

I will now yield to my good friend from New Jersey for whom I was glad to move this hearing to avoid a potential conflict, the Ranking Member, Mr. Pascrell, for any comments he may wish to make.

**STATEMENT OF CHARLES N. JEFFRESS**  
**ASSISTANT SECRETARY FOR OCCUPATIONAL SAFETY AND HEALTH**  
**U.S. DEPARTMENT OF LABOR**  
**BEFORE**  
**THE SUBCOMMITTEE ON REGULATORY REFORM**  
**AND PAPERWORK REDUCTION**  
**OF THE**  
**HOUSE SMALL BUSINESS COMMITTEE**  
**April 13, 2000**

Madam Chairperson, members of the Subcommittee, thank you for inviting me to testify about the Occupational Safety and Health Administration's proposed ergonomics standard. I welcome this opportunity to discuss the severe problem of work-related musculoskeletal disorders, also known as MSDs. OSHA has spent 10 years studying this issue, analyzing evidence, reviewing data, talking to stakeholders, and discussing ideas and options. It is now time to act.

Work-related musculoskeletal disorders are the most widespread occupational health hazard facing our Nation today. Nearly two million workers suffer work-related musculoskeletal disorders every year, and more than 600,000 lose time from work as a result. Although the median number of lost workdays associated with these incidents is seven days, the most severe injuries can put people out of work for months and even permanently impact their ability to perform their job. In addition, \$1 of every \$3 spent on workers' compensation stems from insufficient ergonomic protection. The direct costs attributable to MSDs are \$15 to \$20 billion per year, with total annual costs reaching \$45 to \$54 billion. Yet today, fewer than 30 percent of general industry employers have ergonomics programs.

**Real People**

The human dimension of this problem is striking. This debate is about real people

confronting real risks to their livelihood, health and well-being. Ursula Stafford is a 24-year-old paraprofessional for the New York City school district. Ms. Stafford was assigned to assist a paralyzed student who used a wheelchair. The student weighed 250 pounds and Ursula weighed 122. She received no training on how to lift the student (which was required, for example, to help the student go to the bathroom), nor did her employer provide any lifting equipment. Ursula worked only two days before seriously injuring her back on the third day. She had a herniated disc and spasms in her neck. Today she wears a back brace, endures constant pain and has been told that she may never be able to have children because her back may not be able to support the weight. Compounding this tragedy is the fact that Ursula's predecessor was similarly injured and became permanently disabled. Under the requirements of OSHA's proposal, Ursula's employer would have been required to fix the job after the first injury occurred. Ursula might never have been hurt.

Then there is Walter Frazier, a 41-year-old poultry worker, who has undergone four surgeries on his hands and wrists. For nearly nine years, Walter worked as a "live-hanger" in a chicken processing plant. An admittedly nasty job, live-hanging is simple in concept. Ten to twelve people stand beside a processing line, stretch over a barrier bar designed to contain the often-flapping chickens, grab the chickens by the legs, and then stretch upward while twisting to hang the chickens on fast-moving overhead shackles. Walter repeated this process about once every three seconds—that's about 10,000 times a day, 50,000 times a week, 2.5 million times a year.

Walter felt the initial pains in his hands shortly after beginning to work at the plant. Through the years his pain intensified while his health has diminished. Finally, in 1998, barely

able to lift 20 pounds and unable to perform many daily household chores, he agreed with his doctor's recommendations and had the first of four surgeries in an attempt to repair his damaged hands. In addition to severe hand problems, Walter has lower back pain and severe and chronic arthritis in his hands and shoulders. "My doctor told me I can't do this job anymore. My body's overworked, and I can't do this any further."

Many other workers have written us to express support for ergonomics regulation. One put it like this: "I'm an ultrasonographer who has recently been fired from my job because I had to be out with MSD. I probably would have never had this problem if there were an ergonomics standard present in my workplace."

Another worker who lost her job was Mary, a nurse in Oregon, who sustained a back injury and had to work on light duty for a year. Then her hospital told her to find another job because they did not have anything for her to do. Today she works at different part-time jobs in different locations and can no longer provide patient care. And there's Debra Teske, a customer service representative, diagnosed with bilateral carpal tunnel syndrome that required surgery on her right hand. Today, she has difficulty cooking, cleaning and picking up small objects. She can no longer kayak or bike, hobbies that she once enjoyed. And Carmen Willis, a nurse's aide, is on disability and must use a speaker phone because she cannot hold the telephone.

Beth Piknick is a registered nurse and also knows firsthand the importance of OSHA's proposed ergonomics program standard. While working as an ICU nurse, she suffered a career-ending back injury that was devastating, both personally and professionally. Throughout her career, Ms. Piknick helped patients move from their beds to chairs and back. Twisting, bending, pulling and pushing were all part of the job. She never had any back problems. But on February

17, 1992, while helping move a patient, Beth severely injured her back. Physicians, surgeons, and physical therapists were not able to relieve the constant pain. Finally, two years after the injury Beth had spinal fusion surgery coupled with a major rehabilitation program. She was willing to endure whatever pain it took to return to the job she loved. Despite the surgery and the physical therapy, however, she cannot return to her job. Before her injury, Ms. Piknick was an active person who enjoyed bicycling, racquetball, waterskiing and yearly white water rafting trips with her family. Now, she cannot participate in any of those activities.

Women disproportionately suffer some of the most debilitating types of MSDs, such as carpal tunnel syndrome. This is not because women are more vulnerable to MSDs—but because a large number of women work in jobs associated with heavy lifting, awkward postures or repetitive motions. They hold a disproportionate number of jobs as nurses, cashiers, packagers, maids and house staff, assemblers and office workers. Consequently, women suffer 70 percent of the carpal tunnel syndrome cases and 62 percent of the tendinitis cases that are serious enough to warrant time off work.

Workers should not have to suffer like this. Often solutions to mismatches between workers and their tasks are right at hand—simple, easy and inexpensive. But too many employers have yet to realize the benefits of ergonomics and put protective programs in place. Fewer than 30 percent of employers with 20 or fewer employees have addressed ergonomics although more than 325,000 musculoskeletal disorders occur each year in smaller workplaces. In contrast, more than three-quarters of the companies with 250 or more employees have analyzed hazards and installed some engineering controls to decrease the risk of musculoskeletal disorders.

**Real Solutions**

Ergonomics has an impact beyond workers. This discipline has its roots in improving efficiency and productivity. For years, many employers have known that good ergonomics is often good economics. And those employers have not only saved their workers from injury and potential misery, but they have saved millions of dollars in the process. The proposed rule draws on the experience of companies that have implemented successful programs.

Many businesses—both large and small—have already demonstrated the value of ergonomics programs. Enid Memorial Hospital, a small nursing care facility in Oklahoma, instituted an ergonomics program focused on back-injury prevention. Enid Memorial presented its program to staff through lectures, videos, handouts and demonstrations. The facility purchased mechanical lifts and made them available throughout the establishment. In 1997 and 1998, this practical ergonomics program cut the rate of work-related injuries by almost 75% from their 1996 level, and reduced the number of associated lost workdays by over 85 percent.

A 25-person Ohio lumberyard, the Weyerhaeuser Customer Service Center, invited an ergonomist from the State of Ohio's Workers' Compensation program to survey their site. Based on the recommendations they received, the lumberyard developed checklists for use by each of their employees in evaluating the ergonomic appropriateness of the facility's personal protective equipment, mechanical equipment and overall workplace. The lumberyard completely redesigned their office workstations in 1994. As of July of last year, they had not had any lost-time injuries since strengthening their program.

Two Maine New Balance shoe manufacturing facilities cut their workers' compensation costs from \$1.2 million to \$89,000 per year and reduced their lost and restricted workdays from

11,000 to 549 during a three-year period. New Balance achieved this by adding engineering controls, eliminating piecework, forming manufacturing teams, and rotating work activities.

Ultra Tool and Plastics, a small New York plastics products manufacturer, implemented an ergonomics program that cut back injuries by 70 percent and reduced associated lost workdays by 80 percent. Some solutions included: purchasing ergonomic chairs for production employees; providing back safety training; installing robot presses to eliminate the need for production employees to reach for parts; and making pallet jacks available for metal bins to allow height adjustments.

CR/PL Limited Partnership, a small Texas ceramic fixture manufacturer, had a fairly high incidence of lost workday injuries occurring in this facility due to moving products ranging from 25 to 52 pounds. The firm added mechanical-lift assists and changed the heights of some work stations to reduce lost workdays associated with MSDs by 60 percent in 2 years.

In 1996, Sysco Food Services of Houston, a food service distributor, had 201 injuries with 3,638 lost workdays. Sysco's back injuries accounted for almost 40 percent of the injuries and more than half the company's total workers' compensation costs. Most of the back injuries occurred in the warehouse and on delivery routes. Sysco formalized its ergonomics program under the leadership of its occupational health nurse. They instituted an early return to work policy. Workers were encouraged to report any symptoms. The company re-racked its warehouse and put brakes on the hand trucks. Sysco assessed its customers' locations for hazards during delivery and worked with its customers on improvements. Sysco also worked with its suppliers to get smaller bags, handles on packages, sturdier cardboard and lighter boxes. One year after implementing an ergonomics program, injuries dropped 25 percent, and the cost of

workers' compensation cases was down by more than 45 percent.

Many solutions to ergonomic problems are common sense and inexpensive. OSHA has identified many solutions that cost less than \$100. For example, workers at a packaging plant complained of leg and back fatigue. Their management installed footrests for standing posture workstations at a cost of \$50 each. At a manual assembly plant, a worker's job involved installing a small part with needle-nosed pliers that put stress on the wrist. The supervisor suggested another tool--available in the tool crib--that would make the task easier and safer without costing an extra dime. Another company recognized the need to make changes to their packaging line workstations because workers developed musculoskeletal disorders. They simply added a belt conveyor to move packaged boxes away from the workstation--at a cost of \$90.50 per worker. Employees in a poultry processing plant complained that ill-fitting protective gloves did not provide adequate protection. The company bought protective gloves from several manufacturers to provide a wide range of sizes for better fit. The cost was negligible. In many mechanical assembly companies, the use of hand tools injures small parts of workers' hands. Some companies have used padded tools with inexpensive materials to reduce injury, at minimum cost. These are only a few examples among many.

#### **Public Process**

On November 23, 1999, OSHA published its 11-page proposed ergonomics standard in the *Federal Register*. As explained in the lengthy Preamble, the proposal was based on sound scientific evidence--including findings by the National Academy of Sciences--that strongly supports two basic conclusions: (1) there is a positive relationship between work-related musculoskeletal disorders and the workplace; and (2) ergonomics programs and specific



ergonomic interventions can reduce these injuries.

OSHA is providing ample opportunity for the public to provide input on its ergonomics proposal. We have already heard from more than 7,000 stakeholders during the 100-day pre-hearing comment period, and we are now in the midst of 9 weeks of public hearing on the proposal. During the hearings, we expect to hear from more than a thousand witnesses, including representatives of large and small businesses, small business owners, employee representatives and individual workers, as well as physicians, ergonomists, occupational health nurses, and others.

OSHA rulemaking hearings are legislative-type proceedings in which parties with information and views relevant to the proposed standard may provide testimony and be questioned by the agency. Our hearings go even farther, as OSHA also allows participants to question each other. OSHA believes it has provided sufficient time for this questioning, not all of which has been used. For example, after a National Institute for Occupational Safety and Health (NIOSH) panel testified about the scientific evidence on the causes and management of MSDs, participants did not even use all of the three hours that had been reserved for questioning the panel.

Participants who have filed a notice of intent to appear will also have an additional 90 days after the close of the hearing to submit further comments, including comments on the hearing testimony and other evidence already in the record. In total, the combined period – including the pre-hearing comment period, the public hearing, and the post-hearing comment period – which interested members of the public will have to comment on OSHA's proposal exceeds eight months. This period is in addition to the small business review panel process

conducted under SBREFA, the opportunity for comment after that process concluded, and the eight years of dialogue that have occurred since OSHA issued its Advance Notice of Proposed Rulemaking in 1992. Throughout this process, we have continually increased our understanding of the concerns of workers and businesses, and have considered carefully all of the views we have heard on how best to provide protection.

We very much appreciate efforts of everyone who has filed written comments and those who are participating in the public hearing process. As with all OSHA rules, we will base our final standard on the complete rulemaking record, including pre- and post-hearing comments, as well as the hearing testimony.

#### **OSHA's Proposal**

OSHA's proposed ergonomics program standard relies on a practical, flexible approach that reflects industry best practices and focuses on jobs where work-related MSDs occur, problems are severe, and solutions are generally understood. It would require general industry employers to address ergonomics—the fit between the worker and work—for manual handling and manufacturing production jobs, where we know the problems are most severe. And it requires other general industry employers to act when their employees experience work-related musculoskeletal disorders.

Under the proposal, about 1.6 million employers—those with manufacturing and manual handling jobs—would initially need to implement a basic ergonomics program. This means assigning someone to be responsible for ergonomics; providing information to employees on the risk of injuries, signs and symptoms to watch for, and the importance of reporting problems early; and setting up a way for employees to report signs and symptoms. Full programs for these

and other general industry employers would be required only if one or more work-related MSDs actually occurred. But even if a worker is hurt, the employer need not implement a full program if a “Quick Fix” can take care of the problem. If the employer corrects a hazard within 90 days, verifies that the fix has eliminated the hazard, and has no additional MSDs in that job, no further action is necessary. In addition, a “grandfather” clause gives credit to firms that already have implemented ergonomics programs that satisfy the core elements of the standard.

Under OSHA’s proposal, only 25 percent of general industry companies with fewer than 20 workers will be required to adopt basic ergonomics programs for one or more of their jobs involving manual handling or manufacturing production work. Over a 10-year period, about 900 thousand small employers will need full programs because one or more of their workers will have experienced an MSD.

The OSHA proposal identifies six elements for a full ergonomics program: management leadership and employee participation; hazard information and reporting; job hazard analysis and control; training; MSD management; and program evaluation. OSHA intends that ergonomics programs be job-based, covering only the job where the risk of developing an MSD exists and any other jobs in the workplace that have the same work activities and conditions. Ergonomics programs need not cover all the jobs at the workplace. Nor are all MSDs covered. Rather, only MSDs caused by a work activity that is a core element of an employee’s job or a significant part of her work day will trigger coverage.

The proposal would require that workers who experience covered MSDs receive a prompt response from their employer, including an evaluation of their injury and access to follow-up by a health care professional, if necessary. It also provides work restriction protection for workers

when a health care professional has determined restricted work is indicated due to a work-related MSD. Because the proposed standard is only triggered when an MSD is reported, its protectiveness depends heavily on workers' willingness to raise problems when they occur. Evidence shows that employees are reluctant to report symptoms if doing so might cause them to miss work and lose pay. Therefore, OSHA has proposed that workers whose injuries prevent them from working would receive 90 percent of their after-tax pay and 100 percent of benefits to limit economic loss as a result of their injuries. Workers capable of performing only light duty receive full after-tax pay and benefits. This is roughly equivalent to the 2/3 of pre-tax pay that workers already receive under most State workers' compensation programs. But this provision is not about worker pay, it's about injury prevention. It is designed to encourage early reporting and intervention, which is to the worker's benefit and the employer's benefit. OSHA has included similar provisions in several other standards, including those on asbestos, cotton dust, formaldehyde, lead, methylene chloride, benzene and cadmium.

OSHA estimates the proposed standard would prevent about 3 million work-related MSDs over the next 10 years and save an estimated \$9.1 billion annually in lost production, administrative, and other direct costs alone. The total benefit far outweighs the estimated \$4.2 billion annual cost of the proposal to employers. Although some private organizations have published estimates that differ from OSHA's, many of these estimates contain either fundamental misunderstanding of OSHA's economic analysis, or of how OSHA's proposed rule would be applied. For example, some of these estimates compare their estimates of initial costs to OSHA's estimates of annualized costs (American Meat Institute and the Center for Office Technology). Other estimates compare the costs for a 150-person plant to an OSHA estimate

provided for a 17-person plant (American Meat Institute). Some estimates assume that firms would have to make vastly greater efforts than anything required by OSHA's proposed standard, actually used by existing programs, or adopted as part of OSHA's corporate settlement agreements. For example, one appraisal estimated that complying with part of OSHA's employee participation requirement would require 10 employees in a 150-employee facility to meet 2 days a week every week for 6 months. Nothing in OSHA's standard requires such an effort. This same study assumed that the only way to control problem jobs would be to decrease productivity by 25 percent. Evidence we have received to date indicates that ergonomics programs often lead to productivity increases. Other studies use data based on speculative projections rather than real-world examples. Despite such flaws, where cost estimates submitted for the record demonstrate any mistake or lack of clarity in OSHA's economic analysis, we will revise the analysis accordingly.

#### **Small Business Assistance**

OSHA has paid close attention to the unique needs of small businesses as we have developed the proposal. We drafted the 11-page proposal in a question-and-answer format that is written in plain language. The proposal exempts businesses with 10 or fewer employees from recordkeeping requirements. It extends the phase-in requirements for job hazard analysis for two years and the phase-in for implementing permanent controls for three years.

In accordance with the Small Business Regulatory Enforcement Fairness Act (SBREFA), OSHA, the Office of Management and Budget, and the Small Business Administration convened a Panel to review and comment on a working draft of the ergonomics program. The Panel sought advice and recommendations from potentially affected small business representatives. Twenty-

one small business representatives from a variety of industries participated in the effort. The Panel raised a number of questions and suggested several potential improvements to OSHA's draft, many of which were addressed in the proposal we published in November.

OSHA made changes to both the economic analysis and its proposed standard after the SBREFA Panel's review. Those changes included: refining the work restriction protection provision; increasing the original cost estimates to \$4.2 billion; clarifying that repeat training is not necessary if employees have already received ergonomics training; and providing examples of covered manufacturing and manual handling jobs. Another significant addition based on the SBREFA process was the "Quick Fix" option. The draft we provided the SBREFA Panel required employers to implement full ergonomics programs in the event an employee contracted an MSD. Small entity representatives asked why a full program was necessary if a condition could be easily remedied and workers protected. Those comments led to the "Quick Fix."

In addition to drafting a standard that places a minimal burden on small businesses, OSHA plans to provide extensive assistance to small businesses to assist with compliance—through publications, checklists, training grants, information sheets that help employers provide required information to their workers, Internet-based materials, outreach sessions and its free consultation program. Every small employer that needs help will be able to contact one of OSHA's state consultation programs for free assistance in deciding what they need to do or whether they need a program at all.

We are also undertaking extensive efforts to train OSHA's own compliance staff. The OSHA Training Institute already trains the agency's compliance officers about ergonomics. Consistent with our standard practice whenever OSHA promulgates new standards, we will

revise those courses based on the final rule and ensure that all compliance officers who will perform ergonomics inspections receive updated training. In addition, we will continue to send compliance officers to conferences and programs on applied ergonomics, where best practices are discussed, in order to hone their skills even further.

**Conclusion**

MSDs have a very measurable impact on the lives and careers of American workers. Companies that have worked to prevent these injuries with sound ergonomics programs have often improved productivity, drastically reduced workers' compensation costs, and improved job satisfaction. OSHA believes that the same opportunity for a safer workplace must be extended to other workers whose livelihoods and careers remain at risk. Preventable hazards too often mean the difference between a happy, healthy productive worker and one whose life and career may be forever changed by the misery of chronic pain from a senseless injury.

Thank you for the opportunity to testify about this very important issue. I will be pleased to answer any questions the Subcommittee may have.



## Testimony

of Laura J. O'Shaughnessy  
*Corporate Secretary*  
Revere Copper Products, Inc.

*on behalf of* The National Association of Manufacturers

*regarding* OSHA's Proposed Ergonomics Standard and Its Impact  
On Small Business

*before the* Subcommittee on Regulatory Reform and Paperwork  
Reduction  
*of the* Committee on Small Business  
United States House of Representatives

April 13, 2000

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# Manufacturing:

## The Key to Economic Growth

- The United States was rated number one in global competitiveness by the Switzerland-based Institute for Management Development by a wide margin — almost 20 percent above its closest competition, Singapore and nearly twice as high as traditional economic rivals, Germany and Japan.
- U.S. manufacturing productivity growth averaged more than 4 percent during 1996 and 1997 — roughly one-third higher than the trend since the early 1980s and nearly three times as great as the rest of the economy.
- U.S. manufacturing's direct share of the Gross Domestic Product (GDP) has remained remarkably stable at 20 percent to 23 percent since World War II. Manufacturing's share of total economic production (GDP plus intermediate activity) is nearly one-third.
- Manufacturing is responsible for two-thirds of the increase in U.S. exports, which have grown to 12.9 percent up from 11.4 percent in 1986.
- No sector of the economy, including the government, provides health care insurance coverage to a greater percentage of its employees. Average total compensation is almost 20 percent higher in manufacturing than in the rest of the economy.
- Technological advance accounts for as much as one-third of the growth in private-sector output, and as much as two-thirds of growth in productivity. The lion's share of this comes from the manufacturing sector, which accounts for more than 70 percent of the nation's total for research and development.

**TESTIMONY OF LAURA J. O'SHAUGHNESSY**  
**CORPORATE SECRETARY**  
**of**  
**REVERE COPPER PRODUCTS, INC.**  
**on behalf of**  
**THE NATIONAL ASSOCIATION OF MANUFACTURERS**  
**regarding**  
**"OSHA'S PROPOSED ERGONOMICS STANDARD AND ITS IMPACT**  
**ON SMALL BUSINESS"**  
**before the**  
**SUBCOMMITTEE ON REGULATORY REFORM AND PAPERWORK**  
**REDUCTION**  
**of the**  
**COMMITTEE ON SMALL BUSINESS**  
**UNITED STATES HOUSE OF REPRESENTATIVES**  
**April 13, 2000**

Good morning. My name is Laura O'Shaughnessy and I am the corporate secretary for Revere Copper Products, Inc., Rome, N.Y. Thank you for inviting me to appear before this subcommittee today to discuss the impact that OSHA's proposed ergonomics rule will have on Revere Copper Products, as well as other small businesses across this country.

Revere Copper Products provides customers worldwide with premium quality copper and copper-based alloys for a multitude of applications. Our two locations consist of a rolling and extrusion plant and a plate mill, with just more than 500 employees.

I am testifying today on behalf of the NAM's 14,000 member companies, approximately 10,000 of which are small manufacturers. Small manufacturers especially are sincerely appreciative of the attention that you, Madame Chairwoman, and the members of this committee are paying to this issue of the impact of OSHA's proposed ergonomics rule on small manufacturers.

In illustrating the difficulties of compliance with the standard, I would like to make three points clear: (1) the current ambiguity of the standard, (2) the relative newness and "naïveté" of the ergonomics profession, in general, and, most importantly, (3) how these two would place an excessive burden on Revere Copper Products, Inc., and all manufacturers, with little return.

Safety is, and has been, the main focus of my professional career. I began as a graduate assistant for a state-of-the-art research institute to prevent injury. For my masters thesis in human factors engineering, I studied and proposed methods to reduce carpal tunnel syndrome in animal caretakers. From there, I progressed to workplace safety via a large copper wire and cable manufacturer, and I managed product safety for a juvenile products company. Throughout my career, I have aimed to use my academic

background and knowledge in the practical sense to improve the safety of workers and consumers by applying safety principles in a simple, understandable manner.

I am not an opponent of standards and regulations. On the contrary, I spent some of the most rewarding time in my career complying with, enforcing, creating and improving them. Each regulation, however, mandated or otherwise, with which I have worked has been based on either measurable tests and outcomes, or empirical research. This proposed regulation is not. The only black-and-white facts related to MSDs (musculoskeletal disorders) are that they *do* exist and they are problematic. NO consensus exists among ergonomic professionals as to any equation for quantifying risk or assessing injury.

Currently, OSHA correctly asserts the factors contributing to MSDs are force, posture, repetition, rest, vibration and temperature. I agree, however, without the ability to measure the effect of these factors within the motions of a task, no one – not even OSHA – can rank the potential for injury within a workplace and, consequently, direct the analysis and changes properly. If we do not focus efforts on the most important areas (e.g., the 80/20 rule), we may never positively affect the potential for MSDs. A difficult complicating factor is the effect of age, stress (both at home and at work), fitness and extracurricular activities on body-pain complaints at work. We are apprehensive about the validity of setting priorities for ergonomics in the workplace with programs that also cannot measure the impact of these external factors.

The proposed standard leaves an excessive, open-ended burden on the employer to not only identify, but remedy any potential hazard, and create an effective program to maintain the process. Despite this requirement, the standard offers no clear program guidelines or method by which to achieve such ends. In the absence of clear understanding and requirements for the standard, employers are left guessing what OSHA requires and which jobs should be addressed. The majority of manufacturers, and therefore employees, will be on the losing end of the MSD-elimination battle and will ultimately be crushed by the overly burdensome regulations this standard will impose. The open-endedness and ambiguity of the proposed standard will do nothing but add to the puzzle called ergonomics in the workplace. So, let's work to solve this puzzle.

Ergonomics is, by definition, the study of work, but as OSHA defines it in its "Frequently Asked Questions" document for the proposed standard, "Ergonomics is the science of fitting the job to the worker." I prefer to more clearly interpret ergonomics as studying how performing a task and the workplace environment affect the worker. More practically, the practice of ergonomics should help employers and employees understand how the workplace can affect us physically and how, through equipment and job micro-motion redesign, injuries can be reduced.

In practice, the science and profession of ergonomics is relatively young. Certification of ergonomists is limited and not generally required for practice. As with any such profession, as it grows, many opportunities arise for so-called "experts" – with just enough knowledge to be dangerous – to spread their wares. By approving this

standard, we will be opening the door to a business situation where employers will be forced to spend thousands of dollars on costly consultants just to meet the standard, but not really improve the working conditions for their employees.

The result will be a new generation of shady characters selling ergonomic “snake oil.” Slick words and fast fixes will create a false sense of security – that is, until the next injury unfortunately happens, or an OSHA audit occurs. When this happens, the consultant, who was ever so helpful and knowledgeable during the implementation phase of the program, will not be liable, but instead the company, with emptier pockets and a flashy, but also empty program, will be at fault.

Worst of all, injuries will be a result of improper application of ergonomic principles, in order to “just meet” the regulations. The misclassification of injuries as MSDs will cause resources to be misdirected toward avoiding a non-existent cause; money, time and effort will be wasted. Additional injuries will likely occur due to inappropriate changes. The employee who sustains the injury is the real loser in this situation. In the absence of *effective* programs, *including* education, misuse of adjustable tools and workstations, incorrect analysis and improper changes to tasks will undoubtedly result in an increase of MSDs.

Not to mention an increase in fraud. OSHA’s plan will give 90 percent to 100 percent of pay to workers who claim disabilities attributable to MSDs. This gives a substantial financial incentive to employees to claim that a pain is “work-related,”

leaving it up to the employer to assess what factors may have contributed to the pain. Moreover, as the proposed standard currently exists, it will not be difficult to find a practitioner who could attribute any soft-tissue injury to workplace tasks, thus leaving an open door for full disability coverage of every tennis, motorcycling, basketball or moving injury, as well as legitimate workplace traumas.

At Revere Copper Products, Inc., 35 percent of our injuries are soft tissue, or MSDs; these are unquestionably the hardest to analyze and find cause. We do, however, have in place a very effective safety program that addresses these disorders, and has successfully reduced all types of injuries. To prove how successful we have been, I would like to disclose that for nine consecutive years, we held the Copper Development Association's Annual Safety Award for large copper fabricators. Besides bragging rights from this great honor, this also means that since 1993, we have been able to halve our worker's compensation cases and OSHA incidence rates. We consistently operate at one-third of the industry average for OSHA incidence rates, since 1988. That's pretty good for heavy industry.

Let me briefly describe what Revere does and what the shop floor looks like. As I mentioned in my introduction, we provide customers worldwide with premium quality copper and copper-based alloys for a multitude of applications. Our two locations consist of a rolling and extrusion plant and a plate mill, with just more than 500 employees. Our employee longevity ranges from several to more than 40 years' experience, and often spans multiple generations. The workplace includes a mix of heavy machinery and the

copper industry's most advanced technologies, in casting cakes of copper and alloys, rolling hot metal and slitting sheets of copper. Safety equipment is required, and may include steel-toed shoes, safety glasses, hard hats or heat-resistant suits. All along the plant floor and in the office buildings, safety pervades the culture; visual displays show past and current performance plus future goals. Every monthly performance meeting and quarterly employee talks begin with the topic of safety. Safety is of the utmost priority in all work situations.

Our attitude toward safety and the value of every worker is evident in our mission statement:

Our mission is to be the best in the world at what we do. Revere's talented and dedicated people, working together in a **safe**, environmentally sound and ethical manner, aim to achieve 100-percent customer satisfaction by providing superior quality and reliability.

We value the safety and input of every employee and apply our beliefs by using our resources in teams. We use both project teams to address specific issues and permanent work teams in the plant and offices. Revere has a safety representative on every work team. Work teams have a fully independent right to make capital expenditures for safety issues or improvements. The safety representatives go to one of four safety meetings, held at least twice a month, and perform audits, self-evaluations, review accidents and publish minutes. The Division Safety Team, which consists of the vice president of operations, vice president of human resources, safety director, union safety representative, union chairman and revolving supervisors, meets weekly. At these



meetings, the minutes of the safety teams, near misses, policy issues and other safety-related successes are discussed.

This method to address safety, and all performance issues, has proved extremely effective. On the issue of ergonomics and safety, one office team, "The Resourcefuls," completed a successful project designing the employee orientation program used with every new hire, including ergonomics and safety principles. Our efforts are proving to be wise investments in our employees' safety and, ultimately, Revere's success.

Revere has the capability to comply with *our* interpretation of the proposed standard, due to our size, expertise and legal advisors; however, we may still not comply with OSHA's perception of the new requirements, as they are not clearly outlined in the standard. If Revere, with our resources and commitment to eliminating workplace injuries, cannot comply with the proposed standard, who can? We already have an effective vehicle for improving and maintaining high levels of safety; we do not need to add levels of ambiguity to already sufficient and lengthy requirements for workplace safety.

A more appropriate arena in which to spend funds and allocate resources to address the problem of MSDs is in defining quantifiable methods for assessing risk, identifying cause and preventing injury. A clear process to identify credible, qualified professionals for assistance in job analysis and training is needed to afford competent assistance to small businesses.

The proposed standard is not without merit; however, an ideal standard must do two things. Most importantly, it must outline clear, effective program elements; and second, provide a manner to create and manage a successful in-house ergonomics program. The current proposal does not accomplish either. It is lengthy, ambiguous, increases the opportunity for workplace fraud and will not reduce soft-tissue injuries. Misspent time and resources, as well as increased paperwork, will limit the flexibility of companies, such as Revere Copper Products, to successfully reduce risks to the health and safety of its employees.

Thank you, Madame Chairwoman. I will be glad to answer any questions you or members of the subcommittee might have.

**Statement of**  
**Brian Landon**  
**Owner of**  
**Landon's Car Wash & Laundry**  
**Canton, Pennsylvania**

**Subject:** OSHA's Proposed Ergonomics Standard

**Before:** House Small Business Committee:  
Regulatory Reform and Paperwork Reduction Subcommittee

**Date:** April 13, 2000

Good morning Madame Chairwoman. My name is Brian Landon. I am the owner operator of Landon's Car Wash & Laundry in Canton, Pennsylvania. Besides the services part of my business, which is apparent from my business name, my business also includes the re-manufacturing, installation and service of equipment used in the car wash industry. I have been a small business owner for almost 25 years. Currently, I have three employees, one full time and two part time. I am a proud member of the National Federation of Independent Business. With three employees and gross sales just over \$200,000, I am fairly typical of the 600,000 NFIB members.

It is my pleasure to offer comments on OSHA's proposed Ergonomic's standard. In opening, I would like to say that I have a strong commitment to my employees safety and health. This commitment to my employees safety and health is not rooted in rules or regulations, but in the unique relationships that exist in a very small business. Relationships that come about by working side by side with my employees, at the car wash, at the laundry, in the shop and in the office. Working in an atmosphere where there are no strict job descriptions and daily tasks are often shared and traded between myself and my employees. My employees know that I will provide them with whatever support, be it information, supplies or equipment that is necessary to create a safe workplace and to protect their health. I work in each of my work sites, often alongside my employees, so it is to the benefit of both my employees and myself to provide a safe work place. I am typical of many very small businesses whose employees are family and friends. In my case, one of my employees is my friend and brother-in-law, one is my sister and the other is the wife of a close friend. I know them and I know their families. It is these personal

relationships, not rules or regulations that drive my concern for their health and safety. I am proud to say that we have never had an injury, accident or health hazard occur at my business. The proposed rule ignores these unique characteristics of very small businesses.

The proposed rule also seems to ignore the fact that risk of musculoskeletal disorders for employees of very small businesses are already significantly lower than the risk of MSDs for all of general industry. In fact, the SBA Office of Advocacy calls the risk of MSD for employees of small businesses insignificant. This, along with the fact that MSD's have decreased by 24% over the last 4 years without an ergonomics rule, makes the rule seem, relative to small business, like a solution looking for a problem.

I am extremely concerned with the regulatory burdens and associated costs that the requirements of the proposed rule would place on me and my small business. Costs that have already begun, simply in my need to try to understand the proposed ten page rule and accompanying 260 pages of clarification, a task which OSHA estimates should take one hour and to which I have already spent over twenty hours. And this is just to become familiar with the rule, a task which is not yet completed. As a matter of fact, on March 22 I testified before the OSHA ergonomics panel. During the question and answer period, the panel could not tell me whether the manufacturing I do at my business would subject me to the rule. If OSHA is uncertain whether a small would be covered by the rule, how should a small business know?

As a three employee business I don't have a safety and health officer, I can not assign the tasks required by the rule to a management team, or a manager or even one of my employees. The full burden would fall on me. This would have a detrimental effect on my productivity, and it is my productivity on which the success of my small business and my employees jobs depend. And as always, the overall costs of compliance would fall heaviest on my small business and other small businesses like mine. As published in a document by the Small Business Administration, compliance costs to small businesses are approximately 50% higher per employee, than larger firms. And the smaller the firm, the higher these costs.

There are other aspects of the proposed rule that as a small business owner, I find troubling. Requiring a small business owner to comply with the full program requirements after just one MSD is of concern to me. What could be a very isolated incident would raise the costs of complying with the rule astronomically.

Another aspect I find very troubling is the Work Restriction Protection provision, which in effect creates a federal worker's compensation program overlapping state programs, singling out MSDs for privileged compensation over other injuries and providing no financial incentive for a worker to return to work. The Work Restriction Program does not take into account how a single employee in a very small business may be the whole work force and may make up the entire payroll.

The rule includes a record keeping exemption for very small businesses. This “exemption” under the guise of helping very small businesses is a non-exemption, since no small business owner when faced with the threat of an inspector zeroing in on the requirements of this rule could ignore the necessity of record keeping. Plus, if the very small business owner avails himself of the “Quick Fix” provisions of this rule, he loses any record keeping exemption, such that it is.

In closing, there are several factors relative to small business that the proposed rule does not take into account. One, the very unique nature of small businesses and the unique way they provide for the safety and health of their employees. Two, the risk of musculoskeletal disorders in a small business is extremely low. Three, the burdens and costs of compliance would fall heaviest on the smallest of small businesses such as mine, without significantly increasing workplace safety. Therefore, I strongly urge the agency to eliminate the rule.

Thank you for the opportunity to comment on the proposed rule.



TESTIMONY OF

CHARLES F. KREMP, 3<sup>RD</sup>, AAF

PRESIDENT

KREMP FLORIST

WILLOW GROVE, PENNSYLVANIA

BEFORE THE

COMMITTEE ON SMALL BUSINESS

SUBCOMMITTEE ON REGULATORY REFORM AND PAPERWORK REDUCTION

UNITED STATES HOUSE OF REPRESENTATIVES

ON APRIL 13, 2000

ON OSHA'S PROPOSED ERGONOMICS PROGRAM STANDARD

AND ITS IMPACT ON SMALL BUSINESS



Good morning Chairwoman Kelly and Members of the Subcommittee. My name is Charles Kremp and I am the President of Kremp Florist in Willow Grove, Pennsylvania. Today I am pleased to appear on behalf of the Society of American Florists (SAF). SAF is the national voice of the U.S. floral industry and represents every segment of floriculture from growers, wholesalers, and retailers to manufacturers, suppliers and importers. Most are small family-owned businesses like mine.

The Kremp family has served the Philadelphia area since 1946. I was in business with my brother and father until 1981 when I went into business for myself. My wife Gina and I have 4 sons so active growth of the business was necessary to enable us to send them to college and provide them with positions in our company should they desire. They all so desired. We borrowed a lot of money, acquired some other businesses and invested a lot into marketing. I currently employ 43 full-time and 43 part-time employees in six flower shops and one small greenhouse around the Philadelphia area.

Thank you for the opportunity to offer my views as a small business owner on the Occupational Safety and Health Administration's ("OSHA") Proposed Ergonomics Program Standard and its impact on small business. I understand this rulemaking is one of the largest efforts ever undertaken to prepare a proposed standard and in my estimation it will also have the greatest impact of any OSHA standard on my business. I

am here to say OSHA's proposal would have a disproportionately negative effect on small businesses and a drastic and adverse impact not only on my business but also on many of the small retailers and wholesalers in floriculture. The point of my testimony today is a simple but important one. The entire regulation would be too difficult and too burdensome to comply with. Specifically, OSHA's ergonomics proposal, I believe, does nothing to instruct me on how to specifically protect my employees from musculoskeletal disorders (MSDs) in the workplace. As I understand it, the rule is designed to address the "significant" risk of work-related musculoskeletal disorders (MSDs) confronting employees in general. However, it is also my understanding that among all industries, repeated trauma injuries have been declining steadily and are down 24 percent since 1994 – all without a regulation. The fact is musculoskeletal disorders are rarely an issue at our company. Despite this fact, I am being asked to comply with a vague and confusing regulation which will be extremely costly in terms of both time and resources. Even if I did see a serious hazard in my business, this rule shows me no clear solution to remedy the situation. But its "changes" would have a destructive impact upon Kremp Florist and our employees without offering any benefits in terms of a safer workplace.

First, let me start by saying that I have a strong commitment to a safe workplace. Since it is relevant to today's hearing, I would like to describe the atmosphere at Kremp Florist in terms of the relationship we have with our employees. Since I work in the trenches, I know how the jobs are done. My wife and children work side by side with me and with the rest of our employees. I do not want anyone injured and safety is a

prime consideration. If someone is injured, that injury is happening to someone I care about and is very important to our business.

I believe our record demonstrates how we now protect our workers. The easiest way to measure our exposure to hazards is with our history with Worker's Compensation Claims. Over the past several years, our problems have been negligible. **In fact, out of only 9 injuries, only four of the injuries required compensation and only one was related to a musculoskeletal disorder.** The other five injuries were reported to us and were mostly slips or trips. Two could be considered ergonomic injuries but neither of these injuries required compensation. We have employees who are in their seventies who have said they no longer can do the jobs that they were doing and have asked to have their schedule or task changes. We have made those changes for they are good workers and want to work and we want to keep them.

Even if the rule is necessary to protect my workers, and I do not think it is, the proposed standard does not help me protect my workers. Nobody is perfect and people can make mistakes. Can any regulation realistically prevent someone from falling off his or her chair? Or can this regulation help me determine whether pulls and sprains are work-related? Sometimes these strains and pulls are the result of activities that occur away from the work place from a touch football game to a bowling league to Internet surfing. Another cause of these strains could also be a lack of physical exercise. We have addressed these kinds of issues in the past and will continue to do so. We do not need a regulation to show us what is common sense.

One of my immediate concerns with OSHA's proposal is the time and cost for me to understand and implement this program. I do not employ a safety expert on staff so the burden is likely to fall on me or on one of my sons who visits our stores daily. The reality is that most small retail flower shops employ relatively few people. In each small shop, the salesperson, designer and driver may also be the owner or top manager. In our case I as an owner and my sons as managers, oversee all tasks necessary to run the business including maintain inventories, ordering flowers, hiring and managing employees, creating and managing marketing activities, and keeping close watch on the bottom line. This regulation has a long, unclear list of requirements which will most definitely strain our resources in just determining what's covered let alone the time to manage a program.

We already spend a substantial amount of time to learn and evaluate the "hazards" in our business. We do spend time figuring out how to develop and implement solutions to problems. I want a safe workplace. A safe, healthy and productive workforce is an asset. However, trying to comply with this rule will divert my time, attention and resources from pursuing more proven efforts to maintain a safe and healthy workplace, the efforts that are already effective with our people.

I have a copy of OSHA's ergonomics proposal published in the Federal Register last November. The document is 310 pages long. I understand OSHA has estimated a one-hour per business cost to understand the standard and be prepared should an MSD occur. I have read only the 12 pages describing the standard and how it might

apply to me. I must be a slow reader for I've already spent several hours over several days and am still struggling to understand my obligations under the standard.

Our company provides as few as 3 jobs at one of our locations. These are good-paying jobs, important to our employees and their families. These jobs appear to be threatened by the new regulation. OSHA's proposal covers any employer whose employees work in "manual handling jobs". OSHA's definition of a manual handling job is "jobs in which employees perform forceful lifting/lowering, pushing/pulling, and carrying." What jobs do not? These kinds of activities involve many jobs in a typical retail floral shop. Some typical jobs include: loading and unloading boxes of flowers, processing fresh cut flowers, carrying water-filled buckets, and loading and unloading arrangements in delivery vans. Unlike large employers or employers with union contracts, each job's core elements are not specifically defined, i.e. categorized solely into one task or another. While there are some people with specialized skills, a floral designer may have to move pots and soil or do other unloading, and a driver may have to help out on the retail end in a pinch. So unlike the proposed standard which assumes that there are specifically delineated jobs, my business does not run that way. The regulation does give some examples of "manual handling jobs" however the definition is very vague. How will I determine which jobs are covered? Today, we worry about all jobs and all employees, not just the ones OSHA seems concerned with. I can only hope that if an OSHA inspector visits me, he or she will have the same idea as I do of what a "manual handling job" is.

Because of these activities I just described, I think I would automatically be required to implement the first three elements of the ergonomics program including Management Leadership and Employee Participation, and Hazard Identification and Reporting. We do all this now – lead, interact with employees, identify hazards, and all without a regulation. But the problem is, the way we operate now, may not satisfy an OSHA inspector.

The first element that I would need to implement is the Management Leadership and Employee Participation. If I didn't do this already, I couldn't succeed. In small business there is no filter to prevent management from knowing of problems. As already mentioned, I work side by side with and know each one of my employees very well. They are not faceless numbers. Problems of all sorts are discussed and suggested, and courses of action are developed. All problems are brought to management's attention immediately because we are working together. In our business one of our sons is responsible for all the branch stores and is in them frequently through the week. There is a manager in each store but there is still a close relationship between the staff and our son. Management in a small business is not deep. The top knows intimately what is happening every day or the business will not succeed. Despite a record of success, I have no way of knowing if an OSHA inspector will agree that I have provided adequate leadership or employee participation. The regulation simply does not spell out my exact obligations and in the end changes nothing.

The second element I will be required to implement is "Hazard Information and Reporting". This section requires me to establish a reporting system and provide information to employees on a variety of topics. These topics include: common ergonomic hazards; signs and symptoms of ergonomic injuries; the importance of early reporting; how to report signs and symptoms of ergonomics injuries; and a summary of the requirements of the standard. The requirements to establish a 'reporting system' are unnecessary for a system is in place now. The question is, will my proven, working procedure pass muster with OSHA? Or could the regulation possibly be requiring me to establish a reporting system in all seven locations instead of just one at the main facility?

This description of my responsibilities is extremely vague and I would basically be guessing at whether or not I was in compliance. This section requires me to provide a "summary of the requirements of the standard". Does that mean I and all business people must prepare the summary? It is not clear to me how detailed that summary should be. How many pages is a summary of a 310-page document? This section also requires employers to communicate "periodically" with employees. Does that mean annually, monthly or weekly? These instructions are incredibly broad and vague. I would prefer to know absolutely if and when I am in compliance. OSHA's goal should be to identify specific problems with known solutions that are effective and proven. This is what we now do in our business because that is how we stay in business. Instead it seems to me that OSHA's goal to force me to hire an expensive consultant to resolve problems their way and satisfy OSHA's inspectors regardless of whether or not their

method is effective. If OSHA's goal is to protect workers, this isn't the rule to help me do that. We don't need this regulation.

The Work Restriction Program (WRP) provision is very troubling to me. As I understand the proposal, the full ergonomics program including this provision would be triggered if just one employee in one of my stores reports an MSD. If I understand this provision correctly, OSHA states that work restrictions may involve limitation on the work activities of the employee's current job or transfers to temporary alternative duty jobs or complete removal from the workplace. This element is one of the most costly in the proposal and may not even be feasible. The Work Restriction Program essentially requires me to retain 90 percent of an employee's salary and benefits up to 6 months, upon a finding by a health care professional that time away from work is necessary. Isn't that the reason we purchase worker's compensation insurance?

A retail florist employs a variety of positions both skilled and unskilled from drivers to salespeople to floral designers. For example, I employ skilled floral designers. My designers are trained professionals. A number of the core elements of the designer's job potentially have ergonomic risks involved. I also employ less skilled employees for driving and delivery. The provisions for protecting employees by giving them leave or reassigning them points out OSHA's lack of understanding of how small businesses operate. OSHA's regulation appears to suggest if a driver needs protection, I could reassign her to a design position. I cannot simply substitute another employee for that skilled artisan. My customers expect a skilled floral designer to build



their arrangements and would not be willing to accept someone else doing it because of OSHA's ergonomic standard.

Like many industries, currently the floral industry is experiencing an unusual labor shortage. In fact, this labor shortage is the most severe I can recall. OSHA appears to believe not only that we don't have a labor shortage but that employees are interchangeable. Does OSHA really expect me to replace one of my floral designers with one of my drivers? The WRP provision also seems to suggest transfers to alternative duty jobs, however for me that might include a different location. I don't believe it would be possible for me to transfer employees from one location to another in order to provide work restriction protection. My employees work where they want to work because it is convenient for them. This idea would be met with great resistance. My next question is, if I can even find a replacement to fill in for several months, what am I to do when the injured employee returns?

Again I want to emphasize that I consider safety of utmost importance in my business. However, I don't see how it would be economically feasible for me to comply with the proposal's requirements to provide employees with light duty and/or retain salary and benefits for a worker and hire a new employee to perform the necessary work.

In addition to the WRP provision, compliance with the full program includes that I make physical changes to a job that will "eliminate or materially reduce" the presence of MSD hazards. OSHA's proposal requires me to "control" "problem jobs" and

recommends several "Engineering Controls". Some examples of engineering controls include changing, modifying or redesigning workstations, facilities and equipment. The suggestion that we could modify our facilities misses the point that we don't always have control over the facilities where we have shops. For instance, one of our stores is in a hotel and another is in a gourmet farmer's market. We also lease locations and in all cases have no authority to make structural changes to these facilities.

I don't see how I will comply with this rule if I don't have any personal control over the structural design of the building and I am not permitted to make changes to a structure I do not own. For example, my shop in a hotel has only three employees on site. If one were to request a new chair or new keyboard, I certainly could and would provide such an improvement to help and keep the employee happy and well. Such a request is reasonable and feasible. However, if in the event an OSHA inspector were to visit my shop and conclude that the counters were too high, how would I be expected to make changes to the property I rent? As I stated earlier, I also rent space in a market. I share a loading dock with other lessees. I do not own and have no control over the loading or receiving dock. Again, if an OSHA inspector were to suggest I adjust the loading dock, I fail to see how I could comply with the rule. Again, this provision poses a serious concern as I appear to be in a losing position faced with an agency compliance officer who has the ability to issue fines and citations.

**CONCLUSION:**

Our company is very concerned with safety and health of our employees. We constantly seek ways to design a work environment and procedures that will protect our employees from injury. The proposed regulation is so vague it will be extremely difficult, if not impossible, to determine what steps I must take to achieve compliance. In addition, complying with several provisions is not even within my control. The bottom line is that we are now enjoying a safer workplace without this regulation.

If OSHA were to set forth an affirmative rule showing me how I can protect my employees from MSDs in the workplace, I would most certainly embrace it. For example, if OSHA were to tell me that manual use of scissors should only be permitted for 50 minutes of every hour with two five minute breaks every 25 minutes, I could implement that and know that I am protecting my workers. As previously noted, I am a small businessman – not an expert in orthopedic medicine or ergonomics. Essentially, OSHA leaves me to guess at what will or will not work to protect my employees. And that is unfair to me and more importantly, my workers. I have my responsibilities but it appears that OSHA is shirking its responsibility. I will comply but tell me how. This rule, will have a negative impact on my business with no guaranteed benefits.

I appreciate the opportunity to offer these comments and commend you for holding this important hearing to consider the impact of this rule on small businesses. I look forward to any questions you may have.

**Testimony**

**Mr. Leonard Russ**  
**Administrator, Bayberry Care Center**  
**New Rochelle, New York**  
**American Health Care Association**

**Subcommittee on Regulatory Reform and Paperwork Reduction**  
**House Small Business Committee**  
**April 13, 2000**

Good morning, Madam Chairwoman Kelly, Ranking Member Pascrell and members of the Subcommittee. Thank you for inviting me to testify here today. I am the administrator and a partner in my family's business, Bayberry Care Center in New Rochelle, New York. Bayberry is a 60-bed skilled nursing facility, employing 50 full-time and 30 part-time professional and non-professional staff, most of whom are direct caregivers. I am here today representing the American Health Care Association -- a federation of 50 affiliated associations representing more than 12,000 nonprofit and for profit nursing facilities, assisted living, residential care, intermediate care for the mentally retarded and subacute care providers. AHCA's member facilities employ more than 1.2 million workers, the majority of whom are front line caregivers.

AHCA and its members recognize and emphasize the importance of employers protecting workers from incurring or exacerbating pre-existing musculoskeletal disorders (MSDs). Long term care employers like myself care deeply about the health and welfare of our employees. Indeed, we know that the physical well being of our caregivers is essential to the delivery of the optimal quality of care to our residents. Recognizing the potential physical challenges associated with caring for the frail and elderly, my facility has worked to reduce injuries to our caregivers for many years. I would like to share with you some elements of my program at Bayberry Care Center. For more than two decades, we have used mechanical lifts -- the most common type is known as a Hoyer lift -- to elevate and transfer the most physically challenging residents. Although there are many types of such lifts presently on the market, most operate along the basic principle of positioning the resident securely in a seated position on a canvas sling that is cranked and elevated mechanically. The frame of the device is mounted on wheels, enabling the

transfer of the resident to a desired location where the resident is lowered and released. Our caregivers are also given back braces for use during lifting and transferring and most employees utilize them routinely.

The lift and transfer of residents from bed to wheelchair or from the bed to the bathroom are events that occur repeatedly throughout the day and are an integral part of the resident's care and the safety of the caregiver. When a new resident is admitted to our nursing center, he or she is assessed for all medical and social needs, including the extent to which the resident requires assistance ambulating and transferring. That evaluation identifies the appropriateness of a mechanical lift or the resident's preference to be lifted and transferred manually by the staff. In most cases, residents routinely prefer the direct assistance of another person or, if necessary, two people than a mechanical lift. There are myriad reasons for this. Not the least of which is the comfort and security of being helped by a real person. The resident's fear of the mechanical lift also comes into play, as does the dehumanizing aspect of being lifted like an inanimate object. We work to educate the resident and their family as to the importance and safety of using a lift. The final instructions on the method to be used for a given resident are placed in the Care Plan and are explicitly spelled out in the nurse aides assignment sheet. Above all, it is critically important that we follow the resident's request. You see, regulations from the Health Care Financing Administration require that for the resident's dignity, we offer a choice. Residents in a long-term care facility have the right to object to the use of a mechanical lift, and thus, be lifted by caregivers. HCFA requires caregivers to follow the resident's request, which could place the facility in violation of OSHA's ergonomic standard. In such common instances, caregivers and the facility could face severe penalties for either decision. More than anything, this paradox illustrates an overall dilemma we face in long-term care: layers of conflicting regulations promulgated by different federal agencies

This is where federal standards, however, work at cross-purposes. HCFA requires caregivers to follow the resident's request – but OSHA imposes ergonomic standards

favoring mechanical lifts – and if the resident insists on a manual lift, this could place the facility in violation of OSHA’s ergonomic standard. In such a case, caregivers who must follow HCFA’s regulation, could face severe penalties for either decision. No one is served by conflicting government regulations – regulations that could cause the resident harm and create confusion on the part of my long term care staff.

I was asked to tell you whether I believe the current programs at my facility will grandfather me into OSHA’s ergonomic standard. The honest answer is: I am not really sure. And that’s an answer that’s ominous for me. I believe at Bayberry Care Center, we offer effective ways to protect our employees and keep down the number of injuries. In fact, we have a very low number of incidents of worker’s compensation claims -- and I am proud of that. I believe the steps we have taken already will continue to protect our employees from injury. My programs may fulfill OSHA’s program elements such as management leadership and employee participation, and training, but – as vaguely as the standard is worded -- how can I really be sure, unless I risk tough penalties from an OSHA inspector?

My facility also takes advantage of efforts by AHCA to reduce caregiver risk. AHCA has worked with OSHA and ergonomic consultants since 1993 to develop tools to assist long term care employers and employees to better identify and resolve patient lift, transfer and positioning problems. In 1995 AHCA incorporated a section on ergonomics, specific to patient handling, into its “How To Be A Nurse Assistant” training program – a program used widely in the industry to certify nurse aides (CNAs) for work in long term care facilities. Programs to identify hazards that may expose long term care employees to risk of MSDs have been developed to incorporate creative solutions and best practices. Long term care employers like myself want to work toward safe workplaces with healthy employees to care for residents -- and all of this is happening without the proposed regulation in place.

And the evidence is that voluntary implementation works. Data from the Bureau of Labor Statistics shows that from 1993 to 1997, sprains and strains -- back strain and back

disorders being the number one problem for long term care employees -- declined by 16.7 percent. BLS data released in December 1999 shows the decline to be continuing. AHCA believes that the proposal will have a significant and serious detrimental effect on the positive direction long term care employers have already taken. Instead on focusing on identifying and solving the ergonomics problem, long term care employers will be forced to shift their focus to compliance issues.

I also want to address the cost factor involved with the proposed regulation. As many of you know, about 80% of our residents are covered by Medicaid or Medicare, making long term care facilities dependent on government reimbursement. Only about 3% are covered by private insurance and the rest are spending down their assets in order to qualify for Medicaid. We are, in effect, squeezed by this because we are not able to raise prices or otherwise absorb the cost of compliance with this standard. According to AHCA's conservative estimates, the first year cost to long term care of the proposed ergonomics standard is \$1.2 billion. Given the cuts we've taken in the past few years, it is not economically feasible for an long term care industry that is dependent on federal Medicare and Medicaid dollars to absorb another \$1.2 billion in additional costs.

To put it in per facility terms, for example, to equip a 120-bed skilled nursing facility with moderate to heavy acuity -- including state of the art resident lift and transfer/repositioning equipment -- averages in the neighborhood of \$30,000. Long term care is in a financially fragile position. It is a simple reality that small businesses cannot ignore the cost of the regulations with which they must comply. I can't overstate to you the impact of these cost issues: With almost 10 percent of long term care companies having filed for bankruptcy this past year—the very survival of long term care is at stake. If long term care is required to spend over \$1 billion in the first year to comply with this rule, many more facilities will be forced to close their doors. Long term care providers stand for patient and employee safety and we ask that OSHA not put long term care providers in this financially fragile position. We ask that you fully fund this ergonomic standard.

As I conclude, I want to underscore my commitment to the health and safety of the employees that work at my family's nursing center. My staff is my greatest resource and they are vitally important to the care we give at Bayberry. Long term care employers have the desire -- as well as the responsibility -- to take practical steps to protect the health of their employees by creating and maintaining safe work environments. Our first priority, however, is always the health, safety, and dignity of the residents for whom we care. Our industry remains committed to finding ways to balance the care and commitment to all its residents with the need to provide a safe and secure workplace for our workforce of dedicated caregivers. I share AHCA's view that OSHA's proposed standard fails to maintain this balance -- and indeed may reverse the positive progress the long term care industry has made in recent years in achieving the safer, more secure workplace we all want to see.

I thank the Committee for this opportunity to testify -- and look forward to your comments and questions.

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The Bureau of Labor Statistics, U.S. Department of Labor, *Safety and Health Statistics, Lost-worktime Injuries and Illnesses: Characteristics and Resulting Time Away From Work, 1997*, USDL 99-102, April 22, 1999.



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Re: Ergonomics Program Proposed Rule; Docket No. S-777

Dear Secretary Jeffress:

The American Health Care Association (AHCA) welcomes the opportunity to provide comments on the Occupational Safety and Health Administration's (OSHA) proposed Ergonomics Program Standard. AHCA is a federation of fifty state affiliates representing more than 12,000 non-profit and for-profit nursing facility, assisted living, residential care, intermediate care for the mentally retarded, and subacute care providers. Our member facilities employ more than 1.2 million workers, the majority of whom are front-line caregivers. OSHA's current ergonomics proposal contains requirements that not only would have a significant impact on long term care (LTC) employers and employees, but also would have serious implications for the patients and residents for whom they care.

AHCA, on behalf of its more than 12,000 LTC employers, submits the following comments to OSHA regarding its proposed ergonomics program standard. We request that the agency give full and proper consideration to our serious concerns and recommendations. To that end, we encourage OSHA to withdraw the proposal until such time as: 1) definitive and conclusive scientific and medical evidence support its promulgation; 2) feasible, cost-effective interventions are identified to LTC providers; and 3) financial resources to pay for implementation are made available. AHCA is hopeful that OSHA will modify its current stance on musculoskeletal disorders (MSDs) and the workplace to one that more reasonably reflects a balance between the capacity of employers to implement efficient, effective ergonomics programs with the need of employees to work in an environment safe from hazards.

AHCA recognizes the importance of employers protecting workers from incurring or exacerbating pre-existing MSDs. However, we have numerous questions and concerns about whether the alleged safety and health benefits OSHA predicts could or would, in fact, ever be achieved through its proposal. We are certain, however, that given the current critical financial situation and threatened viability of many long term care companies across this country, implementing this proposal as drafted is not economically feasible. On the other hand, AHCA has and will continue to assist its member LTC facilities in voluntarily implementing reasonable and affordable measures to minimize ergonomic hazards, particularly those that are associated with patient (manual) handling to which OSHA attributes the greatest risk of MSDs for LTC employees.

Since 1993, AHCA has been involved in working with OSHA and ergonomic consultants in the development of various tools that could assist LTC employers and employees to better identify patient lift, transfer and positioning problems in an effort to minimize hazards and potential risks. AHCA is an appointed member of the National Institute for Safety and Health's (NIOSH) National Occupational Research Agenda (NORA) team for MSDs. In 1995, AHCA incorporated a section on Ergonomics, specific to patient handling, into its "How To Be A Nurse Assistant" training program used widely in the industry to certify nurse aides (CNAs) for work in LTC facilities. AHCA monthly publications and annual state and national education programs have been successful in providing members with information on available, relevant ergonomic technology and methods. A great many LTC employers nationwide have, to some extent, implemented ergonomics programs in their facilities and we see this trend continuing with the help of OSHA and the representative industry associations.

AHCA commends OSHA on its attempt to create flexibility for employers to craft ergonomic programs individualized to their workplace under the proposed standard. Unfortunately, OSHA's effort at flexibility has resulted in a performance-based standard that fails to provide employers adequate notice of 1) what is a "covered" MSD, 2) what is the effective means to address the MSD, and 3) how employers know when they have been successful in implementing that means (in compliance with the requirements). Our comments below focus on the flaws in OSHA's use of "scientific" evidence to support its proposal and the agency's gross underestimation of the costs associated with this proposed standard's "unfunded" employer mandates (see [Appendix](#)).

To date, OSHA's focus on ergonomics has had a positive impact on the voluntary implementation of programs to identify and abate hazards that may expose some LTC workers to risks of MSDs and more likely, to risks that may exacerbate pre-existing, non-work related MSDs. AHCA believes that this proposal will have a significant detrimental effect on the positive direction LTC employers have already taken.

In the event that OSHA proceeds with final rulemaking that places long term care employers under its scope of coverage, AHCA offers both general and specific comments in support of our strong opposition to this ergonomics program plan proposal being promulgated as a standard.

## **I. General Comments**

### **A. Lack of scientific evidence to support the proposal as drafted.**

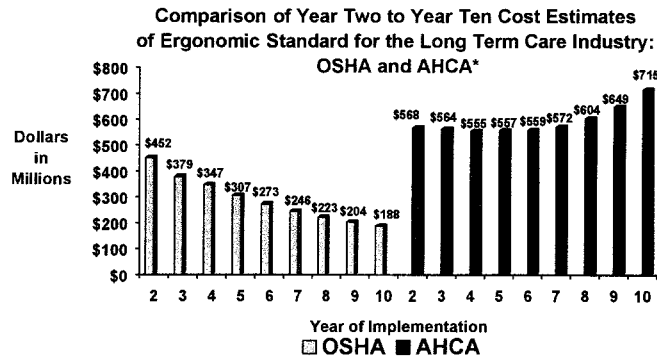
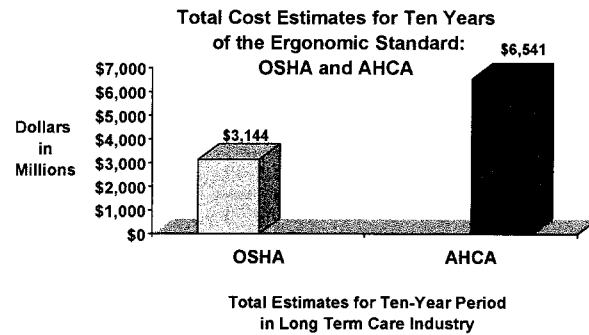
OSHA has identified the major ergonomic risk factors present in LTC facilities as “force, repetition, awkward and static postures and contact stress” associated with the physical work activities and conditions under which the “manual handling of people” occurs. A vast array of scientific and medical literature demonstrate that generally, the causes of MSDs are multiple, varied and often unpredictable. It is well documented in the scientific literature that no medical consensus exists as to what causes and/or remedies the specific area of back injuries/illnesses manifested by certain individuals’ complaints and symptoms of back aches, pains and strains. Back disorders, by far, are the most common employee-reported MSD in LTC according to the Bureau of Labor Statistics (BLS) data. Without a “causal link,” and, perhaps more importantly, without identified remedies for generalized back, neck and arm pain established by the medical community, there is absolutely no reason to presume that workplace solutions alone will eliminate nor necessarily abate these MSD problems in the LTC work environment. Hence, AHCA opposes the government’s promulgation of a safety and health standard until OSHA has sound scientific and medical evidence to support its ergonomics proposal.

### **B. Application/Implementation of the Standard in LTC**

OSHA cites BLS data that found “the vast majority of MSDs reported in manual handling jobs are back disorders (e.g. overexertions).” Additionally, OSHA cites BLS data that indicates jobs with some of the highest rate of time-loss injuries due to overexertion are in nursing and personal care facilities, where employees are required to perform frequent patient handling and lifting. Manual handling jobs are also associated with back pain in 25-70% of all workers’ compensation claims (Snook and Ciriello, 1991, EX. 26-1008). In the case of back pain, manual handling apparently is a risk factor, but according to research so may be aging, smoking, obesity, anxiety, stress and playing golf. Because of the multifactorial nature of MSD hazards, OSHA states in the proposal’s preamble that it will not always be clear whether an employer’s selected work site control will achieve the intended reduction in exposure to the hazards for these risks. As a solution, OSHA says that the control of MSD hazards would require frequent testing of selected controls and modifying them appropriately before implementing them throughout the job. This approach seems to ignore the fact that if a non-work related risk factor, such as aging, presents the real hazard for an MSD, no type or amount of work site control will eliminate the hazard. For that matter, a work site control for non-work related risk factors will not necessarily achieve a reduction in the risks that may have the potential to aggravate the non-work related MSD. Without a better definition of the hazard(s) and understanding of the significance of the risk factors, OSHA should avoid shifting the task of identifying causal links to MSD problems and the costly burden of testing solutions to employers least likely to find answers and least able to afford testing solutions. Hence, AHCA opposes the promulgation of an ergonomics standard until OSHA has fully assessed the impact that more work related risk factors have on the relationship between occupational risk factors and the occurrence of MSDs.

### C. Employer Program Cost

OSHA estimates that the total annualized annual cost to all employers would be \$4.2 billion while the Small Business Administration has reported that the proposed ergonomics regulation could cost employers \$12 billion. OSHA provides an estimate of actual year-to-year costs over the ten year period that totals \$54 billion, of which nursing/personal care and residential care facilities accounts for \$3,144 million (see [Appendix](#) for details). AHCA as demonstrated in the [Appendix](#) estimates that that total cost for LTC providers will range from \$5,643 million to \$6,541 million.



\*OSHA estimate is 5.73% of the total year-by-year estimates reported by OSHA for all industries. OSHA only reported first year estimates by industry groups and nursing/personal care and residential care year-one estimates where 5.73% of total. Since OSHA's estimate for other years is based upon an assumed rate of MSD reduction year by year, and all variable costs are based upon a cost per MSD, it is reasonable to assume that the percent each year of the total accounted for by nursing/personal care and residential care would be constant.

According to OSHA, the Year One impact on nursing and personal care facilities and residential care will total \$526 million. AHCA conservatively estimates that the Year One impact on LTC will be from \$1,089 million to \$1,197 million—over a billion dollars in the first year alone (see Appendix, page A-2). OSHA's estimate of the costs for Year Two through Year Ten also are consistently below AHCA's estimate for these years, as exhibited in the table.

OSHA claims that most employers in general industry will incur minimal costs and that it will cost an average of \$150 to fix a workstation. The cost of mechanical lift equipment purchased by LTC facilities, as a part of their voluntary initiatives at attempts to find effective solutions to problems with resident handling tasks, well exceeds OSHA's \$150 per workstation fix estimate. For example, to equip a 120-bed skilled nursing facility (with moderate to heavy acuity) with state-of-the-art resident lift and transfer/repositioning equipment averages in the neighborhood of \$30,000. In fact, facilities could not even repair and maintain existing lifts for OSHA's estimated "work station fix," annual costs.

In addition to the grossly underestimated costs of engineering controls and the potentially enormous costs of OSHA's worker restriction protection provision, AHCA is concerned about the administrative costs of education and training required by the standard. AHCA, as demonstrated in the Appendix, has re-calculated the training and education costs to LTC providers, to include the industry's average facility turnover rates in direct caregiver staff. We believe that OSHA has failed to capture this rate in its education and training cost estimates for the proposal. Therefore, AHCA recommends that OSHA conduct a more comprehensive and accurate cost estimate before considering the promulgation of a standard.

#### **D. Economic Feasibility**

AHCA is concerned about the economic feasibility within the context of the LTC industry's true costs of this program, as described above and in the Appendix, as well as the available financial resources of LTC employers, the majority of whom operate small businesses.

The primary source of revenue for most LTC facilities in this country is federal and state dollars. As Medicare and Medicaid certified providers of long term care services, approximately 68% of nursing facilities' funding come from state Medicaid health care programs with an additional 8% from the federal Medicare program. ICFs/MR are even more dependent on Medicaid funding.

Over the past two years, skilled nursing facilities (SNFs) have transitioned from a per diem Medicare reimbursement system to a prospective payment system (PPS). During this transition, affected provider, consumer and government debate has raised legitimate doubts as to whether the new PPS system provides adequate reimbursement to off-set the SNFs costs of delivering necessary care and services to their elderly patients. Recent congressional recognition of industry data regarding inadequate payment levels has resulted in the restoration of some limited dollars to the Medicare budget. However, it is yet to be determined whether the restored dollars will be adequate. In addition, limited state Medicaid budgets, combined with the recent loss of legal avenues for providers to challenge states' Medicaid rates, make it highly unlikely that states will provide funding for any of the requirements contained in OSHA's ergonomics proposal.

Offsetting the cost of the proposed ergonomics standard by private pay rate increases is an economic impossibility. First, it is both impractical and unreasonable to assume that 30% or less of the total nursing facility patient population could bear the brunt of the multi-billion dollar price tag of the proposed standard. Second, it is untenable to assume that the highly competitive healthcare market and insurers (including managed care and private insurance companies) would entertain the notion of bearing this cost.

OSHA's work restriction protection (WRP) provision in the proposed standard is not only potentially the most costly, but is the most objectionable requirement to the LTC industry. AHCA opposes the imposition of responsibility on the employer for employee non-work related MSDs, simply because OSHA has identified risks, unsubstantiated by scientific evidence, that "may contribute" to subjective symptoms and reports of back pain and strain. The WRP requirements to pay 90% of an employee's salary, maintain full benefits and guarantee seniority up to 6 months for employees removed from the worksite are unjustified, especially when the MSD has no documented work-related cause. Employers already pay compensation premiums to workers' compensation programs to ensure adequate protection for workers who can demonstrate they are unable to work because of a work-related or work-aggravated injury or illness. We challenge OSHA's authority to circumvent and/or supercede State Workers' Compensation laws and arguably put an employer at risk of double financial jeopardy.

There is no question that the increased benefits provided to employees under the WRP would increase the number of MSDs reported. We disagree with OSHA that this increase in reporting mostly will reflect those MSDs that go unreported because of employees' lack of knowledge about MSDs, fear of reprisal, or decrease in and/or lack of pay. Additionally, OSHA's counter-abuse provisions are implausible. First, OSHA's guarantee that because an employee receives only 90% of pay there will be "... little incentive for employees to persuade an HCP [health care practitioner] to write an unnecessary removal [from work] recommendation for six months or otherwise abuse WRP," is ludicrous. Documented abuse in State Workers' Compensation programs paying as low as 65-70% of pay shows the contrary. In fact, OSHA cites a study finding that a 10% increase in the value of weekly workers' compensation benefits will increase the number of claims filed by 7% and the duration of claims by 16.8% (Krueger), thus further demonstrating that a small 10% salary reduction will not combat abuse of WRP.

Second, OSHA suggests that employers have the ability to prevent abuse because it is the employer who will make the determination as to whether a reported MSD is covered by the standard. However, under current definitions and criteria for recordable injuries, an employee who is responsible for handling patients and who reports a subjective "symptom" of back pain, which is followed by a day away from work triggers a recordable MSD and, in all likelihood, the employer requirement for a full ergonomics program, including WRP. According to OSHA, only if the employer presumes that bringing in lift equipment satisfies the criterion that the "job is fixed so the employee will not continue to get hurt," does the employer's obligation to maintain WRP end (Section 1910.934(B)). This outcome appears to have the perverse effect of stopping WRP for an employee who may have a legitimate MSD that requires additional time away from work.

The unintended consequence of fraudulent MSD reports and/or abuse of time away from work is additional staff coverage and cost implications for employers. Current agency rates for contractual nursing personnel are 2 to 3 times higher than the average rate of pay for full and part-time registered nurses, licensed practical nurses and certified nursing assistants depending upon the location of the facility. In some areas of the country, the critical shortage of nursing personnel will make it impossible to find temporary replacement staff and will seriously jeopardize the ability of facilities to provide care and services to patients. Even when replacement staff is available, the loss of permanent employees, lured away from work for a prolonged time by 90% of their pay, will seriously compromise the continuous quality of care provided by caregivers who have knowledge of and relationships with their patients.

Furthermore, OSHA has failed to provide even the slightest employer protections for possible fraudulent MSD reports or unnecessary excessive time away from work under the WRP. OSHA's proposal puts little or no responsibility on the employee for following policies/procedures or safe work practices implemented by the employer to minimize risks that may cause or contribute to an MSD. For example, a caregiver who fails to use a lift device provided by the employer, complains of back pain and calls in sick the next day establishes a recordable MSD and automatically qualifies, under OSHA's proposal, for WRP. To add further insult, the employer is not entitled to the part of the employee's medical record that describes the prescribed treatment regime for the alleged back injury MSD (Section 1910.932(a)(1)). OSHA's lack of authority to "require employees to refrain from non-work activities that could aggravate an MSD or delay recovering" is problem enough. To exacerbate the problem by denying employers access to information that would, at a minimum, allow them to monitor and assist their employees to comply with treatment regimes, will place additional unanticipated and unjust costs on employers.

The WRP requirements raise serious concern about the impact on hiring considerations and practices. The industry has an aging workforce more prone to anatomical and physical changes related to MSD than the general population. Employers would be faced with developing expensive screening and physical strength testing protocols for post-offer, pre-employment employee candidates in the remote hope of avoiding liability for pre-existing MSDs. Given the nature of the work required and the characteristics of the patients being cared for in LTC facilities, there is not an employer in the LTC business, regardless of the ergonomics steps he/she takes, that will be relieved of the onerous and expensive provisions of this proposal, which has no proven positive cost/benefit. For the aforementioned reasons, AHCA strongly urges OSHA to eliminate the WRP provisions from its proposed ergonomics standard.

#### **E. Potential Conflicts Between Worker Safety and Patient Rights**

AHCA is concerned that OSHA has given little or no consideration to the possibility of conflicting government regulations under which LTC facilities operate. It is generally recognized by the LTC industry, based on accounts of facilities who have undergone workplace inspections, that OSHA already has determined that ergonomic fixes in LTC facilities translates to "use of mechanical lift equipment." Most of OSHA's "best practices" and ergonomic guidance applicable to health care settings include a heavy emphasis on use of mechanical lift devices. AHCA also is aware of

member facilities cited under the Occupational Safety and Health Act's (OSH Act) "general duty clause" for "exposing nursing employees and nursing assistants to the 'hazards' of unsafe lifting and other strenuous activities" followed by OSHA's suggestion that the facilities employ mechanical hoists to perform the necessary lifting of nursing home residents.

On the other hand, attempts by ergonomic consultants hired by facilities to implement "no manual lift" policies and procedures have been thwarted by the Health Care Financing Administration's (HCFA) regulations governing residents' rights. In situations when residents object to being lifted or transferred by a mechanical device, his/her right to refuse treatment is paramount. State officials responsible for surveying nursing facilities for compliance with HCFA's requirements for Medicare/Medicaid program participation have determined that a violation of this right would result in a survey "deficiency." A survey deficiency in the quality of life category, under which the right to refuse treatment falls, can potentially result in denial of payment, civil money penalties and/or termination of the facility from state and federal health care programs. Unequivocally, the choice for LTC employers must be compliance with HCFA regulations.

LTC employers have the desire, as well as the responsibility to take available steps to reasonably protect the health of their employees by creating and maintaining safe work environments. However, their first priority must be the health, safety and dignity of the residents for which they care. The LTC industry remains committed to finding ways to balance the care and commitment to its elderly residents and residents who are mentally retarded or developmentally disabled with providing a safe and secure workplace for our dedicated and hardworking caregivers. We expect no less from the government. OSHA's standard has failed to consider this balance, let alone provide a reasonable way to achieve it. Therefore, AHCA recommends that OSHA review other regulating agencies whose compliance mandates for LTC facilities, at a minimum, pose "practical" implementation barriers to certain ergonomics solutions.

#### **F. Legal/Compliance Issues**

In the preamble at page 65774, OSHA discusses the legal authority under which it proposes to promulgate the ergonomics program plan standard. OSHA cites the OSH Act that sets out conditions at 29 U.S.C. 652(8) under which a standard would be considered reasonably necessary or appropriate. AHCA believes that OSHA's proposal, as currently drafted, fails to meet several of the required conditions. For example, according to Sec. 652(8), a standard is warranted if a significant risk of material harm exists in the workplace. OSHA has failed to define what "material harm" is in the case of MSDs. However, citing a case in which the court said "OSHA has generally considered an excess risk of 1 death over a 45-year working lifetime as clearly representing significant risk," raises the question of how many workers have actually died from an MSD. Another condition to be met as set out in Sec. 652(8) is technological and economical feasibility. To clarify this requirement for standard promulgation, OSHA again cites case law in which the court said, a "standard is economically feasible if the industry can absorb or pass on the costs of compliance without threatening the industry's long-term profitability or competitive structure." As we described above and further demonstrated in the Appendix, the immediate concerns of state and federal government, policy makers, insurers and consumers is focused on the short term survival of the LTC industry, with 9.7 percent of LTC companies having filed for



bankruptcy in the past year. Given the current financial status of the industry, it is unlikely that any LTC facility would remain a viable, profitable company saddled with the additional liabilities and costs of OSHA's ergonomics proposal.

Finally, AHCA does not feel OSHA has met its burdens under Sec. 652(8) to show that this proposal is cost-effective and is supported by substantial evidence. We believe that employers have already found more cost-effective measures to protect workers from MSDs than are required by OSHA's proposal and have been, in good faith, attempting to implement these less costly alternatives. We also believe that the voluntary steps LTC employers are taking can be shown to achieve similar levels of employee protection as what OSHA can realistically achieve under its proposal, given the continued lack of medical consensus regarding the cause, treatment and prevention of most MSDs, especially injuries to the back. Consequently, AHCA strongly opposes OSHA's promulgation of a mandatory ergonomics program standard.

## **II. Specific Concerns and Recommendations**

1. AHCA supports the belief that there is a critical need for more research in an effort to develop a national scientific and medical consensus on the causes of and remedies for MSDs, especially in the area of back injuries/illnesses. The widely accepted concept that there are multifactorial aspects to MSDs that include psychosocial, physical, and psychological stress, work, organizational, cultural, genetic, and anatomic risk factors makes it more probable than not that a single solution or even a combination of ergonomic fixes in the workplace would not eliminate hazards or reduce causal risk factors responsible for an MSD.

### **Recommendation:**

- OSHA should not promulgate an ergonomics standard unless the independent study commissioned by Congress and being conducted by the National Academy of Science provides clear and convincing evidence that there is need for such regulation.
  - Subsequent studies should be conducted to identify effective methods for employers to reasonably identify worksite and task specific MSD hazards and risks. Research also would be needed to establish cost-effective worksite solutions for those hazards and risks.
  - Should OSHA proceed with an ergonomics standard prior to the completion of research, OSHA should, at an absolute minimum, delete Section 1910.918(c) that requires employers to utilize a table of risk factors in conducting job analyses until such time as there is conclusive biological evidence that OSHA's choice of risk factors are statistically significantly linked to MSDs that occur in LTC facilities.
2. Under the proposal, the definition of "covered MSD" is extremely broad and subjective. The proposal does not define "job hazard" nor does it identify "hazard abatement procedures." In the proposed rule, OSHA arguably shifts the burden of determining whether there is an injury, what caused it, and what if any, workplace risk factors contributed to it, as well as of identifying the "correct" solution to ensure that the same injury to that employee or another employee never occurs again. An impossible goal, if one considers that research shows cases

where two workers performing the exact same task may have very different responses to the activity.

**Recommendation:**

OSHA needs to better define terms and clarify core concepts and criteria used throughout the proposal.

- Under Section 1910.901(c)(2), the MSD must be an “OSHA recordable MSD.” As the term “OSHA recordable” currently is undergoing review and change under separate rulemaking, AHCA is reserving its recommendation pertaining to “OSHA recordable” until such time as OSHA promulgates its separate rule.
  - Revise screening criteria under Section 1910.902 to allow employers a better opportunity to appropriately rule out non-work related MSDs.
  - According to Section 1910.902(a) “The physical work activities and conditions in the job are reasonably likely to cause or contribute...” What level of probability is required to meet the definition of “reasonably likely” and how is it determined? AHCA recommends that “reasonably likely” be replaced with definitive screening criteria, i.e., specific determinations of time and place to identify that the MSD occurred in the workplace.
  - According to Section 1910.902(a) “The physical work activities and conditions in the job are reasonably likely to cause or contribute...” AHCA strongly opposes the use of the word “contribute” for purposes of WRP. Employer responsibility should be confined to eliminating those hazards determined to have caused a work related injury as identified by a specific event or task and possibly to eliminating those hazards determined to aggravate an existing MSD. Employers should not have responsibility expanded under WRP for the aggravation of a pre-existing or non-work related MSD. AHCA recommends removal of “or contribute” from Section 1910.902(a) or at least from the WRP requirements.
  - Section 1910.906(2) “Persistent MSD Symptoms” easily could include symptoms such as ordinary aches and pains, therefore, we recommend its removal or the inclusion of a better definition.
  - Section 1910.918(d) shifts the burden of determining MSD hazards to employers. OSHA should retain the responsibility for identification of job hazards.
3. The proposal is vague and lacks sufficient notice of compliance. OSHA has opted to utilize performance-based language throughout its proposed standard, making it difficult for covered employers to ever determine whether they have achieved compliance with the requirements, especially in the area of engineering controls. Without definitive thresholds, e.g. expected rate of reduction in lost work days, number of recordable MSDs, etc. and without defining compliance expectations, employers could be subject to steep fines because they failed to meet OSHA inspectors’ “subjective” decisions. For example, the basic ergonomic program under the proposal requires “employer commitment” and “employee participation.” How is this measured and what is acceptable?

**Recommendation:**

- Section 1910.915(a) requires that employers provide information on “common MSD hazards.” OSHA must provide a definitive list of covered MSD hazards and support its list with credible scientific evidence. OSHA needs to clarify whether all covered employers are expected to provide education on all common hazards or only those determined to exist in the employer’s workplace.
  - Section 1910.917 describes the basic obligation of job hazard analysis and control for a “problem job.” OSHA needs to define “problem job.”
  - Section 1910.919(b) requires employers to “implement feasible controls (interim and/or permanent) to eliminate or materially reduce the MSD hazards.” OSHA needs to define feasible in the language of the standard.
  - The Note to Section 1910.921(a) defining “materially reduce MSD hazards” in terms of “reasonably anticipated to significantly reduce the likelihood that covered MDS will occur” should be replaced with criteria that makes “materially reduce” measurable in a meaningful way to both employers and OSHA inspectors.
  - The terms “promptly” and “prompt” in Section 1910.930(a), (b), (c) and (e) should be replaced with definitive time measures in the language of the standard.
  - OSHA notes in the preamble that in Section 1910.930(c), the term “when necessary” is used to recognize “that it is not always necessary for an employer to send the injured employee to an HCP” and that other measures may be an adequate response. The term “when necessary” should be replaced with meaningful, measurable criteria of adequate responses in the language of the standard.
4. AHCA believes the WRP (Section 1910.933(c)) is an illegal attempt by OSHA to supercede state workers’ compensation programs. AHCA further believes that OSHA’s proposal creates a perverse incentive for an individual not to comply with treatment regimens because by doing so the employee is in a position to collect 90% of pay and benefits without working. The requirement is even more troubling and inappropriate since, under the proposed standard, WRP is not limited to cases of work-related occupationally acquired MSDs because, as proposed, there is no requirement that MSDs be identified as having occurred at the work site. We object to the current proposal requiring employers to assume responsibility for employees injured at home or at another job simply because activities at work may contribute to the course of the injury.

**Recommendation:**

- OSHA should resolve its concerns related to coverage determinations and salary and benefits payments with state workers’ compensation boards and not shift the responsibility to employers who pay insurance to protect workers. **AHCA recommends that OSHA remove WRP, Section 1910.933(c), from this proposal and direct its efforts toward working with states to improve existing worker’s compensation systems.**

- In the event that OSHA decides not to remove WRP altogether, as AHCA strongly recommends, OSHA should:
    - Eliminate coverage of aggravated MSDs, except as relates to requirements for light duty;
    - Limit WRP to seven days, which is: 1) the maximum amount of time most employees would be uncovered by workers' compensation insurance for bona fide MSDs; 2) the maximum number of days required away from work for most reported MSDs according to OSHA cited data; and 3) a more potentially feasible economic burden for employers.
    - Establish more reasonable and well-defined criteria for application of WRP to incorporate relevant comments contained in this comment letter, e.g., work-relatedness has lost all significance and meaning under this proposed rule since injuries do not have to be identified as occurring at a specific time or place at work; in fact, they don't have to occur at work at all. Reasonable and well-defined criteria should preclude pre-existing conditions and injuries that occur at home as it is unacceptable that facilities will be responsible, not only for the workplace, but the general health, habits and hobbies of their employees.
5. A full ergonomics program will be required in all LTC facilities unless OSHA increases its trigger threshold from "one" recordable MSD; and the quick fix option as defined, does not appear to be an option for LTC employers. The requirement proposed under Section 1910.906 that only one covered MSD (or its symptoms for seven days) triggers a full ergonomics program is, in the case of LTC facilities, a requirement that all facilities conduct a full ergonomics program. OSHA states repeatedly in the preamble to the ergonomics proposal that the requirements of the basic ergonomics program are minimal. Yet under Section 1910.906, OSHA has set the trigger from a basic program to a full program so low that the benefit of the basic program will be lost on the LTC industry. AHCA commends OSHA for acknowledging the enormous costs of the full program and attempting to design a quick fix option so that the full program is not always necessary. We appreciate that the quick fix option was added since the February draft of the ergonomics proposal to meet concerns that one covered MSD triggers the full ergonomics program. However, because a full ergonomics program must be instituted if another MSD occurs in the job within 36 months (Section 1910.910(b)), LTC facilities will be unable to utilize the quick fix option. Considering the broad definition of a covered MSD, the required training to report early signs and symptoms of MSDs, and the high rate of staff turnover in LTC facilities, we view the reoccurrence of an MSD within three years as a given. We anticipate continuous training of new staff, followed by the reporting of new MSDs on a regular basis for some time and certainly within 36 months of a quick fix.

**Recommendation:**

- OSHA should increase the trigger level for a full ergonomics program.

6. Hazard information and reporting requirements are well beyond the usual definition of “hazard.” Under Section 1910.914 of this proposal, employers must provide information to employees so that employees can recognize and report on early MSD “signs and symptoms” and employers must respond “promptly” to these reports. According to OSHA, the reporting system, by design, should be highly sensitive and receive some reports that will not result in covered MSDs. The obligation that employers teach employees to report every sign and symptom and that employers promptly respond and evaluate every sign and symptom of a possible MSD is overly burdensome. We remind OSHA that signs and symptoms of MSDs include an extremely wide assortment of complaints and that symptoms are subjective. We also stress that there should be some causation or work relationship to obligate an employer. A poor night’s sleep leading to a stiff neck should not require a prompt response and evaluation or in any other way obligate employers.

**Recommendation:**

- OSHA should reevaluate and revise its hazard information and reporting requirements, within the context of employers, like LTC providers, who are faced with turnover rates that often exceed 100%.
  - Instead of requiring employers to develop the wide array of materials described in Section 1910.915, OSHA should develop extensive hazard information materials relevant to those specific hazards that they determine are most likely to occur in a specific workplace, in order to alleviate the employers’ burdens for developing and disseminating such information. It is currently beyond the capability of LTC employers to develop and produce this information.
7. AHCA also has grave concerns about the requirement under Section 1910.21(b) that employers “periodically” must determine whether additional controls have become feasible. How often is “periodically” and does this, in essence, require employers to conduct constant and on-going reviews of new technology?

**Recommendation:**

- Section 1910.21(b) referring to periodic assessment should be deleted and OSHA should be required to provide technology and program upgrade information when it determines a need for employers to change its administrative and engineering course according to new and credible research more accessible to OSHA than to providers.
8. While AHCA agrees with OSHA that the right to privacy and confidentiality of medical records are important, we point out that these rights normally are voluntarily modified when there is third party financial responsibility. For example, submission of insurance claims open up medical records to Medicare and other health insurance companies. Likewise under this proposed standard where employers are financially responsible for WRP and workplace redesign, employers obviously should be informed of all the HCP’s recommended restriction on the employee’s physical activities. Therefore, AHCA opposes Section 1910.932(a)(1), which requires that some relevant information “must not” be communicated to employers. We also oppose Section 1910.931(d) that provides HCPs with an opportunity to conduct

workplace walkthroughs. OSHA should acknowledge that LTC workplaces are also residences and give consideration to privacy needs and maintaining a homelike environment. The HCP is able to gain a clear understanding of the problem job and available alternatives without walkthroughs by reviewing all the information received under Section 1910.931(a) and (b).

**Recommendation:**

- Section 1910.932(a)(1) should be deleted. We note that Section 1910.932 (a)(2) preserves privacy and confidentiality.
- Section 1910.931(d) should be waived when the employees' workplace is a residence for others.

9. Training requirements proposed under Section 1910.925 are overly broad and burdensome. As stated earlier in this letter regarding hazard information and reporting requirements, it is beyond the capability of LTC employers to develop and produce materials as required in this standard. Training is made even more challenging and expensive for the LTC industry because of its high turnover rates in direct caregiver staff.

**Recommendation:**

- As described under section 5 of this letter, to alleviate the employers' burden, OSHA should develop training materials relevant to those specific hazards that they determine are most likely to occur in a specific workplace.
- OSHA should reevaluate and revise its training requirements to allow LTC employers to limit initial training to the protection and safeguarding of employees' health with additional training on the ergonomics program standard to be provided at regularly scheduled six month intervals.

10. AHCA is appreciative of OSHA's desire to propose "a long start-up period so employers have time to get assistance before the compliance deadline comes due." We are concerned, however, that under Section 1910.942 there is not enough time to learn about and establish MSD management before its deadline for compliance. The standard becomes effective 60 days after the publication date of the final rule and MSD management must occur "Promptly when an MSD is reported." Because we anticipate that MSDs will be reported early under this proposed standard, we envision that the MSD management component deadline will occur almost immediately after the 60-day start-up. This hardly provides an opportunity for employers to receive assistance on MSD management, which is a particularly large and confusing component of the proposed standard.

**Recommendation:**

- Section 1910.942 should be revised to allow an MSD management compliance deadline of no less than 1 year after the effective date.

### III. Conclusion

Many LTC providers have voluntarily implemented ergonomics programs in various forms. The results of these programs are just beginning to be studied and effects published. There is no doubt, and to OSHA's credit, that the agency's emphasis on recognizing, preventing and reducing the risks of musculoskeletal disorders for employees in the workplace created the impetus and continues to stimulate these voluntary programs and employer efforts. That being said, AHCA believes that the promulgation of this overly broad, vague, costly and essentially unenforceable standard will have a devastating effect on the forward movement of LTC in solving the problems of risk exposure to MSD hazards in the workplace. We believe it would be far more valuable for OSHA to use its resources to encourage additional research, publish user friendly guidance, and share effective programs and best practices. OSHA's help combined with the business considerations already driving employers to reduce injuries and illnesses and diminish workers' compensation costs would go further to leverage precious resources by both government and industry and to move the stellar work already being done by LTC providers.

An ergonomics program standard at this time, not based on sound science and written prior to the completion of research to address so many unanswered questions, is premature. AHCA strongly recommends that OSHA delay requiring workplace solutions until more research to respond to unanswered questions relating to the causal link between MSDs and the workplace are completed and solutions are tested and proven effective. Specifically, AHCA urges OSHA to wait until the National Academy of Sciences study, commissioned by Congress in 1998 and due for completion in 2001, is finished before requiring LTC facilities to expend huge amounts of money, currently unavailable to them on a program that may or may not be effective.

LTC employers are concerned about the health and welfare of their employees. Not only is employee health a concern in and of itself, but the health of direct care staff impact upon the quality of life of the residents of LTC facilities. This is why many of our members are trying, in good faith, to address this issue and voluntarily implement a variety of ergonomics programs. LTC employers are expending money, time and effort to prevent workplace injuries and this proposed ergonomics standard, as written, will be counter productive.

AHCA appreciates this opportunity to submit comments on behalf of our more than 12,000 LTC member facilities. We look forward to OSHA's full and proper consideration of our serious concerns and recommendations and we strongly encourage OSHA to withdraw the proposed ergonomics standard until such time as: 1) definitive and conclusive scientific and medical evidence support its promulgation; 2) feasible, cost-effective interventions are identified to LTC providers; and 3) financial resources to pay for implementation are made available.

Sincerely,

  
Charles H. Roadman II, MD  
President and CEO

**APPENDIX**

**The Occupational Safety and Health Administration's  
Proposed Ergonomic Standard:**

**Assessment of the Cost Impact  
On the Long Term Care Community**

**Prepared by:**

**The American Health Care Association  
Washington, D.C.**

**February 29, 2000**



### Cost Impact of the OSHA Proposed Rule

OSHA estimated the cost impact of its proposed rule for implementation over a ten-year period. In this ten-year estimate, OSHA included its projection of the reduction in Musculoskeletal Disorders (MSDs) that would occur over the ten-year period with the implementation of the rule. This projected reduction in MSDs translates into lower estimated costs in the later years of implementation. Whether or not OSHA's projection of MSD reduction is accurate, it is reasonable to assume some reduction in work-related injuries with appropriate interventions to reduce injury. What is not reasonable is to include this projected reduction in cost in the cost impact that OSHA presents as the annual cost. OSHA throughout its presentation in the Federal Register presents "annualized costs," which is essentially (though not exactly) the average costs per year over the ten year period. Since the cost is estimated to be much lower in the later years, presenting annualized cost makes the first year of implementation appear to the reader to be less of a burden than actual. OSHA might argue that the annualized cost provides an estimate of cost that can be spread by business over the course of ten years, but that is not how the cost will be incurred, nor how payment for costs will have to be made by businesses in order to implement the OSHA rule.

OSHA does present the estimate for the first year's actual cost in its detailed document on its Preliminary Economic and Regulatory Flexibility Analysis. The annualized annual cost is estimated to be \$4.2 billion. However, the actual estimate for Year One alone is \$9.2 billion—over twice the amount of the annualized annual cost. The following is the year-by-year estimate of actual incurred costs by OSHA for all industries (Table V-4 in OSHA's Preliminary Economic and Regulatory Flexibility Analysis):

| Year | Cost to Employers |
|------|-------------------|
| 1    | \$9.2 Billion     |
| 2    | \$7.9 Billion     |
| 3    | \$6.6 Billion     |
| 4    | \$6.0 Billion     |
| 5    | \$5.3 Billion     |
| 6    | \$4.8 Billion     |
| 7    | \$4.3 Billion     |
| 8    | \$3.9 Billion     |
| 9    | \$3.6 Billion     |
| 10   | \$3.3 Billion     |

Even if these estimates above are too low, the estimates are telling. Only in Year 8 of implementation is the estimate of actual incurred costs at or below the \$4.2 billion OSHA promulgates as the annualized annual costs. Even the average per year based on the above numbers, \$5.5 billion, is greater than the annualized costs of \$4.2 billion. This difference raises questions about the method or methods used in OSHA's cost estimate.

The difference between the annualized annual amount and the actual estimate for Year One in the SIC category "nursing and personal care facilities" is noteworthy—and striking when discussing the impact on the industry. The annualized total estimate is \$159 million with \$51

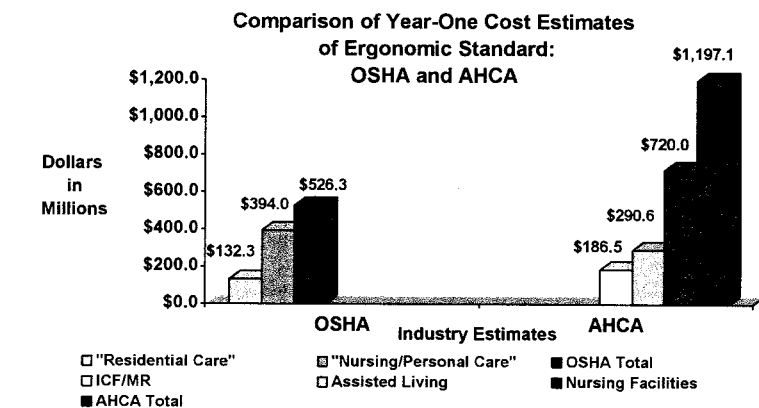
million attributed to the Work Restriction Protection (WRP) alone. For the non-annualized Year One estimate, the OSHA numbers are \$394 million with \$106 million of this total accounted for by the WRP provision.

The use of the annualized number by OSHA underestimates one of the most important components of impact presented by OSHA: the percent of revenues and profits consumed by the proposed rule. Even with the underestimation by OSHA, the differential impact on the long term care industry is substantial. For all industries, the percent of revenues that could be taken by the proposed rule using the annualized annual dollar amount is 0.03%, and the percent of profits, 0.6%. For "nursing and personal care facilities" the percent of revenues is 0.25%, seven times greater than all industries combined. The percent of profits is 5.8%, nearly nine times greater than all industries combined. The percent of revenues consumed under "residential care" establishments by the annualized cost is 0.25% and the percent of profits, 9.8%.

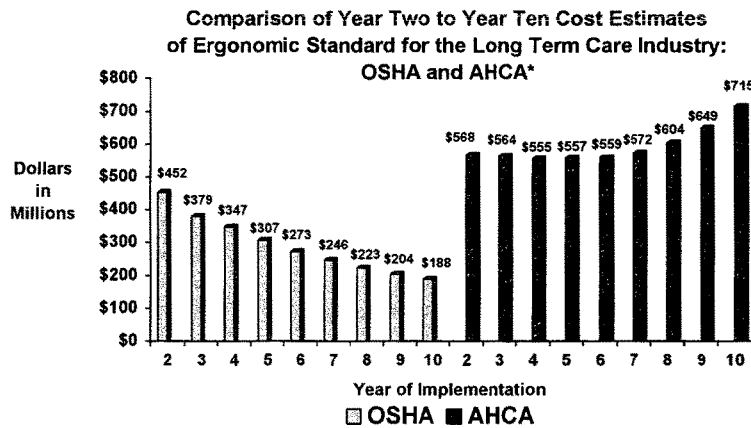
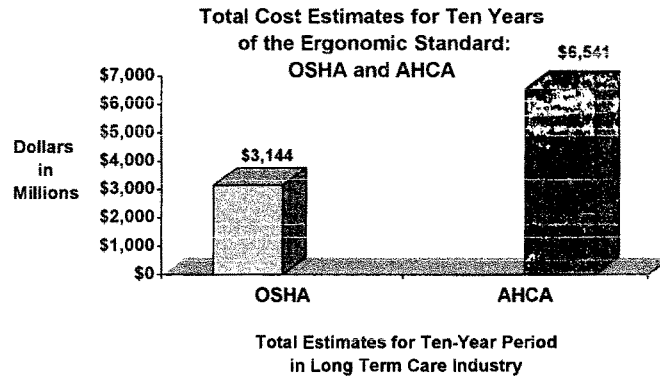
If OSHA had reported these impacts using its own Year One estimate, the percent of revenues for nursing and personal care facilities would have been 0.62%, and the percent of profits, 14.4%. In residential care, the Year One estimate alone consumes 0.66% of revenues and a staggering 25.2% of profits.

These percents are using OSHA estimates, not AHCA's own estimates. And these percents are for a 1996 base year and, thus, do not include the recent changes that have occurred in the governmental financing of long term care, in particular the reduction in revenue associated with the implementation of the Balanced Budget Act of 1997. The fact that nearly 108% of nursing facilities have come under bankruptcy within the last six months indicates that the financial environment has changed substantially, making the implementation of the OSHA proposed rule an even more precarious impact for the industry.

OSHA estimates the Year One impact on nursing and personal care facilities and residential care to be in total \$ 526 million. AHCA estimates the Year One costs to be from \$1,090 million to \$1,197 million—that is, over a billion dollars in the first year alone.



OSHA's estimate of the costs for Year Two through Year Ten are also consistently below AHCA's estimate for these years. The result is that OSHA's estimate of total costs for nursing/personal care and residential care facilities for ten years is \$3,144 million while AHCA's estimate for long term care providers ranges from \$5,643 million to \$6,541 million.



\*OSHA estimate is 5.73% of the total year-by-year estimates reported by OSHA for all industries. OSHA only reported first year estimates by industry groups and nursing/personal care and residential care year-one estimates where 5.73% of total. Since OSHA's estimate for other years is based upon an assumed rate of MSD reduction year by year, and all variable costs are based upon a cost per MSD, it is reasonable to assume that the percent each year of the total accounted for by nursing/personal care and residential care would be constant.

Details of the estimations over a ten-year period of the proposed rule are outlined below (Table 6). However, one difference between OSHA's method and AHCA's method is important to understanding the overall comparison. OSHA calculates the cost of job controls as a cost per affected employee. So the total decreases over the years with an assumed decrease in the occurrence of MSDs. AHCA estimated the cost of job interventions (i.e., job control devices) as a fixed cost that occurs in the first year. The costs for job interventions in later years are ordinary maintenance and repair costs, as well as the introduction of new controls were needed, and an incremental increase in replacement costs. The overall cost in Year Two, using the AHCA method, will be substantially less than the cost for full implementation in Year One. However, as depreciation of equipment occurs normally over the years, the cost of replacement increases.

AHCA also includes the estimation of training new employees year to year. Training is not simply a function of the rate of MSD cases, but the continuous training of new employees in job controls. In other words, AHCA includes a constant training cost related to ordinary turnover.

OSHA does not include costs of ordinary maintenance and repair, nor does OSHA, apparently, include the continuous requirement of training for new employees.

So, even though, some costs may be reduced because of a decrease in MSD cases year to year, the total costs from Year Two through Year Ten progressively increase because of depreciation in job reengineering and the need for normal replacement. The ratio of the AHCA low-end estimate to the OSHA estimate for Year Two, for example, is 1.03, but in Year Ten the ratio is 3.39 (Table 7).

Tables 1 through 7 below describe—in more detail—the assumptions, calculations, and results of the cost estimate conducted by AHCA. Included is a comprehensive comparison of the assumptions and method used by OSHA with those used by AHCA. The reader should read the details provided in the tables to gain a full appraisal of the basis of AHCA's cost estimates and the limitations embedded in the OSHA estimation in contrast. The tables are:

|                          |                                                                                                                                                                                |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| • Table 1. (pp. A8-A9)   | A Comparison of OSHA and AHCA Assumptions in Cost Estimates for Year One Implementation of the OSHA Proposed Rule: All Components Except the Work Restriction Protection.      |
| • Table 2. (pp. A10-A13) | Comparison of Numbers for Wages, Facilities (Establishments), Injury/Illness, and MSDs Used in OSHA and AHCA Cost Estimates for Year One of Implementation.                    |
| • Table 3. (pp. A14-A16) | AHCA Cost Estimate of Year One Implementation of OSHA Proposed Rule: All Components Except Work Restriction Protection—Nursing Facilities, Intermediate Care, Assisted Living. |
| • Table 4. (p. A17)      | Comparison of OSHA and AHCA Assumptions for Cost Estimates of the Work Restriction Protection Provision.                                                                       |
| • Table 5. (p. A18)      | Employer Costs for the Year One of Work Restriction Protection                                                                                                                 |
| • Table 6. (pp. A-18-19) | Comparison of OSHA and AHCA Assumptions Used for Year-by-Year Cost Estimates of the Proposed Rule.                                                                             |
| • Table 7. (p. A19)      | Comparison of OSHA and AHCA Year-by-Year Cost Estimates During the First Ten Years of Proposed Ergonomic Standard.                                                             |

In general, as summarized in the tables, we believe OSHA's estimation method minimizes and underestimates the human resources that would be expended to implement many components of the program, from the starting of a basic program through the implementation of the full program. For example, to assume as OSHA has, that it would take one hour of managerial time only to "familiarize" oneself with the proposed rule is preposterous. We have read the proposed regulation as presented in the *Federal Register* and more than one hour—more than one day—was required to grasp the proposal and guess what actions an establishment should take to comply. For the employee training for the basic and full programs, OSHA has apparently also omitted the costs for training new employees annually. Training in Year One is not a one time event because staff will leave during the year and new staff will be hired. AHCA has included turnover in its estimation.

OSHA has also based its cost estimate on "recordable" MSDs. This method seems to imply that the proposed rule will not introduce uncertainty as to the cases for which the rule applies. OSHA assumes that current practices for defining "recordable" MSDs will not be altered by the political context and regulatory arm of the proposed rule. A broader count of cases is appropriate for estimating the resources spent in the screening process to account for the new uncertainty the proposed rule will introduce into any organization.

Related to the issue of cases to count under the screening process of the basic program, is the OSHA method of excluding from the estimation of costs for the full program, establishments that had, according to an OSHA survey, "ergonomic programs" in place. Given that the focus of the proposed rule is on "problem jobs" within an organization, it does not appear valid to exclude an organization because it has an institutional "ergonomic program." The exclusion assumes every present-day ergonomic program covers every conceivable "problem job" that can or will emerge under the proposed rule.

In our estimate, we assume that every facility could have at least one problem job. Our estimation assumes a distribution of problem jobs across facilities in which some facilities, because of some programs in place, will have fewer problem jobs under the rule than others. For example, some facilities may have three problem job areas emerging in nursing services, food service, and housekeeping. Other facilities are assumed to have only two or one problem job areas. This assumption is detailed further in Tables 1 and 2.

The assumption used about the distribution of problem jobs across facilities results in what we believe is a sounder estimate of the costs of job interventions—an estimate based upon actual costs of selected engineering controls. As mentioned earlier, OSHA estimated the cost of job controls by constructing the average cost per worker in a problem job and multiplying this average times the number of workers. The average per worker was calculated to include, or subtract from the "gross" cost of the job controls, the assumed labor savings to be derived from the implementation of the job controls. For most jobs in nursing services, it needs to be noted that OSHA did not find any labor savings from the ergonomic control costs (Table V-14 in Chapter V in OSHA's Preliminary Economic and Regulatory Flexibility Analysis). That is, the value of labor savings was zero dollars. OSHA's method in essence treats job control costs as variable costs related to the volume of staff affected. This method, as noted above, enables OSHA to

calculate a reduced costs in job controls over time by assuming a reduction in workers affected in later years after the implementation of the rule.

One problem with the basis of OSHA's estimate of job control costs is that many job reengineering costs function more as fixed costs to the facility than a cost the facility can vary, or that varies proportionally, by the number of employees in the problem job. Two facilities may vary slightly in terms of staff in nursing or direct care services, and resident volume, but to fix issues in patient lifting both have to purchase one lift device to properly cover their needs. Some job controls in some industries may be worker specific, for example, the engineering control is a device for each worker. In the long term care industry, and in nursing or direct care services particularly, the fixes are less a device or method for the worker applied to the worker's stationary work station than devices used in delivering patient care. All facilities in long term care are involved in patient care, meaning that it is reasonable to assume that there is a minimum package of ergonomic controls common across facilities. Information from a company that specializes in providing ergonomic solutions in health care settings for patient lifting suggests that facilities will have similar fixed costs incurred to implement job controls. Although the charge to different facilities varied slightly for the external contractor, annual charges that were in the \$10,000s varied in most cases by a \$1,000 or less between facilities with 100 beds to 140 beds.

The type of job control devices for nursing/direct care services in long term care that ergonomic consultants may include in programs for patient lifting and transfer are: various electric patient lifts, SARA slings, regular slings, mesh slings, toilet slings, sling flats, dextra slings, amputee slings, and freestanding side access tubs, among others. The volume of fixes may vary by patient need, but not volume of workers. For this reason, we assumed the costs of fixes varied more by long term care setting than number of workers, that is, between nursing facilities, ICF/MRs, and assisted living.

Clearly, the type of job controls listed above are those relevant to the OSHA proposed rule. OSHA defines "patient handling jobs (e.g., nurses aides, orderlies, nurse assistants)" as manual handling jobs and the recommended job fixes by OSHA for these manual handling jobs are the type of devices above (Chapters I and III in OSHA's Preliminary Economic and Regulatory Flexibility Analysis). OSHA states that for manual handling, solutions to eliminate/reduce bending motions include the use of "lift tables...and simple mechanical aids." Also OSHA states that another important fix is to eliminate/reduce lifting and lowering forces by eliminating/reducing the need to lift or lower manually by using "lift tables...hoists...and similar mechanical aids" (Chapter III in OSHA's Preliminary Economic and Regulatory Flexibility Analysis). In patient care, many other fixes OSHA mentions, such as reducing the weight of the object lifted by reducing the size of the object or the volume of containers, are not applicable. Only devices to reduce the lifting of a fixed weight applies.

We assumed that half the facilities in long term care had job controls in place for nursing services already so we only applied the fixed cost per facility for nursing services to half the facilities in the industry. This assumption likely underestimates the costs of job control fixes but we wanted to present a conservative estimate. First, it is unlikely that half the facilities can be said to have all relevant job controls in place. Second, under the OSHA proposed rule it is very

unlikely that establishments with some devices for patient lifting, for example, will not have to implement additional controls for problem jobs in direct care services to comply with the OSHA rule. Again our estimate, even though already greater than OSHA's estimate, is conservative and in all likelihood underestimates the cost of job controls in the long term care industry.

In the later years of the rules implementation, Year Two through Year Ten, the costs of job controls are lower relative to the costs for Year One. However, as fixed costs, depreciation in equipment should be included, which results in a gradual increase in the costs of job controls between Year Two and Year Ten (see Table 6). AHCA believes this method represents a more reality-based estimate of the manner in which costs would be incurred over the years—i.e., treating job controls as an initial big ticket fixed cost with usual maintenance and increasing replacement costs incurred over the remaining years. A more reality-based estimate for the type of job controls involved in long term care than the fabricated treatment of job controls by OSHA as a variable cost.

**Table 1. A Comparison of OSHA and AHCA Assumptions in Cost Estimates for Year One  
Implementation of the OSHA Proposed Rule:  
All Components Except the Work Restriction Protection**  
*OSHA Assumptions                      Assumptions in AHCA Cost Assessment*

| <b>Initial Education and Planning</b>                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Management Familiarization with Standard</b>                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 1 hour managerial time.                                                    | 2 hours of managerial time for reading rule and familiarization.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Management Training on Regulation</b>                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Not included.                                                              | 12 hours of managerial time plus \$1,500 for travel costs to attend industry workshops on rule.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Basic Program</b>                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Work Plan (Management Leadership and Staff Assignments)</b>             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 1 hour managerial time.                                                    | 1 hour per managerial staff team.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Managers In-Service (Information/Training)</b>                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 2 hours managerial time.                                                   | 2 hours of managerial time for preparation of training and 1 hour per staff in in-service.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Set up Reporting System</b>                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 1 hour managerial time.                                                    | 1 hour preparation (managerial time) and 1 hour review by risk management.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Employee In-Service (Information and Reporting System)</b>              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 0.5 per employee and 0.5 managerial time.                                  | 2 hours of managerial time for preparation of training and 0.5 hour per staff in in-service in initial training program. 0.5 hour per new staff and 0.5 hour per managerial time for new staff training session assumed to be monthly to train new staff.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Investigation of Application of Rule to MSD occurrence</b>              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 0.25 hour of managerial time and 0.25 hour of employee per recordable MSD. | 0.5 hour of managerial time and 0.5 hour of employee time per occurrence of work-site injury and illness. In 25% of cases external consultation with risk management/ergonomist to determine application. OSHA assumption assumes only present "recordable" MSDs at issue. However, under the broad terms of the rule, uncertainty will exist as to what injury/illness should be defined as a relevant MSD. Management will take the prudent course to be in compliance, so the incidence of all work-site injury/illness should be the basis of cost assessment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Full Program</b>                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Job Hazard Analysis</b>                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 1 hour managerial time plus 1 hour employee time per covered MSD.          | <p>1 hour managerial time and 1 hour employee time per covered MSD. Assume 3 problem jobs areas in long term care establishments for purpose of analysis: 1) nursing/personal care services, 2) food service, and 3) housekeeping. Assume 50% establishments have MSDs covered by the rule in all 3 areas. Another 25% have covered MSDs in 2 job areas because they have program in place for third (assume program is for direct care jobs). And 25% have covered MSDs in only 1 area because program in place already for 2 areas (assume one program in place is for direct care jobs). (Put differently, 50% facilities have already programs for direct care jobs. Half of the facilities with a direct care program also have a program for another area. No facility has a program already in place for all 3 problem job areas.)</p> <p>This assumption differs from the OSHA assumption where facilities are excluded if they have an "ergonomic program." Since the OSHA rule applies to covered MSDs in problem jobs and not a general "ergonomic program," having a program in place does not exclude the possibility of MSDs for "problem jobs."</p> <p>Although the assumption used by AHCA differs from that used by OSHA, when applied to an estimate of the number of employees covered by the rule in the full program, the AHCA assumption likely underestimates the number of employees covered by the rule. The estimate of employees covered by the rule drives the estimate of training cost under the full program. So the AHCA assumption provides a conservative, and not inflated estimate, of staffing training under the full program under the rule.</p> |



| <b>OSHA Assumptions</b>                                                                                                                                                                                                    | <b>Assumptions in AHCA Cost Assessment</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                            | <b>Evaluate Job Controls</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 2-16 hours of employee and 2-32 hours of managerial time, depending on problem job; in 15% of cases, \$2,000 for consulting ergonomist's time is assumed to be required (16 hours times rate of \$125 per hour).           | \$2,000 for consultants for 15% of program jobs covered by the rule. 12 hours employee and 12 hours managerial time per program job covered. 12 hours is the approximate average of the ranges and distribution of cases with different hours in the OSHA outline of assumptions.<br><br>Assume 3 program job areas for purpose of analysis. Also assume 50% establishments have all 3 problem jobs covered by rule. Another 25% have 2 job areas because they have program in place for third. And 25% have covered job in only 1 area because program in place already for 2 other problem job areas. (See "job hazard analysis" above.) |
|                                                                                                                                                                                                                            | <b>Implement Job Controls</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Varies with industry and establishment. Used cost in estimate as cost per worker calculated to include estimate of labor savings assumed with intervention that are assumed to offset control costs.                       | Varies with program implemented and preexistence of some ergonomic programs. Costs estimated as cost per facility affected under the assumption that many controls require same purchase by all facilities irrespective of variation in number of workers. That is, many controls are fixed costs at the facility level and not variable costs that vary by employee volume.                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                            | <b>Managerial Training in Full Program</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 16 hours of managerial time.                                                                                                                                                                                               | 16 hours of managerial time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                            | <b>Employee In-Service on Full Program and Job Controls</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1 hour of employee time per affected employee, 2 hours of managerial time per problem job to provide training; 25% of employers able to use quick fix option and these therefore do not need to conduct employee training. | 1 hour of employee time per affected employee, 2 hours of initial managerial time for in-service preparation and 1 hour of managerial time for each in-service session conducted. 1 hour per new staff in problem job and 1 hour per managerial time for new staff training session assumed to be monthly to train new staff. No quick fix for relevant MSDs in nursing, ICF/MR or assisted living facilities.                                                                                                                                                                                                                             |
|                                                                                                                                                                                                                            | <b>Administer MSD Management</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 1 hour of managerial time per MSD.                                                                                                                                                                                         | 1 hour of managerial time and 1 hour of administrative assistant time per occurrence of MSD under program.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                                            | <b>Record-keeping</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 0.25 hour of supervisory time per MSD.                                                                                                                                                                                     | 0.25 hour of supervisory time per MSD.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                                                                                                                                                                            | <b>Program Evaluation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 4 hours of managerial time in the three years following occurrence of covered MSD. For 25% of problem jobs able to use quick fix option, no program evaluation is conducted.                                               | 1 hour of managerial time per year to review results and 20 hours per year of staff to tabulate data and prepare report. No quick fix for relevant MSDs in nursing, ICF/MR or assisted living facilities.                                                                                                                                                                                                                                                                                                                                                                                                                                  |

**Table 2. Comparison of Numbers for Wages, Facilities (Establishments), Injury/Illness, and MSDs Used in OSHA and AHCA Cost Estimates for Year One of Implementation.**

| <b>OSHA Estimate</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>AHCA Estimate</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hourly Wages</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p>Bureau of Labor Statistics (BLS) Hourly Wages reported for 1996 times 1.39. Assumed 39% for benefits on top of hourly wage.</p> <p>For the category "nursing and personal care facilities," OSHA used \$12.52 for "production" staff (general staff) and \$24.19 for managerial time. For the category "residential care," OSHA used \$12.08 for "production workers" and \$23.07 for managerial time.</p> <p>[See Table II-7 in OSHA's Preliminary Economic and Regulatory Flexibility Analysis of proposed rule.]</p>                                                                                                                                                                                                                                                   | <p>Used most recently available BLS statistics, which are for November 1999 for "production workers," which are \$10.39 hourly wage for nursing and personal care facilities and \$9.85 for residential care establishments (BLS Series National Employment, Hours and Earnings from BLS web page (www.bls.gov)). Used the ratio of "production worker" to managerial hourly wage used by OSHA to calculate managerial hourly wage to have same relatively to 1999 BLS "production workers" wage. Hourly wages used include 39% for benefits.</p> <p>For nursing homes and ICF/MRs used \$27.90 hourly wage for managerial time and \$14.44 for all other employees. For assisted living, used \$26.14 for managerial hourly wage and \$13.69 for all other employees.</p>                                                                                                                                                                                                                                                                                  |
| <b>Facilities</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• <b>"Nursing and personal care facilities"</b><br/>Used 24,009 reported in <i>County Business Patterns</i>, 1996. "Nursing and personal care facilities" includes nursing facilities and intermediate care facilities (ICF/MRs). Assume 23,955 fall under scope of rule during the first year.</li> <li>• <b>"Residential Care"</b><br/>Used 28,762 reported in <i>County Business Patterns</i>, 1996. However, OSHA estimates that only 16,077 of these facilities would fall under the rule in the first year of the standard (Table VIII-2 in <i>Federal Register</i>, Vol. 64, No. 225, pp. 65995-66000).</li> </ul> <p>[See Table I-1 in OSHA's Preliminary Economic and Regulatory Flexibility Analysis of proposed rule.]</p> | <ul style="list-style-type: none"> <li>• <b>Nursing Facilities</b><br/>Used the Health Care Financing Administration's (HCFA) Online Survey Certification and Reporting System (OSCAR) data from nursing facilities Medicaid/Medicare certification surveys. Most recent data available as of December 1999 was analyzed. Number of facilities is 16,937.</li> <li>• <b>ICF/MRs</b><br/>Used the HCFA certification survey data for ICF/MRs available as of June 1999. Number of facilities is 7,258.</li> </ul> <p>[Note: Nursing facilities plus ICF/MRs from HCFA data equals 24,195 which is very similar to the number of establishments used by OSHA of 24,009 for "nursing and personal care facilities."]</p> <ul style="list-style-type: none"> <li>• <b>Assisted Living Facilities/Residential Care</b><br/>Since a single data source does not exist, as it does for nursing facilities and ICF/MRs above, used the number of facilities used in the OSHA estimate for those falling under the rule in first year: 16,077 facilities.</li> </ul> |
| <b>Total Employees</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• <b>"Nursing and personal care facilities"</b><br/>Used 1,806,086 employees reported in <i>County Business Patterns</i>, 1996. "Nursing and personal care facilities" includes nursing facilities and intermediate care facilities (ICF/MRs).</li> <li>• <b>"Residential Care"</b><br/>Used 550,745 employees reported in <i>County Business Patterns</i>, 1996.</li> </ul> <p>[See Table II-2 in OSHA's Preliminary Economic and Regulatory Flexibility Analysis of proposed rule.]</p>                                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>• <b>Nursing Facilities</b><br/>Used the Health Care Financing Administration's (HCFA) Online Survey Certification and Reporting System (OSCAR) data from nursing facilities Medicaid/Medicare certification surveys. Most recent data available as of December 1999 was analyzed. Number of total full-time equivalents (FTEs) nationally from analysis of these data is 1,562,562.</li> <li>• <b>ICF/MRs</b><br/>Used the HCFA certification survey data for ICF/MRs available as of June 1999. Number of FTEs derived from analysis of these data is 203,237.</li> </ul> <p>[Note: Nursing facilities plus ICF/MRs from HCFA data equals 1,765,799 FTEs which is very similar to the number of employees —1,762,000— reported in the "nursing and personal care" industry for 1999 by BLS.]</p> <ul style="list-style-type: none"> <li>• <b>Assisted Living/Residential Care</b><br/>Used the number of employees used by OSHA: 550,745 employees.</li> </ul>                                                     |

| <b>OSHA Estimate</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>AHCA Estimate</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| <b>Employees and Facilities in "Problem Jobs" Requiring Analysis Under Full Program:<br/>Jobs with MSDs Requiring Full Program</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p>Number of problem jobs was "the number of covered MSDs projected to occur in establishments with problem jobs that do not already have an effective ergonomics program in place" (Chapter V, Costs of Compliance, in OSHA's Preliminary Economic and Regulatory Flexibility Analysis of proposed rule).</p> <ul style="list-style-type: none"> <li>• <b>"Nursing and personal care facilities"</b><br/>Based upon the 1993 OSHA Ergonomics Survey, OSHA estimated that 22% of employees are already covered by ergonomic engineering controls.<sup>1</sup></li> </ul> <p>In terms of facilities, OSHA estimated that only 11,190 establishments (or 46.6% of total) would be affected by the rule over ten years.<sup>2</sup></p> <ul style="list-style-type: none"> <li>• <b>"Residential Care"</b><br/>OSHA estimated that 56% of employees covered by existing ergonomic engineering controls.<sup>1</sup></li> </ul> <p>In terms of facilities, OSHA estimated that only 14,449 establishments (or 50.2% of total) would be affected by the rule over ten years.<sup>2</sup></p> <p><sup>1</sup>See Table II-8 in Chapter II, Industrial Profile in OSHA's Preliminary Economic and Regulatory Flexibility Analysis of proposed rule.</p> <p><sup>2</sup>Table VIII-4 in <i>Federal Register</i>, Vol. 64, No. 225, pp. 66011-66018.</p> | <p><b>Facilities:</b></p> <p>Assume for purposes of analysis there are 3 "problem job" areas in long term care establishments. These are: 1) direct care jobs performed by nursing and personal care staff, 2) food service/preparation jobs, and 3) housekeeping and more specifically laundry services.</p> <p>No facilities are excluded as being unaffected by the proposed rule because it is assumed that existing ergonomic programs do not cover all 3 problem jobs.</p> <p>Assumptions about percent of facilities with ergonomic programs in place for problem jobs are outlined in Table 1.</p> <p><b>Employees affected by Basic Program under rule:</b><br/>Assume all employees affected under basic program as the basic program concerns establishment-wide reporting system and practices for identifying MSDs and problem jobs, including problem jobs not yet identified or under existing ergonomic programs.</p> <p><b>Employees affected by Full Program under rule:</b><br/>Assume all facilities will have at least one problem job, so some employees in all facilities will be affected. For purposes of analysis of full program implementation, used the assumption on percent of facilities with problem jobs to calculate employees covered under the full program. (See Table 1 for more detail, particularly assumption under "job hazard analysis.") Since assuming half of facilities have program for direct care, assume only 50% of direct care staff covered under full program. As stated, of this 50% with a program for direct care staff, half have problems jobs in the two other areas because the direct care program is the only program, and half have one other program resulting in one other problem job. Combining this distribution of programs across all facilities means that 87.5% of food service and housekeeping employees are covered under the full program in the proposed rule.</p> <p>In nursing facilities, assume 907,332 nursing employees at any one time and 349,954 employees in food service/housekeeping. The result is that 759,876 are covered by proposed rule at initial implementation of full programs.</p> <p>In ICF/MRs, assume 139,758 employees in direct care at any one time and 45,322 in food service/housekeeping (see next section in table for calculation). The result is that 103,870 are covered by the proposed rule at initial implementation of full programs.</p> <p>In assisted living/residential care, assume 293,982 employees in direct care any one time and 152,121 in food service/housekeeping. The result is 261,082 are covered by the proposed rule at initial implementation of full programs.</p> <p>(A survey reported in <i>The State of Seniors Housing</i>, 1998 by ASHA, PriceWaterhouseCoopers, and NIC, suggests that the percent of direct care, housekeeping, and food service workers, combined, in half of assisted living facilities, ranges from 69.2% to 92.8% of the facilities. Without more precise data available, used 81% in this cost estimate as percent of direct care, housekeeping, and food service. Of the 550,745 total employees, 446,103 are in direct care/ housekeeping/ food service. The percent direct care staff is of total direct care/housekeeping/food service ranged from 64.4 to 67.4. Direct care staff was assumed here to be 65.9% of total direct care/housekeeping/food service.)</p> |

| OSHA Estimate                        | AHCA Estimate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| Turnover and Employee Training Costs |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Not included                         | <p><b>Basic Program</b></p> <ul style="list-style-type: none"> <li> <b>Nursing Facilities</b><br/>           Applied turnover rates for RNs (50.6%), LPNs (51.3%), and CNAs (93.3%) from a survey reported in the <i>1999 Facts and Trends</i> by AHCA to the total employees in each of these categories calculated from the 12/99 OSCAR data. Applied 50% turnover rate to food service and housekeeping, and 25% to remainder of employees. Result was 968,227 new employees annually for industry.         </li> <li> <b>ICF/MRs</b><br/>           Food service workers and housekeeping are 22.3% of total employees in nursing facilities. Applied this percent to total ICF/MR employees to estimate number of FTEs in food service and housekeeping in ICF/MR. This number was added to the number for direct care staff from the analysis of the HCFA ICF/MR data to get 185,080. Turnover rate of 50% was applied to this number and 25% was applied to remaining employees in ICF/MRs. The result was 97,079 new employees in ICF/MRs annually.         </li> <li> <b>Assisted Living/Residential Care</b><br/>           Applied turnover rate of 50% to direct care, housekeeping, and food service workers. A survey reported in <i>The State of Seniors Housing</i>, 1998 by ASHA, PriceWaterhouseCoopers, and NIC, suggests that the percent of direct care, housekeeping, and food service workers, combined, in half of assisted living facilities, ranges from 69.2% to 92.8% of the facilities. Without more precise data available, used 81% in this cost estimate as percent of direct care, housekeeping, and food service. Of the 550,745 total employees, 446,103 are in direct care/housekeeping/food service. A turnover rate of 50% was applied to this number and 25% to the remainder, yielding a total of 249,213 new employees annually.         </li> </ul> <p><b>Full Program</b></p> <p>Applied same assumptions outlined in the preceding section of this table ("Employees and Facilities in 'Problem Jobs' Requiring Analysis Under Full Program") to the number of new hires annually.</p> <p>In nursing facilities, assume of the new hires in nursing/food service/housekeeping, 511,571 are covered by the rule under full programs annually.</p> <p>In ICF/MRs, assume of the relevant new hires, 51,935 are covered by the rule under full programs annually.</p> <p>In assisted living/residential care, assume of the relevant new hires, 130,541 are covered by the proposed rule under full programs annually.</p> |

| <i>OSHA Estimate</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <i>AHCA Estimate</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Injury/Illness</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p><b>"Nursing and personal care facilities"</b> BLS 1996 data, but only used MSD numbers in cost estimates.</p> <ul style="list-style-type: none"> <li><b>"Residential Care"</b><br/>Same as for nursing and personal care facilities.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <ul style="list-style-type: none"> <li><b>Nursing facilities</b><br/>Used rate reported for nursing and personal care facilities by BLS for 1998, which was 14.2 per 100 employee FTE for total cases with occupational injuries and illnesses, yielding estimated 221,884 injuries and illnesses.</li> <li><b>ICF/MRs</b><br/>Same as for nursing facilities, resulting in estimated number of injuries/illnesses of 28,860.</li> <li><b>Assisted Living/Residential Care</b><br/>Used rate of 9.8 per 100 FTEs for 1998 reported by BLS and applied to number of employees used in this estimate, 550,745, yielding 53,973 occupational injuries and illnesses.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Musculoskeletal Disorders (MSDs)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li><b>"Nursing and personal care facilities"</b><br/>Used 1996 data from BLS. The BLS reports detail on type of injury/illness only for cases with days away from work. Estimated MSDs covered by rule in all cases with days from work. The ratio of cases away from work to all cases was 2.9. Multiplied 2.9 times "covered" MSDs in cases with days from work to get estimate of total covered MSDs. Estimated 43,945 covered MSD cases with days away from work and 127,496 in total. This number was converted into a rate of 706 per 10,000 employees. Total injury/illness cases for 1996 from BLS data was 226,300. So estimated covered MSD cases was 56.34% of total injury/illness cases.</li> <li><b>"Residential Care"</b><br/>Same method as above. Estimated 6,624 covered MSD cases with days from work and 19,449 total covered MSD cases. Total injury/illness cases for 1996 from BLS data was 59,900. So estimated covered MSD cases was 32.47% of total injury/illness cases.</li> </ul> | <ul style="list-style-type: none"> <li><b>Nursing facilities</b><br/>Applied rate for all injury/illness reported by BLS for 1998 for nursing and personal care facilities. The rate 14.2 per 100 FTEs applied to the total 1,562,562 FTEs in nursing facilities yielded an estimate of 221,884. Of these, a conservative estimate was that 56.34% were relevant MSDs or 125,012 cases.<br/><br/>Using 3 program job areas in analysis, assumed the 125,012 MSDs were distributed across these three job areas proportional to the percent of employees in nursing services and the remainder to the other two areas (72.17% direct care staff with the remainder divided between food service and housekeeping). Of the 125,012 MSDs, 90,221 are attributed to direct care, 17,396 to food service, and 17,396 to housekeeping. Given the assumption about percent of facilities with programs in place, not all of these MSDs are covered by the rule. Assumed 50% attributed to direct care are covered under the rule and 75% of one other area (75% of 17,396). All facilities experience at least 17,396 covered MSDs. The result is that 75,554 MSDs are covered by the rule and require job hazard analysis.</li> <li><b>ICF/MRs</b><br/>Same method above, resulting in estimate of 28,860 injuries and illnesses and 16,260 relevant MSDs.<br/><br/>Using 3 program job areas in analysis, assumed the 16,260 MSDs were distributed across these three job areas proportional to the percent of employees within each area (75.51% direct care staff with the remainder divided between food service and housekeeping). Of the 16,260 MSDs, 12,278 are attributed to direct care, 1,991 to food service, and 1,991 to housekeeping. Given the assumption about percent of facilities with programs in place, not all of these MSDs are covered by rule. Assumed 50% attributed to direct care are covered, 75% of one other area (75% of 1,991). All facilities experience at least 1,991 covered MSDs. The result is that 9,623 MSDs are covered by the rule and require job hazard analysis.</li> <li><b>Assisted Living</b><br/>Used rate of 9.8 per 100 FTEs for 1998 reported by BLS and applied to number of employees used in this estimate, 550,745, yielding 53,973 occupational injuries and illnesses. Of these, a very conservative estimate was that 32.47% were relevant MSDs or 17,525 cases. 65.9% of MSDs attributed to direct care staff. Using same estimation used for nursing facilities and ICF/MRs, yielded 11,004 MSDs requiring job hazard analysis.</li> </ul> |

**Table 3. AHCA Cost Estimate of Year One Implementation of OSHA Proposed Rule :  
All Components Except Work Restriction Protection\***

| <b>Nursing Facilities</b>                                      |                                                                                                                                                                                                                                                                                                                                               |                      |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| <b>Initial Education and Planning</b>                          |                                                                                                                                                                                                                                                                                                                                               |                      |
| Management Familiarization with Standard                       | (2 hours X \$27.90 hourly wage X 16,937 facilities)                                                                                                                                                                                                                                                                                           | \$945,085            |
| Management Training on Regulation                              | (12 hours X \$27.90 hourly wage X 16,937 facilities) + (\$1,500 travel costs for workshop X 16,937 facilities)                                                                                                                                                                                                                                | \$31,076,008         |
| <b>Basic Program</b>                                           |                                                                                                                                                                                                                                                                                                                                               |                      |
| Work Plan (Management Leadership and Staff Assignments)        | 3 managerial staff per facility (Executive Director, Nursing, Administration). (3 staff X 1 hour X \$27.90 hourly wage X 16,937 facilities)                                                                                                                                                                                                   | \$1,417,627          |
| Managers In-Service (Information/Training)                     | (2 hours preparation X \$27.90 hourly wage X 16,937 facilities) + (1 hour session X 3 managerial staff X \$27.90 hourly wage X 16,937 facilities)                                                                                                                                                                                             | \$2,362,712          |
| Set up Reporting System                                        | (2 hours X \$27.90 hourly wage X 16,937 facilities)                                                                                                                                                                                                                                                                                           | \$945,085            |
| Employee In-Service (Information and Reporting System)         | (2 hours preparation X \$27.90 hourly wage X 16,937 facilities) + (0.5 hour session X \$14.44 hourly wage X 1,562,562 staff) + (0.5 hour session X \$14.44 hourly wage X 968,227 new hires) + (0.5 hour session X \$27.90 hourly wage X 12 sessions per year X 16,937 facilities)                                                             | \$22,052,635         |
| Investigation of Application of Rule to MSD occurrence         | (0.5 hour X \$27.90 hourly wage X 221,884 cases) + (0.5 hour X \$14.44 hourly wage X 221,884 cases) + (\$100 per external review X 55,471 cases)                                                                                                                                                                                              | \$10,244,384         |
| <b>Full Program</b>                                            |                                                                                                                                                                                                                                                                                                                                               |                      |
| Job Hazard Analysis                                            | (1 hour X \$27.90 X 75,554 cases) + (1 hour X \$14.44 X 75,554 MSD cases)                                                                                                                                                                                                                                                                     | \$3,198,956          |
| Evaluate Job Controls                                          | (12 hours X \$14.44 X 8,469) + (12 hours X \$14.44 X 12,703) + (12 hours X \$14.44 X 16,937) + (12 hours X \$27.90 X 8,469) + (12 hours X \$27.90 X 12,703) + (12 hours X \$27.90 X 16,937) + (\$2,000 X 1,270 problem jobs [15% of 8,469]) + (\$2,000 X 1,905 problem jobs [15% of 12,703]) + (\$2,000 X 2,541 problem jobs [15% of 16,937]) | \$30,794,421         |
| Implement Job Controls                                         | (\$30,000 X 8,469) + (\$3,000 X 12,703) + (\$3,000 X 16,937)                                                                                                                                                                                                                                                                                  | \$342,990,000        |
| Managerial Training in Full Program                            | 16 X \$27.90 X 16,937                                                                                                                                                                                                                                                                                                                         | \$7,560,677          |
| Employee In-Service on Full Program and Job Controls           | (2 X \$27.90 X 16,937) + (1 X \$14.44 X 759,876 affected staff) + (1 X \$14.44 X 511,571 affected new staff) + (1 X \$27.90 X 12 months X 16,937)                                                                                                                                                                                             | \$24,975,287         |
| Administer MSD Management                                      | (1 X \$27.90 X 125,012)                                                                                                                                                                                                                                                                                                                       | \$3,487,835          |
| Recording-keeping                                              | (0.25 X \$27.90 X 125,012)                                                                                                                                                                                                                                                                                                                    | \$871,959            |
| Program Evaluation                                             | (1 hour X \$27.90 X 16,937) + (20 hours X \$14.44 X 16,937)                                                                                                                                                                                                                                                                                   | \$5,363,948          |
| <b>Subtotal for Nursing Facilities (WRP Rule Not Included)</b> |                                                                                                                                                                                                                                                                                                                                               | <b>\$488,286,617</b> |

| <b>Intermediate Care Facilities</b>                           |                                                                                                                                                                                                                                                                                                                                     |                      |
|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| <b>Initial Education and Planning</b>                         |                                                                                                                                                                                                                                                                                                                                     |                      |
| Management Familiarization with Standard                      | (2 hours X \$27.90 hourly wage X 7,258 facilities)                                                                                                                                                                                                                                                                                  | \$404,996            |
| Management Training on Regulation                             | (12 hours X \$27.90 hourly wage X 7,258 facilities) + (\$1,500 travel costs for workshop X 7,258 facilities)                                                                                                                                                                                                                        | \$13,316,978         |
| <b>Basic Program</b>                                          |                                                                                                                                                                                                                                                                                                                                     |                      |
| Work Plan (Management Leadership and Staff Assignments)       | 3 managerial staff per facility (Executive Director, Nursing, Administration). (3 staff X 1 hour X \$27.90 hourly wage X 7,258 facilities)                                                                                                                                                                                          | \$607,495            |
| Managers In-Service (Information/Training)                    | (2 hours preparation X \$27.90 hourly wage X 7,258 facilities) + (1 hour session X 3 managerial staff X \$27.90 hourly wage X 7,258 facilities)                                                                                                                                                                                     | \$1,012,491          |
| Set up Reporting System                                       | (2 hours X \$27.90 hourly wage X 7,258 facilities)                                                                                                                                                                                                                                                                                  | \$404,996            |
| Employee In-Service (Information and Reporting System)        | (2 hours preparation X \$27.90 hourly wage X 7,258 facilities) + (0.5 hour session X \$14.44 hourly wage X 203,237 staff) + (0.5 hour session X \$14.44 hourly wage X 97,079 new hires) + (0.5 hour session X \$27.90 hourly wage X 12 sessions per year X 7,258 facilities)                                                        | \$3,788,267          |
| Investigation of Application of Rule to MSD occurrence        | (0.5 hour X \$27.90 hourly wage X 28,860 cases) + (0.5 hour X \$14.44 hourly wage X 28,860 cases) + (\$100 per external review X 7,215 cases)                                                                                                                                                                                       | \$1,332,466          |
| <b>Full Program</b>                                           |                                                                                                                                                                                                                                                                                                                                     |                      |
| Job Hazard Analysis                                           | (1 hour X \$27.90 X 9,623 cases) + (1 hour X \$14.44 X 9,623 MSD cases)                                                                                                                                                                                                                                                             | \$407,438            |
| Evaluate Job Controls                                         | (12 hours X \$14.44 X 3,629) + (12 hours X \$14.44 X 5,444) + (12 hours X \$14.44 X 7,258) + (12 hours X \$27.90 X 3,629) + (12 hours X \$27.90 X 5,444) + (12 hours X \$27.90 X 7,258) + (\$2,000 X 544 problem jobs [15% of 3,629]) + (\$2,000 X 817 problem jobs [15% of 5,444]) + (\$2,000 X 1,089 problem jobs [15% of 7,258]) | \$13,197,454         |
| Implement Job Controls                                        | (\$20,000 X 3,629) + (\$3,000 X 5,444) + (\$3,000 X 7,258)                                                                                                                                                                                                                                                                          | \$110,686,000        |
| Managerial Training in Full Program                           | 16 X \$27.90 X 7,258                                                                                                                                                                                                                                                                                                                | \$3,239,971          |
| Employee In-Service on Full Program and Job Controls          | (2 X \$27.90 X 7,258) + (1 X \$14.44 X 103,870 affected staff) + (1 X \$14.44 X 51,935 affected new staff) + (1 X \$27.90 X 12 months X 7,258)                                                                                                                                                                                      | \$5,084,799          |
| Administer MSD Management                                     | (1 X \$27.90 X 16,260)                                                                                                                                                                                                                                                                                                              | \$453,654            |
| Recording-keeping                                             | (0.25 X \$27.90 X 16,260)                                                                                                                                                                                                                                                                                                           | \$113,414            |
| Program Evaluation                                            | (1 hour X \$27.90 X 7,258) + (20 hours X \$14.44 X 7,258)                                                                                                                                                                                                                                                                           | \$2,298,609          |
| <b>Subtotal for Intermediate Care (WRP Rule Not Included)</b> |                                                                                                                                                                                                                                                                                                                                     | <b>\$156,349,029</b> |

| <b>Assisted Living</b>                                      |                                                                                                                                                                                                                                                                                                                                               |                      |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| <b>Initial Education and Planning</b>                       |                                                                                                                                                                                                                                                                                                                                               |                      |
| Management Familiarization with Standard                    | (2 hours X \$26.14 hourly wage X 16,077 facilities)                                                                                                                                                                                                                                                                                           | \$840,506            |
| Management Training on Regulation                           | (12 hours X \$26.14 hourly wage X 16,077 facilities) + (\$1,500 travel costs for workshop X 16,077 facilities)                                                                                                                                                                                                                                | \$29,158,533         |
| <b>Basic Program</b>                                        |                                                                                                                                                                                                                                                                                                                                               |                      |
| Work Plan (Management Leadership and Staff Assignments)     | 3 managerial staff per facility (Executive Director, Direct Care, Administration). (3 staff X 1 hour X \$26.14 hourly wage X 16,077 facilities)                                                                                                                                                                                               | \$1,260,756          |
| Managers In-Service (Information/Training)                  | (2 hours preparation X \$26.14 hourly wage X 16,077 facilities) + (1 hour session X 3 managerial staff X \$26.14 hourly wage X 16,077 facilities)                                                                                                                                                                                             | \$2,101,264          |
| Set up Reporting System                                     | (2 hours X \$26.14 hourly wage X 16,077 facilities)                                                                                                                                                                                                                                                                                           | \$840,506            |
| Employee In-Service (Information and Reporting System)      | (2 hours preparation X \$26.14 hourly wage X 16,077 facilities) + (0.5 hour session X \$13.69 hourly wage X 203,237 staff) + (0.5 hour session X \$13.69 hourly wage X 96,302 new hires) + (0.5 hour session X \$26.14 hourly wage X 12 sessions per year X 16,077 facilities)                                                                | \$8,837,735          |
| Investigation of Application of Rule to MSD occurrence      | (0.5 hour X \$26.14 hourly wage X 53,973 cases) + (0.5 hour X \$13.69 hourly wage X 53,973 cases) + (\$100 per external review X 13,493 cases)                                                                                                                                                                                                | \$2,424,197          |
| <b>Full Program</b>                                         |                                                                                                                                                                                                                                                                                                                                               |                      |
| Job Hazard Analysis                                         | (1 hour X \$26.14 X 11,004 cases) + (1 hour X \$13.69 X 11,004 MSD cases)                                                                                                                                                                                                                                                                     | \$438,289            |
| Evaluate Job Controls                                       | (12 hours X \$13.69 X 8,039) + (12 hours X \$13.69 X 12,058) + (12 hours X \$13.69 X 16,077) + (12 hours X \$26.14 X 8,039) + (12 hours X \$26.14 X 12,058) + (12 hours X \$26.14 X 16,077) + (\$2,000 X 1,206 problem jobs [15% of 8,039]) + (\$2,000 X 1,809 problem jobs [15% of 12,058]) + (\$2,000 X 2,412 problem jobs [15% of 16,077]) | \$28,143,725         |
| Implement Job Controls                                      | (\$10,000 X 8,039) + (\$3,000 X 12,058) + (\$3,000 X 16,077)                                                                                                                                                                                                                                                                                  | \$164,795,000        |
| Managerial Training in Full Program                         | 16 X \$26.14 X 16,077                                                                                                                                                                                                                                                                                                                         | \$6,724,044          |
| Employee In-Service on Full Program and Job Controls        | (2 X \$26.14 X 16,077) + (1 X \$13.69 X 261,982 affected staff) + (1 X \$13.69 X 130,541 affected new staff) + (1 X \$26.14 X 12 months X 16,077)                                                                                                                                                                                             | \$11,257,179         |
| Administer MSD Management                                   | (1 X \$26.14 X 17,525)                                                                                                                                                                                                                                                                                                                        | \$458,104            |
| Recording-keeping                                           | (0.25 X \$26.14 X 17,525)                                                                                                                                                                                                                                                                                                                     | \$114,526            |
| Program Evaluation                                          | (1 hour X \$26.14 X 16,077) + (20 hours X \$13.69 X 16,077)                                                                                                                                                                                                                                                                                   | \$4,822,135          |
| <b>Subtotal for Assisted Living (WRP Rule Not Included)</b> |                                                                                                                                                                                                                                                                                                                                               | <b>\$262,216,501</b> |
| <b>Industry Total (WRP Rule Not Included)</b>               |                                                                                                                                                                                                                                                                                                                                               | <b>\$906,852,147</b> |



**Table 4. Comparison of OSHA and AHCA Assumptions  
for Cost Estimates of the Work Restriction Protection Provision**

| <b>OSHA Estimate</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>AHCA Estimate</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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| <p>OSHA used data on costs of worker compensation claims to derive estimates of the Work Restriction Protection program (WRP). The exact number(s) used by OSHA is, however, not clear. Different numbers are presented throughout OSHA documents related to the WRP estimate, as highlighted below.</p> <p>In Chapter V of the Preliminary Economic and Regulatory Flexibility Analysis, OSHA states that it began with an estimated average value of claims as \$8,000 per MSD. Also estimated that 58% of claim payment is indemnity and 42% medical costs. WRP is to cover temporary disability cases only and not permanent disability. Estimate was that 38.5% of all indemnity payments are for temporary disability. Thus, as OSHA states, "the total indemnity cost of cases potentially dealt with by this provision is \$1,783 (\$8,000 x .385 x .58)." This figure was reduced by 30%, to \$1,259, to account for indemnity costs for cases beyond 6 months. Finally, worker benefits not covered by worker compensation were added. It was estimated that benefits was 27% of wages covered, not 39% because "legally required benefits" such as Social Security and workers' compensation would not be required. The addition brought the cost per case to \$1,844.</p> <p>Finally, OSHA reported research that indicates that 69% of recordable injuries are covered by workers' compensation. Where workers' compensation is available OSHA assumes cost to employer of WRP is reduced. OSHA also estimated cost of cases less than the workers' compensation waiting period. As OSHA concluded: "Taking account for all of these factors, the average weighted cost of a WRP case is estimated to be \$877 per case."</p> <p>However, in Table V-1 of Chapter V, "Assumptions Used to Develop Costs for Provisions of the Proposed Rule," in the Preliminary Economic and Regulatory Flexibility Analysis, OSHA states that the cost per MSD for the WRP was \$1,293. And in the <i>Federal Register</i> (Vol. 64, No. 225, November 3, 1999) at page 66038 in Table VIII-7, OSHA states its assumption that the "cost to provide work restriction protection" is "\$946 per MSD."</p> | <p>AHCA estimated the cost of the WRP provision by grounding its assumptions in the actual process of the WRP: payment by the employer for days from work.</p> <p>Crucial to estimating the actual cost incurred by employers is the average days from work for MSDs. BLS does not report the average for recent years, only the median and the number of cases within different ranges of days, e.g., 3-5 days or 31+ days. However, for 1990 and 1991, BLS did report both the rate per 100 employees of cases involving days away from work and the rate of days away from work. Dividing the rate of days by the rate of cases gives the average days away from work for cases with days away from work. For nursing and personal care facilities the mean for 1990 was 19.5 and 20.1 for 1991. For residential care, the means were 19.2 and 18.0. For nursing facilities and ICF/MRs, used 19.5 means days from work and 18.0 for assisted living.</p> <p>The wage used was the hourly rate from BLS noted in Table 2 times 1.27 using the OSHA assumption. However, it is not clear an employer under the WRP would not have to pay Social Security and other "legally required" benefits. Under the WRP without change in laws otherwise, the employee being paid while unable to work may still be considered under the employment of the employer. So using 1.27 may understate the costs incurred. Using 1.27, the hourly cost for nursing facilities and ICF/MRs was \$13.20 and \$12.51 for assisted living.</p> <p>Two WRP costs were derived: one without potential of recouping costs from workers' compensation and one assuming some recouping of costs. How the WRP would affect present workers' compensation operations and coverage is unknown. How and when recouping costs would occur is also unknown. If recouped, it would likely be after employer costs are incurred. The costs of lost opportunity associated with employer payments under WRP should also be considered but are not included here.</p> <p><b>Costs without workers' compensation.</b> The number of MSDs (Table 2) was multiplied by the hourly cost, the average days lost converted into hours (8 hours per day), and 0.9 to get the costs without recouping expenditures from workers' compensation. (Without evidence otherwise, used total number of MSDs because the effect of WRP on occurrence of cases with days away from work is unknown.)</p> <p><b>Costs assuming recouping monies from workers' compensation.</b> Used OSHA assumption that 70% of WRP cases have workers' compensation. The weighted number of waiting days was subtracted from the average days away from work to calculate days for which workers' compensation monies might be available. The weighted average was obtained by multiplying the waiting period in each state by the number of employees in each state then summing the result and dividing by the number of total employees nationwide (the MSD rate was assumed constant). This weighting was possible with data for nursing facilities and ICF/MRs. The weighted mean waiting period was 5.49 days for cases among nursing facilities and 5.64 for ICF/MRs. A period of 5.5 days was used for assisted living. The waiting period was subtracted from the mean days from work converted into total hours which was multiplied by the number of cases (70% of MSD cases), the hourly cost, and 0.666 (the % of salary under workers' compensation) to get potential amount recouped from workers' compensation. Subtracting this amount from the total initial payment under WRP by the employer gave the final cost to the employer under WRP assuming recouping monies from workers' compensation would be possible and ignoring the cost of lost opportunity with the monies expended by the employer prior to recouping monies.</p> |

Table 5. Employer Costs for the Year One of Work Restriction Protection

| Long Term Care Provider | Employer Payments to Employees for Days Away From Work Under the Work Restriction Provision | Employer Costs Assuming Monies Recouped from Workers' Compensation |
|-------------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| Nursing Facilities      | \$231,682,239                                                                               | \$145,458,664                                                      |
| ICF/MRs                 | 30,134,333                                                                                  | 19,039,521                                                         |
| Assisted Living         | 28,413,212                                                                                  | 18,192,349                                                         |
| <b>Industry Total</b>   | <b>\$290,229,784</b>                                                                        | <b>\$182,690,534</b>                                               |

Table 6. Comparison of OSHA and AHCA Assumptions  
Use for Year-by-Year Cost Estimates of the Proposed Rule.

| OSHA Year-by-Year Estimate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | AHCA Year-by-Year Estimate |    |        |     |        |     |        |     |        |     |        |     |        |     |        |     |         |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|---------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>OSHA estimates, aside from year-one estimates of managerial "familiarization" with the rule and initial planning, are based upon costs per affected employee. OSHA estimates a reduction in the MSD rate each year as a benefit of the proposed rule and applies this projected reduction to the calculation of year to year costs. For example, since OSHA assumes, by its method, that job control costs are variable costs defined by volume of affected employees, job control costs are reduced each year because the rate of MSD occurrence is reduced (i.e., there are less new MSDs requiring implementation of job controls).</p> <p>OSHA's method apparently does not include a fixed cost for employee training year to year for new employees in problem jobs.</p> <p>The following is the percent of reduction in MSD cases OSHA assumes for each year over the ten year period:</p> <p>Projected Estimate of Reduction in MSD Cases</p> <table> <tr><td>Year 2</td><td>7%</td></tr> <tr><td>Year 3</td><td>11%</td></tr> <tr><td>Year 4</td><td>15%</td></tr> <tr><td>Year 5</td><td>17%</td></tr> <tr><td>Year 6</td><td>20%</td></tr> <tr><td>Year 7</td><td>22%</td></tr> <tr><td>Year 8</td><td>23%</td></tr> <tr><td>Year 9</td><td>24%</td></tr> <tr><td>Year 10</td><td>26%</td></tr> </table> | Year 2                     | 7% | Year 3 | 11% | Year 4 | 15% | Year 5 | 17% | Year 6 | 20% | Year 7 | 22% | Year 8 | 23% | Year 9 | 24% | Year 10 | 26% | <p>All cost estimates, as were OSHA's, were calculated using the dollar value in Year One. Inflation costs were not included.</p> <ul style="list-style-type: none"> <li> <b>Managerial Training</b><br/>           AHCA assumes that managerial training occurs every year for new managerial staff. Assuming an annual turnover among managerial staff of 25%, the year-one costs for relevant categories of cost were multiplied times 0.25. Categories of costs where a factor of 0.25 was multiplied included:           <ul style="list-style-type: none"> <li>Management familiarization with standard</li> <li>Management training on regulation</li> <li>Managers in-service on basic program</li> <li>Managerial training in full program</li> </ul> </li> <li> <b>Review Work Plan for Basic Program</b><br/>           AHCA assumes that reviewing the work plan is an annual function of any organization and remains the same year to year.         </li> <li> <b>Employee training in basic program</b><br/>           AHCA includes the training cost for all new employees annually. The number of new employees annually calculated for the year-one estimate is applied to each subsequent year. The base year number for all employees at the time of the rules implementation is not included. Only this turnover factor and the time of managerial staff for the training sessions are included.         </li> <li> <b>Employee training in the full program</b><br/>           AHCA includes the estimated number of new employees annually in problem jobs that was calculated in the year-one estimate for estimating training costs in subsequent years. Only this turnover factor and the time of managerial staff for the training sessions are included.         </li> <li> <b>Injury/Illness/MSD cases</b><br/>           AHCA used OSHA's projected reduction in MSD cases year to year to adjust the relevant year-one estimates. For example, relevant costs in year one were multiplied by 0.93 to estimate the year-two costs, by 0.89 for year three, and so on. Categories of costs estimated in this manner were:           <ul style="list-style-type: none"> <li>Investigation of application of rule to MSD occurrence</li> <li>Job hazard analysis</li> <li>Evaluate job controls</li> </ul> </li> </ul> |
| Year 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 7%                         |    |        |     |        |     |        |     |        |     |        |     |        |     |        |     |         |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Year 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 11%                        |    |        |     |        |     |        |     |        |     |        |     |        |     |        |     |         |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Year 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 15%                        |    |        |     |        |     |        |     |        |     |        |     |        |     |        |     |         |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Year 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 17%                        |    |        |     |        |     |        |     |        |     |        |     |        |     |        |     |         |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Year 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 20%                        |    |        |     |        |     |        |     |        |     |        |     |        |     |        |     |         |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Year 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 22%                        |    |        |     |        |     |        |     |        |     |        |     |        |     |        |     |         |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Year 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 23%                        |    |        |     |        |     |        |     |        |     |        |     |        |     |        |     |         |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Year 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 24%                        |    |        |     |        |     |        |     |        |     |        |     |        |     |        |     |         |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Year 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 26%                        |    |        |     |        |     |        |     |        |     |        |     |        |     |        |     |         |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

| OSHA Year-by-Year Estimate | AHCA Year-by-Year Estimate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                            | <ul style="list-style-type: none"> <li>• Administer MSD management</li> <li>• Record-keeping</li> <li>• Costs of the Work Restriction Protection</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                            | <ul style="list-style-type: none"> <li>• Implement Job Controls<br/>           AHCA estimates job controls as institutional fixed costs. As such, assuming all job controls are implemented in year one, the costs in other years are for maintenance/repairs of job control devices, the introduction of new job controls, as well as depreciation that entails an increased rate of replacement costs over the ten-year period. The year one costs of job controls, which was assumed an underestimation, was multiplied by a 0.20 (20%) factor for annual maintenance/repairs and the introduction of new controls. It was also multiplied by the replacement costs assumed for the respective year. The maintenance/repair costs and new control costs were added to the respective year's replacement costs. It was assumed that by year ten, replacement costs (the total of the percents across the years) would be about 100% of original costs. The percent of the base year job control costs (a 1.5 increase each year starting with 2% in Year Three) used to estimate replacement costs were:<br/><br/>           Percent of Base Year Costs for Replacement Costs<br/>           Year Two 0%<br/>           Year Three 2%<br/>           Year Four 3%<br/>           Year Five 4.5%<br/>           Year Six 6.75%<br/>           Year Seven 10.125%<br/>           Year Eight 15.875%<br/>           Year Nine 23.8125%<br/>           Year Ten 35.7188%         </li> </ul> |
|                            | <ul style="list-style-type: none"> <li>• Program evaluation<br/>           Program evaluation is a constant function annually and the cost remains the same.         </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

**Table 7. Comparison of OSHA and AHCA Year-by-Year Cost Estimates During the First Ten Years of Proposed Ergonomic Standard.**

| Year of Rule | OSHA Estimate for Nursing/Personal Care and Residential Care* | AHCA Estimate for Nursing Facilities, ICF/MRs, and Assisted Living |                        | Ratio of AHCA Estimate to OSHA Estimate |                |
|--------------|---------------------------------------------------------------|--------------------------------------------------------------------|------------------------|-----------------------------------------|----------------|
|              |                                                               | Low-End of Estimate                                                | High-End of Estimate   |                                         |                |
| 1            | \$526,346,359                                                 | \$1,089,542,680                                                    | \$1,197,081,932        | 2.07                                    | to 2.27        |
| 2            | \$452,052,562                                                 | \$467,549,199                                                      | \$567,560,703          | 1.03                                    | to 1.26        |
| 3            | \$378,831,366                                                 | \$468,783,765                                                      | \$564,493,698          | 1.24                                    | to 1.49        |
| 4            | \$346,873,362                                                 | \$463,833,621                                                      | \$555,241,985          | 1.34                                    | to 1.60        |
| 5            | \$306,506,434                                                 | \$467,543,259                                                      | \$556,800,837          | 1.53                                    | to 1.82        |
| 6            | \$273,365,863                                                 | \$473,107,716                                                      | \$559,139,117          | 1.73                                    | to 2.05        |
| 7            | \$245,947,058                                                 | \$488,413,685                                                      | \$572,294,301          | 1.99                                    | to 2.33        |
| 8            | \$223,080,047                                                 | \$521,192,054                                                      | \$603,997,277          | 2.34                                    | to 2.71        |
| 9            | \$203,852,363                                                 | \$567,499,475                                                      | \$649,229,306          | 2.78                                    | to 3.18        |
| 10           | \$187,549,389                                                 | \$635,569,006                                                      | \$715,148,052          | 3.39                                    | to 3.81        |
| <b>Total</b> | <b>\$3,144,404,801</b>                                        | <b>\$5,643,034,459</b>                                             | <b>\$6,540,987,207</b> | <b>1.79</b>                             | <b>to 2.08</b> |

\*OSHA estimate is 5.73% of the total year-by-year estimates reported by OSHA for all industries. OSHA only reported first year estimates by industry groups and nursing/personal care and residential care year-one estimates where 5.73% of total. Since OSHA's estimate for other years is based upon an assumed rate of MSD reduction year by year, and all variable costs are based upon a cost per MSD, it is reasonable to assume that the percent each year of the total accounted for by nursing/personal care and residential care would be constant.



NATIONAL SMALL BUSINESS UNITED

*SIXTIETH ANNIVERSARY*  
*1937-1997*

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## **Testimony of Edward Saxon**

**President and C.E.O., Conco Systems, Inc.  
Verona, Pennsylvania  
on behalf of  
National Small Business United**

**Before the House Subcommittee on  
Regulatory Reform and Paperwork Reduction**

**April 13, 2000**

Madam Chair and Members of the Subcommittee on Regulatory Affairs and Paperwork Reduction, my name is Edward Saxon, President and Chief Executive Officer of Conco Systems, Incorporated of Verona, Pennsylvania, a family-owned business. Conco Systems employs approximately 80 people in our efforts to provide condenser-related tools and services to the power generating industry. I am also here representing National Small Business United (NSBU), the nation's oldest small business advocacy organization and SMC Business Councils of Pennsylvania (SMC). I respectfully submit this testimony regarding the impact of OSHA's Ergonomics Rulemaking on behalf of NSBU's 65,000 members and SMC's 5,000 plus members.

The promulgation of a mandatory workplace ergonomics standard is a substantial concern to all small businesses. Small businesses will be significantly and adversely affected by this standard as it is currently written. As a small business owner, worker and workplace safety and health is a vital concern to me, I do not feel that the ergonomics proposal as it appears now is the best means of addressing this problem. Thus, I am -- as is NSBU and SMC -- strenuously opposed to the promulgation of a final ergonomics standard in its current form. I urge OSHA to take a step back, gather all the relevant information, comments and research, and to reevaluate the ergonomics proposal.

Barring that, I ask that Congress intervene to protect small businesses from an improperly promulgated ergonomics standard, such as the one being considered here today, that will have a horrific impact on small business, including mine. I offer the following critiques and suggestions on the Ergonomics standard.

#### TIME FRAME AND SCHEDULE REQUIREMENTS

As noted in the written comments submitted by NSBU to OSHA, I would like to register my displeasure with the manner in which OSHA has continued to advance this regulatory proposal. It appears that OSHA deliberately chose to limit the amount of meaningful public participation and input by originally making the comment period extremely short. Isn't a standard so vast in nature, and probably the most significant and burdensome regulatory initiative ever proposed by the Agency, worth of an appropriate amount of time for review and comments?

#### SCOPE OF THE PROPOSED STANDARD

The proposed standard's automatic application to all general industry jobs involving manufacturing or manual handling alone creates quite a broad reach. But when you add to that the inclusion of any job in which an employee reports a musculoskeletal disorder (MSD) or experiences persistent MSD symptoms, then the threshold for being included is extraordinarily low and unjustifiable. Based upon the criteria described in section 1910.901 and 1910.906, NSBU believes, and I agree that OSHA has drafted an ergonomics standard that is too expansive to properly address the initiatives and ultimate goal of the proposal -- the reduction and prevention of MSDs.

OSHA contends that the proposed standard will avoid a "one size fits all" approach, yet we've seen no evidence to conclude that this is the case. Virtually every

general industry workplace, regardless of size or injury history, would fall under coverage as described in sections 1910.901 and 1910.906. Rather than focusing on those industries that have demonstrated a clear track record of ergonomically related problems, or those industries that are deemed to have "high risk" potential, OSHA has chosen to blanket the entire business community regardless of industry, size or history. Ultimately, it appears that no business will be able to escape the scope of this standard.

Clearly, a "one size fits all" approach to ergonomics will not work. Not all manufacturing and manual handling businesses are alike and in many cases, based on size and type of business, the likelihood of a worker experiencing an MSD or repetitive stress injury is remote. Despite no credible evidence that MSDs are a widespread problem caused by workplace situations, OSHA continues to press their heavy-handed standard on all businesses regardless of size. This is completely inappropriate and unfair for small businesses, the majority of which have rare occurrences of MSDs. Why should the small business community be placed under an umbrella where "high risk" industries are also included? It would be of greater benefit if the Agency would focus its efforts on industries that show a high occurrence of MSDs and repetitive stress injuries. This standard must be industry specific to make it fair for small businesses.

This being said, it is not unreasonable to request that OSHA exempt all small businesses from the basic program requirements. The simple fact is that the ergonomics standard, if implemented in its current form, will have a much greater negative impact on the small business community than larger industries. Labor statistical data suggests that MSD incidence rates are too low to justify implementation of the basic program for businesses with fewer than 100 employees.

#### **LACK OF SCIENTIFIC EVIDENCE & CONSENSUS ON MSDS**

One of the major deficiencies in the literature surrounding what OSHA defines as MSDs, repetitive stress injuries and ergonomically related problems is that there is no demonstrable relationship between workplace activities and illness and injuries. There is no clear statement, consensus or evidence that describes which activities really pose a threat of employee injury, and at what levels of "exposure" is that risk present. Even the National Institute on Occupational Safety and Health (NIOSH) stated in a report entitled Musculoskeletal Disorders and Workplace Factors that "the document represents a first step in assessing the work relatedness of MSDs. The second step would involve qualitative risk estimates that are beyond the purpose and scope of this document." (National Institute on Occupational Safety and Health (NIOSH), Musculoskeletal Disorders and Workplace Factors. -- U.S. Department of Health and Human Services, 1997) It is disingenuous and unacceptable to bring forth such a huge standard without clear, convincing, and indisputable evidence that describes exactly what causes these injuries and how to identify a hazardous exposure.

While OSHA and other proponents of an ergonomics standard insist that the current wisdom and information and evidence gathered to date is sufficient so as to justify this broad regulatory scheme, unbiased and reasoned people would disagree with

this short-sighted and narrow assessment. There is no convincing proof or sufficient data to support the need for this heavy-handed regulation.

One essential question that OSHA continually sidesteps is how to deal with the existence of pre-existing conditions, or symptoms that have their origin in factors unrelated to work or work exposures. What impact does work have on these pre-existing conditions? This is particularly a concern for me, as I have personal experience with this problem.

OSHA has chosen not to address these factors because they fall outside the scope of what can be analyzed and defined. OSHA, in its standard, has failed to give any weight to the relationship between these factors and the presence of pre-existing MSD symptoms or disorders. The net result could be employers spending exorbitant amounts of money and time trying to eliminate job related MSD or repetitive stress injuries that have no relation to work. Many of the risk factors addressed in the standard (force, repetition, vibration, awkwardness, posture, etc) are encountered routinely on a daily basis outside the work place, when participating in non work activities. OSHA must delay their standard until the National Academy of Sciences concludes their study on ergonomics. (which was mandated by the U.S. House of Representatives.) Then, working in conjunction with the business community, the information can be analyzed, disseminated and used in a way that benefits both employers, and employees and balances the cost and benefits of implementation.

#### **REAL LIFE EVIDENCE THAT THESE PROBLEMS EXIST**

In October of 1990, Conco Systems, Inc. hired a part-time employee as a general laborer and pump mechanic. In November of 1991, this employee began to complain of pain in his right wrist. This pain was originally diagnosed as possible slight Carpal Tunnel Syndrome (CTS). As surgery was a possibility, this employee went for further testing and it was found that CTS was an incorrect diagnosis and the patient was sent to a neurologist for further examination. At that same time, November, 1991, this person's workman's compensation claim was denied as a result of the diagnosis that the problem was not CTS and could not be traced to any work related incident. The patient/employee continued to pursue his claim even after being laid off as a result of a reduced workload. Some years later, in July of 1994, this former employee's workman's compensation claim was approved granting him medical expenses and back wage benefits to February, 1992, plus penalties and interest even though he had left the state and removed himself from the workforce. On January 11, 1999, the case was closed on appeal reversing the July 1994 position claiming that this employee was responsible for restitution which, of course never happened. This former employee made it perfectly clear that he had no intention of returning to work at either Conco Systems or anywhere else.

Not only are these injuries hard to diagnosis and trace to any specific incident, work-related or otherwise, they are often impossible to evaluate in an effective manner. To place the burden on the small business employer to resolve problems that medical professionals can not determine is not fair. If the current proposed ergonomics regulation

were in place when this incident occurred, this single incident would have required Conco Systems to investigate this pump mechanics job and find ways for him to perform the functions without further aggravating his injuries, at great expense and time. Further, it would have potentially opened the door to other claims by Conco Systems employees. And ultimately, this "claim" was shown to be unrelated to the work place and the workman's compensation award reversed by the courts.

#### **UNREASONABLE TRIGGER MECHANISM FOR COVERAGE**

Another area of concern in OSHA's proposed ergonomics standard is the single-MSD-instance trigger mechanism. The occurrence of a single reported MSD would force small businesses to address with substantial and costly compliance responsibilities along with ongoing "improvement" measures. Even in circumstances in which a covered MSD has not occurred, expanded responsibilities can be triggered by complaints of persistent MSD symptoms (from one employee over seven consecutive days). It is clear that the reporting of one single reported MSD is too low of a threshold to require the implementation of an expensive ergonomics program of dubious value. If this rulemaking were in effect 10 years ago at Conco Systems would have been activated into this program, despite the fact that this injury was proven to be non-work related.

The broad programmatic obligations of the standard should not be triggered by a single occurrence in one aspect of a businesses operation. External factors, including pre-existing or non-work related physical conditions may be the reason an employee feels pain while at work. This does not mean that another employee, who performs the same physical tasks, is in danger or that the job is "hazardous." The one-instance threshold makes the full program an almost certainty for virtually every business owner. Given the absence of scientific consensus on the causes and work relationship of asserted workplace-based MSDs, this threshold is absurdly low and unreasonable!

#### **QUICK FIX ALTERNATIVE**

The Quick Fix alternative in the ergonomics standard is designed to serve as an alternative to the full program obligations brought forth by the unreasonably low trigger mechanism. While I recognize OSHA's attempt to address this concern in the revised November 1999 proposal, I do not feel that it is an appropriate solution. If an employer, such as myself, is able to devise an improvement that effectively minimizes or eliminates the problems that OSHA aims to regulate, those efforts could be wasted if another MSD is reported within a three-year period. The greater problem is that the trigger for a revived full program is not another MSD of the same sort, reported by the same person, but merely a second MSD in another, unrelated position at the business where the "risk factor" is allegedly present. The mere fact of a second MSD reporting relating to the same hazard, occurring in the same job would disqualify employers from further Quick Fix efforts and immediately places them into the jeopardy of a full program.

This "opportunity" for the employer to respond promptly and effectively to remedy the alleged problems is unreasonably narrow and extremely limited. The time frame to evaluate the results of the Quick Fix effort is too short to be truly conclusive. Thirty days



is not enough time to determine whether or not the efforts of the employer have eliminated the alleged hazard. If not, then owners have another three years of "probation" where their business must keep a clean record.

#### **GRANDFATHER CLAUSE**

OSHA is now facing the realization that many small businesses and other employers are taking steps independently to implement their own "ergonomics program" to help control MSDs. Many of these efforts have been successful. In an effort to show that they are not utilizing a "one size fits all" approach, OSHA has highlighted some employer created program success stories. This regulatory section, 1910.908, states that a business with an ergonomics program already in place, "may continue that program, even if it differs from the one this standard requires, provided that you show that..." the program meets certain OSHA requirements.

This grandfather provision, when further analyzed, reveals that any independent ergonomics program that is self imposed must really satisfy every major element of OSHA's proposed standard. Thus, there are very few current programs that would meet the basic requirements, including the MSD management component. Thus, those businesses that have implemented their own program, regardless of its effectiveness, will essentially be forced to reconfigure their programs as to nearly match OSHA's mandatory components. Instead of reviewing and analyzing the benefits of the self-imposed program, the Agency appears determined to have every employer's efforts match their desired program. Once again, the "one size fits all" approach rears its ugly head. Furthermore, what OSHA proposes as mandatory components are scientifically unproven and untested.

#### **MSD MANAGEMENT (MISMANAGEMENT)**

The MSD management portion of OSHA's ergonomic proposal is unbelievably unfair and abusive to small business. According to the proposal, employers must make MSD management available promptly whenever a covered MSD occurs. At no cost to the employee, employers must provide workers with temporary "work restrictions" and work "restriction protections" (Federal Register, 1910.929 November 23, 1999). Under MSD management, employers also have other obligations such as providing access to a health care professional (HCP). If an HCP makes a determination that a worker suffered an MSD, the employer will be responsible for implementing work restriction protections, which includes maintaining 100 percent after tax earnings for employees who claim to have an MSD. For employees who are removed from the workplace, the employer would be responsible for maintaining 90 percent of the employee's after tax earnings. OSHA contends that the extensive MSD management provisions are necessary in order for the regulation to be effective. They contend that workers will not properly report MSD related injuries for fear of punishment or retribution from their employers.

In fact, the MSD management portion creates incentives for the employee to mischaracterize conditions as MSDs. Any possible pain, strain or sprain that occurred in

or out of work could be classified as an MSD so an employee could be eligible for compensation and other protections. The standard invites such actions and the inherently subjective nature of the conditions will make this assertion difficult to resist. Employees who report MSD symptoms and whose jobs contain identified "risk factors" thereby instantly qualify for an employer's mandatory compliance. This means that those employees will be granted with specified work limitations, obtain a right to restricted or "light" duty with no employer right to "challenge" that assertion and the economic advantages of wage protection. Moreover, the standard would require maintenance of "rights and benefits" as though the employee had not been placed on temporary work restrictions. This means that they may secure payment protections for overtime and other premiums they could have earned during the period of absence from their normal job or work schedule.

Employers know better than other parties that such concerns do not apply to all employees. Certainly, in many instances, long-standing company employees, an organization's hardest-working, highest-performing and most capable employees never incur workplace injuries, and know how to work with high productivity without incurring strains, sprains, pains and other disorders. Many employers' report that a very small percentage of employees account for a disproportionately large percentage of injuries and compensation costs. Nonetheless, there is a percentage of individuals in the workforce that approaches injury and compensation questions from an entirely different perspective. Consider the example from Conco Systems. It is clear that the mechanisms outlined in the proposed standard provides a path to recovery that is too attractive and enticing, with inadequate protections for employers who will pay their costs, both out-of-pocket and in terms of operational constraints, and should be reconsidered in many key respects. The conditions for abuse are ripe.

#### VAGUENESS AND AMBIGUITY OF THE STANDARD

Another significant problem that I foresee with the standard is its vagueness. As the standard is currently written, key terms and obligations are so vague that many regulated businesses will not be able to take the necessary measures or even know the correct steps to take to be in compliance. In many cases, the definitions held within the standard are completely ambiguous and circular in nature. Additionally, the guidelines and subjectivity of enforcement is extremely cloudy and could lead to variance in compliance. The terminology utilized, and the desired goals to be achieved are largely undefined and will undoubtedly leave business owners more confused then ever before.

The simple truth is that there is no consensus definition on many of these terms because there is inadequate data and research. Researchers and doctors are nowhere near agreement on the root cause or the true definition of MSDs because there are no universal truths. Scientists have a difficult time explaining why different individuals working on exactly the same job will not experience the same symptoms. Meaning that quantifying "permissible exposure limits" and setting other obligatory criteria is a guessing game. A certain exposure level may pose a significant risk to one employee while have no affect on another. Once again, the "one size fits all" mantra is inappropriate.

Anyone can recognize the difficulties OSHA faced in defining key terms for use in the proposed standard. But, that does not mean that these overly broad, ambiguous definitions are acceptable. This vagueness will lead to an expanded scope of the standard itself, as well as serving to increase the various responsibilities placed upon any regulated small business. The vagueness will also lead to expensive litigation or the threat thereof.

#### **ECONOMIC IMPACT OF PROPOSED STANDARD**

The various cost estimates of the proposed standard differ greatly. Much like the definitions in the standard and the true cause of MSDs, the economic impact the proposed ergonomics standard will have on both employers and employees is unknown. Once again, there is no consensus as to the cost of implementing this standard. OSHA predicts that in the first year of implementation, the ergonomics program will generate \$9 billion in direct cost savings. Over ten years, OSHA contends that the ergonomics proposal will save the government, and industry \$90 billion. Why is there any reason to believe that the "first year savings" will be repeated each year for 10 years? On the other hand, OSHA estimates that the first year costs to employers to be approximately \$ 4.2 billion, with small businesses incurring costs of \$2 billion per year. The \$4.2 billion number is a drastic increase from the \$1.75 billion estimate contained in the February 1999 working draft.

In contrast, some other estimates done by research and economic polling firms have had single industry costs as high \$30 billion. The SBA Office of Advocacy, through Policy Planning & Evaluation, Inc., estimated in September 1999 that the cost of the proposed standard could be anywhere from 2.5 to 15 times higher than the original estimates given by OSHA.

Regardless of the correct estimates, the existence of such variance must raise some serious doubts about the projected costs. Small business owners will be faced with numerous new costs, such as hiring experts to review their workplace, costs of development of the worksite, purchasing of new equipment, increased insurance costs and other additional costs incurred after a review. Small businesses, that will bear the brunt of these costs, are not in a position to do so. The ergonomics standard could lead to the demise of many small businesses. If they can survive this regulatory process, the taxes collected from these enterprises will be much less since the costs associated with compliance will erode profits dramatically.

#### **CONCLUSION**

As a representative of National Small Business United, SMC Business Councils and as a small business owner, I strongly urge OSHA to reconsider the release of their ergonomics standard without a more complete review and encourage Congress to take action to stop them if they do not. OSHA's intentions are good, but the means by which they are attempting to reach their goal is fundamentally flawed. This broad effort to redefine the workplace needs to be supported and mandated by scientific consensus, of which there is none. The approach OSHA has taken is a direct threat to the livelihood of the backbone of America's economy - small business. I fear that the ergonomic standard,

as currently drafted, will adversely affect the small business community, the economy, and the group it is designed to protect -the workforce. For all the reasons stated in this document, I object to the standard and will vigorously fight it's promulgation.

Thank you for the opportunity to speak with you on this important topic. I would like to thank the Chairwoman Kelly, Ranking Member Pascrell and the entire Subcommittee for allowing me to address this matter.

**TESTIMONY OF**

**JENNIFER S. WOODBURY, ESQ.,**

**OSHA PRACTICE GROUP  
MCDERMOTT, WILL & EMERY  
WASHINGTON, D.C.**

**BEFORE THE  
COMMITTEE ON SMALL BUSINESS  
SUBCOMMITTEE ON REGULATORY REFORM  
AND PAPERWORK REDUCTION  
UNITED STATES HOUSE OF REPRESENTATIVES**

**OSHA'S PROPOSED ERGONOMICS STANDARD  
AND ITS IMPACT ON SMALL BUSINESS**

**APRIL 13, 2000**

**OSHA'S PROPOSED ERGONOMICS STANDARD  
AND ITS IMPACT ON SMALL BUSINESS**

**BY JENNIFER S. WOODBURY, ESQ.  
MCDERMOTT, WILL & EMERY  
APRIL 13, 2000**

Madam Chairwoman and Members of the Subcommittee, I am Jennifer Woodbury, an attorney in the OSHA Practice Group in the Washington Office of McDermott, Will & Emery. It is my distinct honor to be here today to participate in this hearing on OSHA's proposed ergonomics rule.

The most important point that my testimony can communicate today is that, no matter how good OSHA's concepts sound on paper, without establishing any objective measures for how musculoskeletal disorders, or MSDs, are to be eliminated, OSHA's ergonomics program will not stop injuries and employers will never know whether they have attained compliance with the rule. This point cannot be overemphasized.

OSHA has stated two overriding principles regarding its proposed rule. First, that the science supports it. Second, that the rule will work because its provisions are written to embody a flexible format and use "plain language." I will tell you that I strongly disagree with those claims. I believe that any rule forcing *employers* to define the compliance criteria, to determine what injuries are covered by the standard, and to figure out how to address and reduce injuries does not have sufficient scientific underpinnings. I also believe that the language of this standard

is so vague, so ambiguous, that any claims of "flexibility" ring hollow when an OSHA inspector can override even the best and most good faith employer interpretations.

For months, my colleagues and I have been reviewing OSHA's proposed ergonomics rule, drafting comments on behalf of clients in industry, participating in the public hearings and cross-examining OSHA's panel of experts and others supportive of the proposal. The Subcommittee has asked me to be here today based on this experience to comment on how I would advise clients, and particularly small business clients, on compliance assuming OSHA's proposal becomes final. The answer to this question is simple: Do the thing that you think is right for your business. Then hope for the best but plan for the worst if OSHA comes calling. Indeed, not even OSHA can say that its inspectors will interpret ambiguous provisions in the same way in different inspections, or that the OSHA inspector's interpretations will land in the same ballpark as the interpretations that the rule's drafters had in mind. This is the price of failing to identify objective methods for evaluating compliance, and it will be borne by the employer.

OSHA's proposal is premised on the assumption that ergonomic injuries are caused by inherent dangers in the workplace, that these injuries can be easily detected and prevented by employers, and that, in any event, employers are responsible for all ergonomics injuries that occur. I would suggest to you that this premise is flawed. I would also suggest that, if it is the goal of OSHA's proposal to stop ergonomics injuries in this country, then OSHA should make plain the cause of these injuries and how they can be eliminated rather than placing the burden on employers to figure it out for themselves. For the fact is that without any objective measures

for success, this proposal will force employers to waste valuable safety resources without repairing even a single MSD and without ever knowing when they have attained compliance.

Let me offer the following example. An employee in your office comes to you, complaining of pain in her wrists, and says that she wants you to pay for her visit to a doctor. She says that her pain was caused from the typing that she is responsible for at work. You suspect that the pain might have something to do with the fact that she does a lot of recreational Internet surfing on her home P.C. in the evenings and on the weekends. But you have no experience in diagnosing injuries, and you also want to do the right thing. What would the proposal require you to do?

The "MSD management" section of the proposal provides that, when an employee experiences a "covered MSD," the employer must pay for the employee's visits to a health care professional, must follow the health care professional's recommendations for reduced work or time off work for up to six months, as well as maintain the employee's wages and benefits during the recommended work restrictions. The employer might also be required to "fix" the job.

This will be a significant burden for employers, and particularly for employers with 25 or 30 employees. Not only will you have to pay your employee while she is off the job for up to six months, but you will also have to pay for another, temporary employee to do her job. This burden is compounded by the fact that the injury might have been caused by non-work activities.



Indeed, all of us can easily envision a scenario where an assembly-line employee is also an avid gardener, a package handler has a preexisting arthritic condition, or a grocery store bagger spends hours every night on her home computer, and that employee develops carpal tunnel syndrome or lower back strain. How is the employer to know whether or not a non-work related condition is the actual cause of the injury in a definitive way? No employer will be able to make such definitive determinations, and the stakes are unbelievably high if an OSHA inspector disagrees with the employer's best guess.

OSHA has countered that years have gone into researching the science of ergonomics, and that there is a large body of evidence supporting the provisions in the proposal. If that is true, I would ask why OSHA has placed the onus of determining whether an MSD is "covered" (e.g. work-related) *on the employer* and yet gives him not one shred of guidance to help him make that determination. I would also ask what scientific evidence suggests using vagueness and ambiguity over objective criteria.

Take, for example, the proposal's requirement that employers take steps that are "reasonably anticipated" to "significantly" reduce the "likelihood" that covered MSDs will occur. Another requirement calls on employers to implement controls that "materially reduce" the MSD hazards, to implement controls that are "feasible", and to "periodically" evaluate additional controls. Employers are also required to "promptly respond" to employee reports and "communicate 'periodically'" with employees.

Think of yourself as the employer. Having heard these directions, is it now clear to you what you are required to do?

The list of subjective, ambiguous requirements continue. The standard proposes to cover OSHA recordable MSDs in general industry jobs that satisfy the test of "activities and conditions (that) are a core element of the job and/or make up a significant amount of the employee's worktime." The term "significant amount" is never defined. Rather, in the Summary and Explanation, the following language is used to support this vague requirement: "In general, significant amount means that performing (certain) tasks is a key or characteristic element of the employee's job. It will probably be obvious that employees are performing (these) tasks for a significant amount of their worktime." (64 Fed. Reg. 65780).

As written, this standard allows OSHA to freely second-guess the efficacy of whatever steps the employer does take, which makes the much-vaunted flexibility of performance standards illusory.

The point is not that well-founded ergonomics programs are not valid. Indeed, they can be. Nor is the point even that the six basic elements set forth by OSHA have no validity. The point is that, if our goal is to make plain how employers can help prevent ergonomic injuries from occurring, this proposal misses the mark entirely.

The best ergonomics programs prevent MSD injuries by evaluating how those injuries are caused and by incorporating end points and specific steps necessary to achieve the end points.

OSHA's ergonomics proposal fails to do either. Moving forward with this rule will result in the continued frustration of employers who will not ever be able to attain objective compliance. It will also result in inevitable citations for employers whose good faith interpretations will in many cases differ from those of the OSHA inspector. It will cause a massive misdirection of resources, both in government and in the private sector, that could be better devoted to improving employee safety in concrete ways. Worst of all is that by failing to identify the steps that are required to prevent MSD injuries, it is the American worker who will loose out most because injuries will not be prevented.

I thank Chairwoman Kelly and the Committee for the opportunity to testify. I would be happy to answer any questions that you may have.

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**Testimony  
on**

**Implications and Applicability of an OSHA Ergonomics Standard to  
Small Business**

**by  
Jacqueline Nowell  
Director**

**Occupational Safety and Health Office,  
United Food and Commercial Workers International Union**

**before  
Subcommittee on Regulatory Reform and Paperwork Reduction  
Committee on Small Business  
United States House of Representatives  
Washington, DC  
April 13, 2000**

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Good morning, my name is Jacqueline Nowell and I'm the Director, Occupational Safety and Health Office, UFCW International Union.

The UFCW represents 1.2 million US workers in the retail food, meatpacking, poultry, food processing and warehousing, healthcare, garment and textile, footwear and chemical industries. Included in this are over 400 small employers in virtually every state of the country, from Hawaii to Alaska, including New York, New Jersey and Missouri.

The UFCW strongly supports OSHA's proposed ergonomics program standard. We have been actively involved in this issue for nearly 20 years, since the early 1980s. We began by educating our members about the problems of musculoskeletal disorders, MSDs, and the lack of programs and fixes for them in our industries. We filed OSHA complaints in the meatpacking, poultry and cat fish industries. We worked closely with the Department of Labor in developing the Red Meat Guidelines, issued by Secretary of Labor Elizabeth Dole. In 1991, we petitioned OSHA for an Emergency Temporary Standard. In 1992, under Secretary Lynn Martin, the Department of Labor agreed with the unions that available information supported initiation of Section 6(b)(5) rulemaking under the OSHAct to address ergonomic hazards. This standard has been 10 years in the making and it is long overdue. The UFCW has many ergonomics programs with full union participation in our represented industries that are working to reduce MSDs.

Our testimony today will focus on 5 key issues:

1. MSDs are real injuries — they often lead to disabling injury and can have a lifetime affect on workers lives. Caroline Shebora is a cashier in a grocery store in Alexandria, Virginia. She's had bilateral carpal tunnel surgeries and is fearful that it's coming back. Her company fought her worker's compensation claim for over 1 ½ years, and she feels devastated by that after working for this one company for 27 years. Jan Garrett works in a poultry plant in Kentucky, where she worked salvage, until she started having problems with her hands. She's also had bilateral carpal tunnel surgeries on her hands. Her job, at a line speed of 140 birds per minute, was to cut off broken wings, broken legs, cut skin off that had gall stains, cut tail gland if the machine missed it, anything USDA sent down because they knew Jan would wash, cut, trim

and vacuum trying to salvage any of the bird at all. Her life has been completely changed, both at work and home. She can't hang out her laundry, can't clean her house, especially using cleaners that come in spray bottles. Her family bought their first home last summer and her husband and sister had to clean it. To this day, she still hasn't been able to wash the windows. She is afraid, now that she's back on a knife job at the plant, that she won't be able to keep up, and the plant will tell her they have no work for her.

2. Many industries we represent have recognized the problem for more than 15 years, and have developed ergonomics programs. These include meat, cat fish, retail, boot and shoe. One meatpacking company reduced its worker's compensation costs by nearly 60%, reduced turnover by 75% and recouped all of their investment in the first two years of the program. In the first two years of the program, the number of diagnosed cases of MSDs was halved and the number of surgeries in the plant fell by 40%. Another collectively-bargained ergonomics program in meatpacking has a worker doing most of the ergonomic changes in the plant. That plant has reduced the number of MSD cases in the 10 years of the program by over 78%! In a work boot and shoe plant, MSD cases were reduced by 70 percent in two high-hazard departments after the company began an ergonomics program.

There are concrete things small business can do to protect workers from developing MSDs. Many of them are low cost. The "quick fix" provision of the proposed standard is an example where, if there's a limited problem, a limited response is allowable.

3. The retail industries have recognized the problem of poor ergonomic design for years. In retail food, the Food Marketing Institute, who claim that more than half of their members own just one store, has educated themselves and their members about the issue of MSDs and back injuries related to job design as well as commissioned and gathered scientific data on the issue. These resources that the FMI has are available for its members. As well, they claim that the injury rate has declined 28% in 10 years of voluntary grocery industry efforts to reduce worker injuries. Unfortunately, this same trade group is making

exaggerated claims about this proposed standard, telling its members that they will suffer greatly from a mandatory standard, including that they will have to hire baggers, that customers will have to bag their own groceries and that the prices of groceries will increase as a result of the standard. We see this as scare tactics aimed at generating opposition to the standard rather than concrete criticism of the standard itself, which would be far more useful for all parties.

4. There is a lot of information that has been developed by unions, trade groups and associations that will be tremendously helpful to small business. This includes non-mandatory appendixes OSHA can add to the standard, for example, that would provide resources for small business.
5. Workers are being hurt —Jan and Caroline are but examples of the hundreds of thousands of workers in the US who are developing MSDs. I could have also told you about Ray Prestine from New York and Dennis Norton from Maine. You can see these workers when you go into your own neighborhood grocery store. They come from small plants and large ones; union ones and non-union ones. The point is it doesn't matter where they worked, they needed protection. We've been working to get those protections for them. We think this standard will help.

While we know there are some differences between small and large businesses, we believe that the standard is flexible. It is programmatic rather than specification-based, meaning it is a flexible set of requirements that small business will be able to adapt to its establishments. But if "small business" believes that OSHA needs to clarify the rule for them, then they should be informing OSHA of specific provisions that would assist them.

Thank you for the opportunity to speak to you about this important issue for workers.

**Testimony of**

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**Before the  
Committee on Small Business  
Subcommittee on Regulatory Reform  
And Paperwork Reduction  
United States House of Representatives**

**OSHA's Proposed Ergonomics Standard:  
Its Impact on Small Business**

**April 13, 2000**



**OSHA's Proposed Ergonomics Standard:  
Its Impact on Small Business**

**By Lawrence P. Halprin, Esq.  
Keller and Heckman, LLP  
April 13, 2000**

Madam Chairwoman and Members of the Subcommittee, my name is Lawrence Halprin. I am a partner in the OSHA/Employment Law Practice Group in the Washington, D.C. office of the law firm of Keller and Heckman, LLP. I have been practicing in the area of Occupational Safety and Health law since 1978, have participated in most of the major OSHA rulemakings since that time and have extensive experience in the interpretation and enforcement of OSHA standards. Our firm represents a number of business interests in the ongoing OSHA ergonomics rulemaking, including the National Coalition on Ergonomics. However, I am here today to speak to the issues generally and not on behalf of any particular client.

**OSHA Has Not Demonstrated That Its Proposal Would Be Effective  
In Addressing The Identified Conditions**

Before OSHA may adopt a proposed standard, it must demonstrate, on the basis of sound science, that there is a real workplace safety problem and that the proposed rule provides a solution that is not only an effective and understandable solution but the most cost-effective solution. What does this mean? First, OSHA must identify a specific activity or condition as hazardous. Second, OSHA must demonstrate that the activity or condition **causes** an identified material impairment of health. In our view, an activity is not hazardous simply because it brings out or magnifies symptoms of a pre-existing condition not caused by that activity. Third, OSHA must demonstrate that a significant number of employees are exposed to this hazard at unsafe levels by properly quantifying the risk. The agency may not arbitrarily aggregate different health effects and different types of hazards (*e.g.*, repetitive motion injuries and single incident over-exertions) so as to increase the purported risk.

If OSHA reaches this point, which we do not believe it has, all it would have shown is that there is a problem. It must still demonstrate, again on the basis of sound science, that the proposed rule provides an effective and understandable solution for the problem—that it significantly reduces or eliminates the risk in the most cost-effective manner.

It is our contention, supported by the written statements and testimony of some of the world's most outstanding medical experts, that the relationship between workplace bio-mechanical risk factors and the great majority of what the agency refers to as MSDs is unclear. Even NIOSH has acknowledged that "in the general population, nonoccupational causes of low back pain are probably more common than workplace causes."<sup>1</sup> The opinion of those medical experts, based on extensive research and clinical experience, is that OSHA's bio-mechanical hypothesis is unproven, and, in fact, contrary to a significant body of evolving medical and scientific practice and knowledge. The testimony of the experts who appeared at the hearings on Tuesday, April 4, clearly puts the issue in focus. Lloyd Fisher, Ph.D., the outstanding bio-statistician who reviewed the scientific evidence offered by OSHA in support of the proposed rule described that evidence as "pitiful" and the fact that the agency plans to adopt a rule that would cost billions of dollars without any convincing evidence that it would do any good as "bizarre."

In light of the written statements and testimony of these experts, we believe it is clear that OSHA has not demonstrated that the rule would be effective. Even if, for purposes of discussion, one were to assume the proposal had some utility, it is incomprehensible and far from cost-effective. A rule is not cost-effective when it prescribes a uniform bureaucratic approach that eliminates the ability to tailor the program to the particular personnel, business and culture at

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<sup>1</sup> Elements of Ergonomics Programs - A Primer Based on Workplace Evaluations of Musculoskeletal Disorders, NIOSH, March 1997, p. 2.

the facility, or to the particular processes, activities and risks involved. A rule is not cost-effective when its scope substantially exceeds any reasonable description of the problem. A rule is not cost-effective when it creates economic incentives that upend the goals and objectives of the state workers compensation systems and long-established principles of labor-management relations.

**This Initiative Represents a Radical Departure from Prior OSHA Initiatives**

This proposed standard represents a radical departure from every previous OSHA effort to develop an occupational safety and health standard. In every previous rulemaking, OSHA has:

- 1) Identified the material impairment of harm to be prevented in terms of a medically recognized condition subject to an objective diagnosis (*e.g.*, a specified level of hearing loss determined through audiometry under specified testing conditions, cancer as would be determined by pathology)
- 2) Identified the physical work activities and conditions that actually caused that identified medical condition (*e.g.*, excessive workplace exposure to — noise, a known carcinogen);
- 3) Demonstrated that there were a significant number of workers exposed to that risk through workplace measurements and analysis;
- 4) Identified the relevant attributes of those activities and conditions (*e.g.*, sound pressure, airborne concentration);
- 5) Identified how an employer should measure those attributes (*e.g.*, dosimeter, absorption tubes); and
- 6) Quantified objectively measurable action levels and permissible exposure levels (*e.g.*, noise — 90 dBA based on an 8-hour time weighted average (TWA), benzene — 1 ppm over an 8-hour TWA) so that an employer would know when those attributes had reached

a potentially hazardous level, when further control measures were required, and when compliance had been achieved.

In this case:

- 1) OSHA has not identified the harmful end point but defined it in terms of presumptions and proxies based on whether a condition is recordable under its highly controversial “injury and illness recordkeeping system.” That system captures virtually every type of harm, however minor, unless the employer can prove that work did not in any way and to any degree contribute to or aggravate that condition. As a practical matter, the additional screening criteria in proposed Section 1910.902 are virtually meaningless. When the official OSHA hearing panel was asked to define the injuries covered by the proposed standard, their answer was (my paraphrasing) “a recordable musculoskeletal disorder that passes the screening criteria.”
- 2) OSHA has not identified the hazardous activities and conditions of concern in any meaningful way. They are circularly defined as any activities, in which ergonomic risk factors are present, that are reasonably likely to cause the type of recordable condition that is presumed to be a work-related MSD.
- 3) OSHA has not defined the relevant attributes — which it asserts to be force, repetition, awkward postures, etc. — in any meaningful way, and has ignored the factors which a large group of outstanding scientists has found to be the predominant factors.
- 4) OSHA has not provided any meaningful guidance on how to measure those factors, which are not measured in many if not most of the studies on which OSHA relies, or how to prospectively identify, in a quantitative way, a hazardous activity or condition.

Instead OSHA relies on circular terminology and a bootstrapping approach that is in many ways comparable to a bill of attainder.

This is illustrated by the following hypothetical scenario.

The compliance officer says to the employer: “You have an employee with muscle stiffness, made more uncomfortable by work, who can normally touch his toes from a standing position but can’t do that today. That is a positive physical finding of restricted motion that establishes the existence of an MSD that we presume to be work-related and covered by the standard unless you can prove work did not in any way or to any degree cause, contribute to or aggravate the condition. Since you cannot prove that to be the case, you have a covered MSD and one or more of the tasks performed by the affected employee is hazardous. We also assume that anybody else performing similar tasks is also at risk unless you can prove that is not the case. For each of those jobs, you may eliminate the MSD hazards, reduce them to the extent feasible (continuously checking for the availability of new measures), or reduce the risk factors in a way that is reasonably expected to significantly reduce the likelihood that the recordable condition presumed to be work-related will recur.”

I believe the following expresses what many employers will understand to be the uncommunicated part of the compliance officer’s message: “We don’t know which activities are hazardous or how to fix them; that’s for you to figure out. If you don’t do anything, we will figure out a basis for bringing an enforcement action and force you to defend it or go along with whatever we decide is appropriate. If you do take some remedial measures, we may accept them as adequate, we may decide to second guess what you do, or we may wait until we have an opportunity to review the OSHA 200 summary data you are required to submit to us annually. If you do not plan to accept the conclusions from our second-guessing, be prepared to defend your technical position based on expert

advice from a certified ergonomist and a board certified occupational physician. If you plan to object to our proposed abatement measures on the ground of technical or economic infeasibility, be prepared to back up your position with a Ph.D. economist, an MBA in Technology Management, or a certified professional engineer. If your budget isn't adequate for that level of commitment, we suggest you go along with our conclusions. Litigation on matters requiring expert testimony is very expensive, especially for a small business."

#### **The Proposed Rule is Incomprehensible and Counterproductive**

To make the employer responsible for the mere aggravation of an existing condition is to upend long-established principles of personnel management, health care and workers compensation. OSHA's mandate is limited to workplace and does not extend to re-writing employment law, federalizing workers compensation and taking a giant step toward universal health care. When asked whether the standard would be triggered by an employee who reported to work with a non-work MSD and then aggravated that injury performing work he or she had performed for years without any problem, the answer from the official OSHA panel was, almost verbatim, "yes, you take the workers as you find them." The fallacy of the agency's approach is illustrated by the following example.

First, by way of background, it is important to note that current data show an individual is more likely to get injured at home than at work. Let's assume an employee — on a day off — injures his/her back planting a tree, picking a grocery bag out of the car or bungee jumping. The back discomfort is still there when he reports to work the next day. If he reports this problem to the employer, under current law, the employer may voluntarily find a light duty job for the employee, may tell the employee to try working and see how it goes, or may tell the employee to get a medical release before beginning work. On the other hand, under this rule, the employer who elects the "try it out and see how it goes option" does so at significant risk. There is a

significant possibility that the condition will be sufficiently aggravated by work to trigger the full requirements of the standard. Furthermore, the proposed work removal provision provides the employee with an incentive to hide his non-work injury from the employer and proceed to work. If the work does not aggravate the condition, the employee works and receives his normal pay. If work aggravates the condition, which a small number of employees may even hope to be the case, the employee can then report a work-aggravated MSD. The employer will have no choice but to put the employee on restricted duty, triggering the full application of the standard. After going through and documenting the application of the bureaucratic quick fix or full hazard analysis and control process, hopefully the employer will be able to conclude that the problem is a temporary condition unique to that employee. At that point, the employer goes through what may be a very complicated calculation process to provide the employee with either 100% or 90% of after-tax wages under the WRP provision.

If the non-work injury is a long-term or permanent condition that continuously would be aggravated by work, this proposal would go well beyond the requirements of the Americans With Disabilities Act. It would force the employer to take all feasible measures, whether or not reasonable, to modify the employee's job so that it no longer aggravated the non-work injury.

#### **Summary of Substantive Inadequacies of the Proposed Rule**

From a substantive standpoint, the information, albeit massive, that OSHA has placed in the public docket does not meet the applicable scientific, legal or public policy criteria for the adoption of an occupational safety and health standard prescribing either a programmatic approach or specific measures for the prevention and management of ergonomics-related musculoskeletal disorders (MSDs). More specifically:

The agency selectively relies on a body of outdated and inadequate studies, and excludes from its consideration the entire body of persuasive scientific evidence that the vast

majority of the covered MSDs are not caused by workplace exposure to biomechanical stressors;

OSHA fails to distinguish between the background risk and the “excess” risk of harm allegedly posed by exposure to workplace biomechanical stressors, and improperly assumes that workplace biomechanical stressors cause every MSD that conceivably could be caused, contributed to or simply aggravated in any way and to any degree by work activities;

This proceeding was originally initiated by a union petition to address cumulative trauma disorders, also known as repetitive motion injuries. That is consistent with OSHA’s statement that “MSDs develop as a result of repeated exposure to ergonomic risk factors.” 64 Fed. Reg. 65783. Somewhere along the way OSHA apparently lost sight of what this rulemaking was all about. According to the BLS data, only about 12% of the lost workday cases that OSHA describes as MSDs that would be covered by the proposal are due to repetitive motion injury and the other 88% are due to single incident sprains and strains. Although we believe the scientific evidence relied on by the agency is inadequate to support this proposal, its proposed scope clearly exceeds any reasonable bounds;

The proposal fails to recognize that the discomforts of everyday living do not rise to the threshold level of significance – “material impairment of health or functional capacity” – that must exist before OSHA can issue an occupational safety and health standard;

An objective review of the agency’s analysis of the expected impact of the proposed standard demonstrates that the agency’s estimates of substantial benefits are unfounded and its estimates of the costs of compliance are substantially understated;



The proposed requirements of the standard are incomprehensible;

The standard would inappropriately insert a meddling government bureaucracy into the arena of labor-management relations, and would interfere with important management prerogatives to employ measures that appropriately advance workplace safety because they might also have the incidental effect of discouraging the reporting of MSDs covered by the standard; and

The MSD management provisions would undermine the effectiveness of state workers compensation programs and existing health care systems, and would create a strong incentive for abuse of the special work restriction protection benefit by amplifying symptoms, encouraging claims, and fostering disability through a regulatory structure that discourages the very measures that would be effective in addressing the conditions of concern.

#### **Summary of Procedural Inadequacies of this Rulemaking**

From a procedural standpoint, OSHA has violated the fundamental requirements of due process applicable to OSHA rulemaking by failing to provide interested parties with either a proposal that can be reasonably understood or with a full and fair opportunity to participate in the comment and debate on that proposal. First, the agency has proven what we all knew — a rule can be written in plain English yet be so vague as to be incomprehensible. The rule does not identify in any meaningful way 1) the harm it is designed to prevent, 2) the hazardous activities or conditions to be eliminated or controlled, 3) the pertinent attributes of the ergonomic hazards, 4) how to measure these attributes, or 5) how to determine whether those attributes have been adequately controlled. In fact, the proposal completely ignores the non-biomechanical factors although there is strong evidence that they are the predominant factors in the causation of MSDs.

Second, during the wholly inadequate time available to question the agency's official panel, questions on how the rule would be interpreted were largely answered with non-responsive statements such as (with my paraphrasing) "we have not yet developed our compliance instruction because this is only a proposed rule" or "we have not resolved that issue and would very much appreciate receiving your post-hearing comments on it."

Third, the public docket was missing much of the information relied upon by OSHA in proposing the rule for a significant portion of the comment period and I would not be surprised to find that there are still missing or incomplete references.

Fourth, the time set aside to conduct the most complicated rulemaking in the agency's history is wholly inadequate. The agency simply has not provided anywhere near the amount of time needed to review and analyze the public record, prepare initial comments and testimony by March 2, or to review the comments and testimony of the approximately 1,100 scheduled witnesses, first available to us around March 2, in time to conduct effective questioning of those witnesses beginning only 11 days later on March 13.

The incomplete public docket contained over 50,000 pages when the rule was proposed, and has been growing ever since. To truly understand the issues required a review and analysis of the following "basic" documents: the 310-page November 23, 1999 Federal Register notice, two Federal Register correction notices (the second in response to our Freedom of Information Act request seeking to clarify erroneous and incomplete citations to the references on which OSHA was relying), the approximately 250-page supplemental health effects document, the approximately 1100-page economic analysis, OSHA's 200 plus page 1993 Ergonomics Survey, the approximately 500-page NIOSH Literature Review, and the extensive comments of OSHA's expert witnesses who, despite knowing what the proposal would say (because they helped to write it), did not submit their comments to the record until the end of the comment period. In performing its literature review, NIOSH reported that it considered approximately 2000 studies and relied on 600 of them, most of which are not in the public record. It was simply impossible

to review and analyze all of this material in time to file the initial comments or to prepare for the testimony by the OSHA panel, OSHA's experts and the NIOSH panel during the first week of the hearings. We formally advised the Department of Labor of this material lack of due process and requested that the hearings be delayed to allow adequate preparation time. That request was denied.

### **Conclusion**

Ergonomics is an area where the scientific knowledge is limited and the conditions of concern are both subjective and associated with a broad range of personal and non-occupational factors. Rather than developing a proposal that reflects these critical constraints, OSHA has chosen an ideological path that reflects a commitment to a social re-engineering of the workplace and to cast aside longstanding scientific, legal and public policy principles. Under OSHA's master plan: all work would be comfortable for everyone; everyone could do every job; all MSDs would be eliminated; and employers acting in good faith would have no reason to fear arbitrary and capricious enforcement of this incomprehensibly vague and overreaching standard because the overreaching provisions are only there to assist the Solicitor's Office in pursuing enforcement against the truly recalcitrant lowest common denominator employer.

Unfortunately, that is not what the proposed standard would achieve. First, the information offered by the agency does not demonstrate that it has identified the relevant causal factors or that the rule would be effective in preventing MSDs, and there is substantial evidence to the contrary. Even if one assumes, for purposes of discussion, that the rule has some utility, it clearly is not sensible or cost-effective.

The proposal fails to satisfy the basic rule that any OSHA standard must establish reasonable, readily understood, easily measured and objective performance criteria for assessing compliance. This standard falls at the opposite end of the spectrum. Instead of establishing performance criteria, it establishes an infeasible and illegal result-based requirement — zero risk.

At virtually every decision point, OSHA opted for expanded coverage (*e.g.*, covered MSD, problem job, manual handling job) and expanded and burdensome control measures (*e.g.*, work restriction protection, reduce MSD hazards to the extent feasible).

Approaches based on the application of a reasonable decision-making process would be subjected to constant challenges by those who would use the standard to advocate zero risk and working conditions free of discomfort. Rather than allowing the employer to apply the responsible principles of risk management to this issue, OSHA would possess and, we fear, would exercise virtually unlimited discretion in second-guessing employer determinations, aided by the fact that the adoption of this type of standard effectively shifts the burden of proof from OSHA to employers.

The Coalition and many other business groups have encouraged voluntary efforts by employers to incorporate ergonomic principles, long known as industrial engineering or human factors, into their operations to improve productivity, employee comfort and job satisfaction. At the same time, they have opposed a broad, over-reaching regulatory scheme that would require employers to adopt comprehensive ergonomics management programs of the type proposed by the agency without regard for the need, practicality or effectiveness of those efforts in any particular business.

We recognize and care about the people in this country, both inside and outside the workplace, who are truly experiencing pain and even disability associated with musculoskeletal disorders (MSDs). We also recognize that physical activity, both inside and outside the workplace, can magnify the symptoms associated with MSDs. That does not mean, however, that the activity caused the MSD or that the workplace is unsafe. In other words, we do not believe the OSH Act makes the employer responsible for eliminating workplace activities that, in many if not the vast majority of cases, do not cause MSDs but simply magnify their symptoms. Many MSDs are simply the aches and pains of life and do not rise to the level of a material impairment of health. Finally, the adoption of a complex and bureaucratic ergonomics program

is not an effective means of addressing the MSDs associated with single incident events (primarily over-exertions), which represent 88% of the lost workday MSDs that would be covered by the proposed standard.

The proposed standard is inconsistent with and undermines the careful balance reflected in the requirements and goals of the state workers compensation laws, the Americans With Disabilities Act and corresponding state disability laws. It would lead to a substantial and counterproductive expansion in tort litigation. In virtually every aspect, it was developed without adequate regard for the realities of the legal and regulatory environment in the United States.

For the foregoing reasons, we are of the firm belief that OSHA has not and cannot satisfy the threshold legal criteria applicable to the adoption of an ergonomics program standard and has failed to comply with the fundamental requirements of due process in its conduct of this rulemaking. Accordingly, we believe the proposed standard should be withdrawn. Thank you for the opportunity to testify before your committee on this critical issue. I will be happy to answer any questions you may have.

Testimony  
on

**Implications and Applicability of an OSHA Ergonomics Standard to Small  
Business**

by

Franklin E. Mirer, Ph.D.  
Director  
Health and Safety Department  
International Union, UAW

before

Subcommittee on Regulatory Reform and Paperwork Reduction  
Committee on Small Business  
United States House of Representatives  
Washington, DC  
April 13, 2000

This testimony is on behalf of the International Union, United Automobile, Aerospace & Agricultural Implement Workers of America, UAW and its 1.3 million active and retired members, and also on behalf of millions of American workers exposed to ergonomic hazards who are not represented by a labor union.

UAW members assemble vehicles and make parts for the Big 3 auto makers and also produce 18-wheelers, construction equipment, locomotives and the Space Shuttle. These employers are industrial giants. However, we also represent approximately 275,000 employees of 1500 private and public employers in 2800 bargaining units whose average size is 100. In addition, our units include warehouses, schools, cafeteria workers, health care and social service agencies. So, our experience with ergonomics programs includes many small units, and many of the processes and industries found in the small business sector of our economy.

The UAW's experience holds answers to the threshold questions: "Is an OSHA ergonomics standard needed? Is an ergonomics standard based on sound science? Is an ergonomics standard consistent with industry practice? Is an ergonomics standard feasible?" And, of particular interest to members of this subcommittee: "Is an ergonomics standard applicable and feasible in the small business sector of the economy?" The answer to all these questions is a resounding "yes." The actions such a standard will require are not only feasible, they are already being done by many employers and unions.

Testimony: Ergonomics in Small Businesses  
UAW Health and Safety Department  
April 13, 2000

The UAW is appreciative of the fact that this hearing has not limited testimony to the concerns or complaints of management at small businesses. We are pleased you have invited union representatives with experience in ergonomics programs. We are aware that some small businesses are worried about the financial costs and perceived burdens of the proposed ergonomics standard, although I believe many of these concerns are based on lack of information or misinformation. We hope members of this committee will give appropriate weight to the health and safety of the employees of small businesses. The UAW believes that employees of small businesses have the same rights and deserve the same protections as all other employees in our nation.

The UAW strongly supports OSHA's proposed ergonomics program standard as a modest, but critical, first step toward abating the largest single cause of injury and disability among American workers generally, and UAW members in particular. Forward movement has been delayed several years by political controversy. The UAW hopes that the ongoing rulemaking proceeding will be permitted to provide an oasis of science amid a desert of lobbying and sound bites. OSHA's proposal is supported by the experience of the UAW with ergonomics in hundreds of workplaces in many industries. The standard, when promulgated, will benefit employees in small and medium sized facilities which now lag behind in implementing ergonomics programs. The standard will benefit employees in facilities that have begun to address ergonomics, by establishing a framework of employee rights. And it will benefit employers by leveling the playing field and by defining the specific action necessary to protect their employees.

However, the proposal falls short in several areas: medical surveillance programs; timetables for correction of identified hazards; triggers for the ergonomics program; and, scope of jobs to be covered. OSHA must also make clear that this proposal is a step on a longer road to protection, rather than the last word. In the long run, OSHA will need to set actual exposure standards and regulate particular operations.

The UAW testimony today will emphasize the following key points:

1. Ergonomics programs are the only means to prevent the majority of injuries suffered by American workers in the automobile industry, and the manufacturing sector generally. Approximately 60% of injuries in the auto sector are musculoskeletal disorders.
2. Practical ergonomics programs are in place in hundreds of worksites and have set the stage for major progress.

Testimony: Ergonomics in Small Businesses  
UAW Health and Safety Department  
April 13, 2000

3. The Bureau of Labor Statistics 1998 survey shows the effectiveness of UAW negotiated ergonomics programs.
4. Methods for measuring and relieving ergonomic stresses and procedures for carrying out practical ergonomics programs have been developed and verified over the last decade. The science is known. There is no valid reason to delay action on an ergonomics standard until completion of an additional National Academy of Sciences review.
5. The principal need over the next decade is abatement of exposure to physical stresses.
6. The UAW has developed and implemented an ergonomics model for small manufacturing suppliers and office and professional facilities, which demonstrates that ergonomics is necessary and feasible in such facilities. These programs also establish industry recognition of MSD risk factors and the elements of a program needed to protect employees.
7. The OSHA process, including the rulemaking, is a model for allowing all interested parties to have their say.
8. The present industry critique of the OSHA proposal rejects every concession to industry that OSHA has made.
9. In conclusion, the ergonomics standard is necessary, and well within the capabilities of small business to comply.

Each of these points is discussed in detail below:

- 1. Ergonomics programs are the only means to prevent the majority of injuries suffered by American workers in the automobile industry, and the manufacturing sector generally. Approximately 60% of injuries in the auto sector are musculoskeletal disorders.**

The need for ergonomics abatement is most clearly shown in the Bureau of Labor Statistics (BLS) Disabling Injury reports.<sup>1</sup> These studies compile employer-supplied data on the types and causes of injuries and illnesses that result in days away from work. The employer data are a sample of OSHA 101 forms for cases with days away from work.

OSHA has relied on this same database. We concur with OSHA that these employer-supplied data probably under-report musculoskeletal disorders. However, the data portray the full extent of the problem.

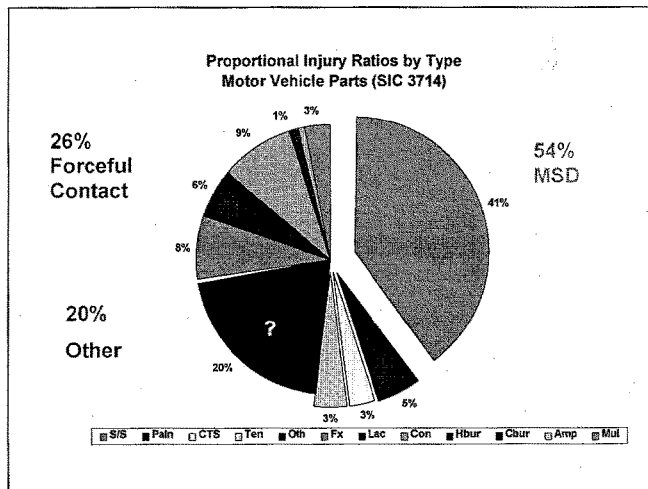
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<sup>1</sup> Most recent data available are for 1997.



Testimony: Ergonomics in Small Businesses  
 UAW Health and Safety Department  
 April 13, 2000

In the motor vehicle parts sector (SIC 3714), the category of employment



in the auto industry with many small employers, 54% of disabling conditions are identified by management as strain or sprain injuries and various cumulative trauma diagnoses which are properly grouped as

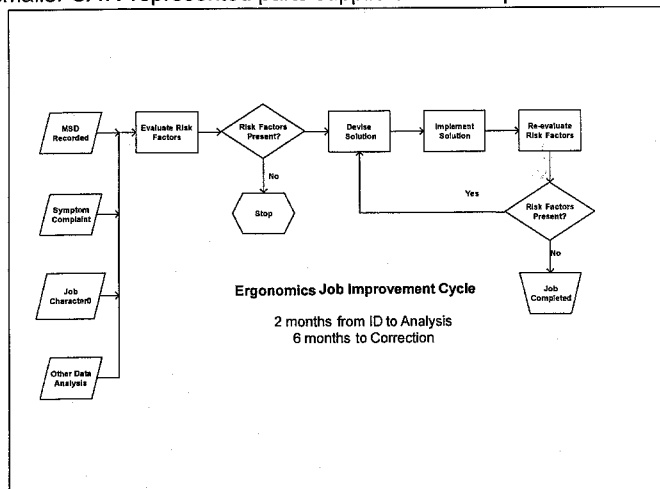
MSD's. In addition, about 20% of disabling injuries were in the "other" category, which includes some MSD's. So, the large majority of disabling conditions are MSD's. For auto parts, 40% of injuries were coded as arising from repetitive motion or overexertion, with an additional 11% in the "other" category. Back injuries are the largest single diagnosis in this sector, 22%, and shoulder injuries are 7%. Back and shoulder injuries are almost entirely of ergonomic origin. In short, injuries preventable by ergonomics programs dominate the disabling injuries in the motor vehicle parts sector, a sector with many small employers.

These data demonstrate that the biggest problems now faced by safety specialists and suffered by workers are hazards that can be abated only by ergonomics programs.

**2. Practical ergonomics programs are in place in hundreds of worksites and have set the stage for major progress.**

Testimony: Ergonomics in Small Businesses  
 UAW Health and Safety Department  
 April 13, 2000

Every UAW-represented location in the Big 3 auto companies has a labor-management ergonomics committee in addition to a labor-management health and safety committee. These approximately 300 facilities employ about 350,000 hourly workers and additional salaried personnel, and represent a substantial fraction of the US Gross National Product. The two UAW-represented international transplant assembly plants use the same structure. Labor and management representatives on these committees are trained to analyze injury and illness data to identify high injury jobs; to conduct risk factor analyses; and to identify solutions to reduce ergonomic stresses. Dozens, if not hundreds, of smaller UAW-represented parts suppliers have adopted this model as well. UAW



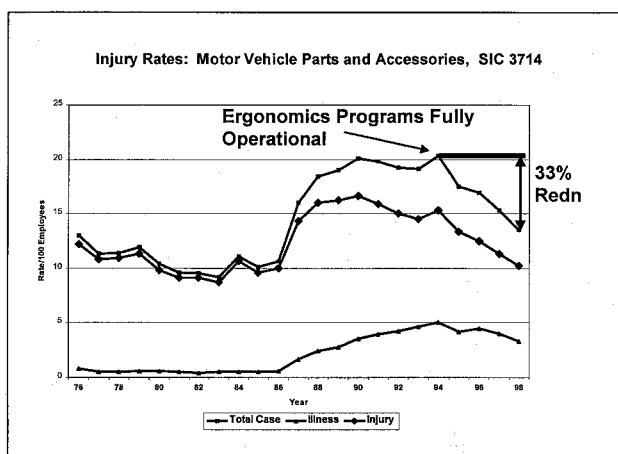
members in the service, clerical and public sectors have been able to implement similar programs. These programs are described in more detail below.

The common ergonomic abatement process used by these committees is shown in the flowchart below. This process is a continuous improvement process with no clear endpoint. In fact, participants believe that ergonomics improvement is integral to a high performance manufacturing system, just as quality improvement is.

Initially, these UAW ergonomic programs grew from massive penalty OSHA citations for failure to record injuries and illnesses, and from citations under the General Duty Clause. The programs were later codified in labor contracts. Now, labor and management argue about the best way to do things, and whether change is fast enough, but the need for ergonomics on this model is not in dispute. Our ergonomics programs have been shown to reduce worker injuries and to increase productivity.

Testimony: Ergonomics in Small Businesses  
 UAW Health and Safety Department  
 April 13, 2000

Ergonomics program activity goes well beyond the vehicle assembly, stamping, parts manufacturing and parts distribution facilities of the Big 3 auto makers. Similar but less elaborate programs following the same model, including job analysis methods and labor management structure, have been implemented in many smaller UAW represented workplaces. Ergonomics committees at these facilities are often trained by UAW professionals. We have done this in parts plants, bicycle plants, a health maintenance organization, and in clerical settings.



### 3. The Bureau of Labor Statistics 1998 survey shows the effectiveness of UAW negotiated ergonomics programs.

Analysis by the UAW of the most recent government statistics shows that safety and ergonomics programs prevented over 69,000 occupational injuries and illnesses in 1998 in the vehicle assembly and parts sectors. Of these, at least 41,000 were musculoskeletal problems prevented by ergonomics programs.

These data are derived from the Bureau of Labor Statistics' annual injury and illness survey data for 1998, released in December 1999. Reductions in injury rates reported for key UAW workplaces give strong evidence for the effectiveness of UAW safety and health programs generally, and especially for the value of our ergonomics programs.

The UAW believes that the motor vehicle assembly (SIC 3711), motor vehicle parts (SIC 3714) and automotive stamping (SIC 3465) sectors have gone farther than most others in implementing ergonomics programs. My testimony

Testimony: Ergonomics in Small Businesses  
 UAW Health and Safety Department  
 April 13, 2000

concentrates on the auto parts sector, which has a higher number of small employers. We selected 1994 as the baseline, because that is when ergonomics programs were first likely to be fully implemented, and also to obtain a five year period. For the auto parts sector, the total case rate dropped 12% over one year and 33% over five years, while the occupational illness rate fell 17% over one year and 34% over five years. Cumulative trauma disorders declined 13% and 24% over this time period.

Over this same period the total case rate, injury rate and CTD rate fell slightly for all private employment, while the illness rate increased by a small amount. The vehicle assembly rate however, dropped 5.5 times as fast as the national average over five years, while auto parts dropped 4.5 times as fast. Percentage reductions were 40% greater in vehicle assembly and 70% greater in parts manufacturing compared to all employers combined.

These data show that ergonomics programs decrease the number of worker injuries, with attendant savings to employers as well.

**4. Methods for measuring and relieving ergonomic stresses and procedures for carrying out practical ergonomics programs have been developed and verified over the last decade. The science is known. There is no valid reason to delay action on an ergonomics standard until completion of an additional National Academy of Sciences review.**

The important technical developments for effective ergonomics programs emerged two decades ago, and the broad outline is now largely in place. The driving force was combining the engineering and biomechanics disciplines with medical science and epidemiology. Key institutions were the University of Michigan and NIOSH, which have established the United States at the forefront of the science of ergonomics. These technical developments include:

- Development of consistent methods to measure the physical stresses on the human body. Stress is determined by the force exerted on a body part, the frequency of the motion, and the posture of the joint. The Force-Frequency-Posture paradigm is common to both expert and checklist approaches to ergonomic analysis;
- Acceptance of expert ergonomic analysis for measurement of risk factors according to these methods;
- Development of simplified non-expert approaches to measurement of risk factors (checklists);

Testimony: Ergonomics in Small Businesses  
 UAW Health and Safety Department  
 April 13, 2000

- Formulation of the NIOSH lifting guide and related biomechanical models which take into account the weight of an object, distance from the body, and motion of the body in lifting;
- Validated semi-quantitative risk factor checklists for hand, arm and shoulder (upper extremity) cumulative trauma disorders;
- Diagnostic criteria for upper extremity CTD's;
- Standardized physical examination protocols for upper extremity CTD's;
- Validation of symptom surveys and discomfort surveys (psychophysical measures) as risk factor identification tools;
- Validation of risk factor checklist and symptom survey by workforce personnel to identify high risk jobs and propose abatement methods;
- Acceptance of the plant ergonomics committee model, especially lay analysis of risk factors using standardized checklists.

These scientific developments rest on an enormous body of published work as well as practical experience. In 1997, NIOSH published a massive compilation of ergonomics studies. The UAW believes that the NIOSH compilation and analysis of virtually all available studies of work-related musculoskeletal disorders settles the question whether there is sufficient science underlying ergonomics. The studies show exposure-response relationships for ergonomic stress factors and various health outcomes. NIOSH did an excellent evaluation of hundreds of reports to show the weight and strength of the evidence for cause and effect relationships, and conclusively confirmed that increased stress causes increased injury.

Nonetheless, Congress subsequently funded a review of this issue by the National Academy of Sciences.<sup>2</sup> A steering committee was established in May

<sup>2</sup> The NAS ergonomics report responds to seven questions posed by Congressman Livingston:

1. What are the conditions affecting humans that are considered to be work-related musculoskeletal disorders?
2. What is the status of medical science with respect to the diagnosis and classification of such conditions?
3. What is the state of scientific knowledge, characterized by the degree of certainty or lack thereof, with regard to occupational and non-occupational activities causing such conditions?
4. What is the relative contribution of any causal factors identified in the literature to the development of such conditions in (a) the general population; (b) specific industries; and (c) specific occupational groups?
5. What is the incidence of such conditions in (a) the general population; (b) specific industries; and (c) specific occupational groups?

Testimony: Ergonomics in Small Businesses  
 UAW Health and Safety Department  
 April 13, 2000

1998, under the auspices of the NAS Committee on Human Factors. The UAW believed this review was unnecessary, but we recognize that NAS reviews are frequently mandated by Congress when a sufficient number of members distrust the conclusions of government expert agencies.

NAS studies typically consist of literature reviews and presentations at open meetings, followed by a report drafted by the expert committee and reviewed by the Academy members and other peer reviewers. The ergonomics study involved an open workshop attended by 66 leading technical experts. The UAW participated in this workshop, presenting evidence of our experiences with ergonomics programs. The NAS issued a report on the study in 1999. The summary conclusion was: "Scientific research clearly demonstrates that effective work place interventions are available which can reduce ergonomic hazards and prevent musculoskeletal disorders. There is evidence that interventions are cost-beneficial for employers." The report thus validated the scientific conclusions cited by OSHA as the basis for its decision to move forward with an ergonomic standard.

In 1998, Congress commissioned a second NAS study of the same issues. The UAW notes that the legislative history on the appropriations bill funding the second study includes a letter signed by then Chairman Bob Livingston and ranking member Dave Obey saying the study will not be the justification for delay in promulgating the ergonomic standard. The UAW believes that no significant change in the overall view of causation and prevention of work-related musculoskeletal disorders will issue from the second NAS committee.

In any event, the second NAS study will not quell controversy, because opponents of the standard have already called for an investigation of the investigation. Apparently, there are some in Congress who simply will not take "yes" for an answer!

**5. The principal need over the next decade is abatement of exposure to physical stresses.**

Many case histories show improved health outcomes on jobs where risk factors had been reduced. Many facilities report reduced injury rates after implementing ergonomics programs. Scientific studies show reduced injury rates and symptom complaints after job changes. These case studies were reported in

6. Does the literature reveal any specific guidance to prevent the development of such conditions in (a) the general population; (b) specific industries; and (c) specific occupational groups?
7. What scientific questions remain unanswered, and may require further research, to determine which occupational activities in which specific industries cause or contribute to work-related musculoskeletal disorders?

Testimony: Ergonomics in Small Businesses  
 UAW Health and Safety Department  
 April 13, 2000

the NIOSH conference and are regularly presented at professional meetings. The data presented above show sector-wide reductions in MSD rates in the sector with the most advanced ergonomics activities. These successes are reasons for government to keep pressure on employers to abate ergonomic hazards.

The principal problem plant ergonomics committees report is not being able to get high-risk jobs fixed in a timely fashion. High-risk jobs are jobs where multiple injuries have already been recorded. Solutions are usually identified directly from the risk factor analysis: the job task must be changed to reduce the force, limit the number of repetitions of the same motion, or allow the worker to do the job in a neutral posture.

Routine solutions include raising loads off the floor with lift tables, adjusting the height of work, reducing the reach to get or place parts, damping vibration, placing the tool or the work in a fixture, reducing or counterbalancing tool weight. Many tricks of the trade are known to engineers and workers alike. People from the workplace know job changes that will allow the work to be done and reduce the stresses. Virtually all these solutions improve quality and efficiency.

Nevertheless, to solve ergonomics problems and to reduce injury rates in the long term, an employer has to invest time and money up front. Unless pressure for job improvement is maintained, employers will resist stepping up to their responsibility.

**6. The UAW has developed and implemented an ergonomics model for small manufacturing suppliers and office and professional facilities which demonstrates that ergonomics is necessary and feasible in such facilities. These programs also establish industry recognition of MSD risk factors and the elements of a program needed to protect employees.**

The UAW has implemented ergonomic interventions at approximately 45 smaller UAW-represented worksites over the past five years. The optimal intervention involves all the elements of the OSHA standard, except that MSD management typically falls short of the OSHA proposal.

The essential element of the intervention is training of a worksite ergonomics committee to analyze jobs and suggest interventions. This training is now primarily conducted by a group of peer trainers, called Local Union Discussion Leaders (LUDL's). LUDL's are full time employees at UAW-represented facilities. They are shop floor employees who move into a trainer position because of their interest and demonstrated training skills. These persons are released from work on union leave at UAW request to conduct training related activities. LUDL's assigned to ergonomics training are usually ergonomics committee members at their home facility. They have all taken at

Testimony: Ergonomics in Small Businesses  
 UAW Health and Safety Department  
 April 13, 2000

least a 40-hour course, conducted job analyses, received training technique instruction and been fully evaluated by UAW Staff and University of Michigan training evaluation staff.

Our experience with this training method indicates that because it is based on hands-on activities, it ensures retention of information. The small group discussion and problem-solving allows for direct learning from peers with experience in the topic. The training includes extensive case studies through the use of videos. In addition, it is delivered at the site. It includes a component where participants evaluate real jobs on the shop floor, in real time.

The UAW has implemented successful ergonomics programs using this training at numerous small businesses, including Jaquith Industries (Local Union 1128) in Syracuse, New York. With the completion of a recent 40-hour Practical Ergonomics Training (PET) program, Jaquith workers are now able to evaluate problem jobs and develop solutions. Some jobs in this shop are presently being re-engineered to eliminate job hazards. In a recent letter to the UAW Health and Safety Department from Jaquith's owners, they praised and credited UAW's Health & Safety Department grant staff for a professional job in helping them to assess their ergonomics concerns and offering solutions to the problems they faced.

Other small employers who have worked with the UAW to establish successful ergonomics programs include: Recycle Ann Arbor (Local Union 157) in Ann Arbor, Michigan; Bosch Braking Systems (Local Union 2155) in Johnson City, Tennessee; United Defense Systems (Local Union 683) in Minneapolis, Minnesota; Sidler Corp. (Local Union 417) in Madison Heights, Michigan; and AP Parts (Local Union 12) in Toledo, Ohio.

**7. The OSHA process, including the rulemaking, is a model allowing all interested parties to have their say.**

The ergonomics standard has been under consideration for ten years, initiated by then-Secretary of Labor Elizabeth Dole. OSHA invited stakeholders to participate in many meetings to discuss key issues in the rule before a proposed standard was issued. NIOSH held an open invitation national conference to present best practices. OSHA held a series of regional open invitation best practices conferences. There was every opportunity for pre-proposal input to all interested parties.

A working draft of the ergonomics standard was reviewed by small business representatives under the SBREFA process, beginning in February, 1999. OSHA, together with the Office of Management and Budget and the Small Business Administration created a panel to review and comment on a working draft of the standard. The panel sought the advice and recommendations of potentially-affected small entity representatives, consulting with 21 persons. This



Testimony: Ergonomics in Small Businesses  
 UAW Health and Safety Department  
 April 13, 2000

included a face-to-face meeting on March 24-26, 1999. The UAW notes with concern that small business representatives were given special status and access to rulemakers to ask questions and make comments before workers and the public had an opportunity for similar input. Nevertheless, in accordance with law, the SBREFA panel submitted a report to OSHA on April 30, 1999.

The SEBREFA panel made 36 recommendations to OSHA concerning the ergonomics standard. OSHA responded to each one of them, as detailed in the preamble of the proposed rule. Some comments resulted in modifications to the cost estimates of the standard. Others resulted in clarifications or changes to the explanation of the regulatory text. Finally, several changes in the regulatory text were made in response to recommendations. These changes include: removing a provision that employers must analyze jobs with "known hazards;" providing a step-by-step incremental abatement process; and modifying the medical management program to reduce potential cost to employers.

The UAW notes that some of the changes from the working draft made in response to small business recommendations - in particular the incremental abatement process - are now the basis for criticism by business representatives.

I can also report that the ongoing OSHA ergonomics hearings continue this open process. I, along with a panel of UAW staff and local union representatives testified in Washington on March 30, and appeared before OSHA in Chicago on April 11. And I have been present for testimony on several other days as well. Our group was among the hundreds of persons who asked for and received time for presentations.

This committee should take note of the remarkably open nature of an OSHA standard hearing. Prior to a hearing, OSHA issues the proposal and explanation, and invites written comments. The hearing starts with the OSHA team which wrote the standard appearing on stage taking questions from all comers, industry and labor, explaining and defending the proposal, on the record. Then, OSHA presents experts, who have to appear and face questioning by all parties under the same ground rules. After OSHA has laid out its proposal and its evidence, anyone with an opinion can submit evidence and present oral testimony. However, the price of appearing before the team which will write the standard is taking questions from participants from industry, labor and OSHA, also on the record. For questioning of witnesses, labor and OSHA have relied principally on subject matter experts rather than lawyers. United Parcel Service, the main opponent of the ergonomics rule, asked for two and a half days of testimony, then dropped nearly all its witnesses and took just a couple of hours.

Ultimately, when OSHA promulgates a standard, the agency has to respond to the substantial comments in the explanation (preamble) of the rule, and eventually face court and congressional review on whether substantial evidence in the record, taken as a whole, supports the rule.

Testimony: Ergonomics in Small Businesses  
 UAW Health and Safety Department  
 April 13, 2000

It would be better to wait for all the evidence to be in before characterizing the debate, but this committee deserves a report from the front.

**8. The present industry critique of the OSHA proposal rejects every concession to industry that OSHA has made.**

OSHA responded to early industry comments by proposing a "plain language" ergonomics standard, by allowing management "flexibility" in determining the exposure assessment methodology, by permitting management to defer exposure assessment until injuries or symptoms complaints were reported, by permitting the incremental abatement and the "quick fix" alternative, and by "grandfathering" existing programs that meet the requirements of the proposed standard.

Now, ironically, each of these concessions is a target of industry criticism. Nevertheless, the UAW believes that OSHA can, and should, respond to these criticisms within the bounds the current rulemaking process, and in accord with the notice given to the parties.

Specifically, the UAW recommends that OSHA identify, in non-mandatory sections of the rule, those risk assessment checklists and other methodologies OSHA would accept. In addition, OSHA could give examples of criteria for force, postural deviations and duration of exposure, which could be used to exclude jobs from the reach of the standard. OSHA could also provide the criteria by which alternative nationally-recognized methods or consensus standards could be evaluated and accepted. This would provide guidance for employers who want guidance, but permit flexibility for employers or others who want to use alternative methods. Such specification would provide "safe harbors" for employers. The UAW notes that industry commentary on the proposed rule makes similar recommendations.

**9. In conclusion, the ergonomics standard is necessary, and it is within the capabilities of small business to comply.**

The underlying premise of the ergonomics standard is that an employer who knows a job has injured an employee must take feasible steps to make the job safer. Few would disagree with the propriety of this premise. The UAW and many smaller employers have demonstrated that ergonomics programs are well within reach. Straightforward risk assessment methods have been validated for use by facility personnel without professional training. In many of our worksites, these methods are applied predominantly by hourly workers, and training to use these methods is also done by hourly workers. These methods both measure hazard and validate abatement.

Testimony: Ergonomics in Small Businesses  
UAW Health and Safety Department  
April 13, 2000

In addition, smaller employers tend to use standardized equipment such as hand tools and computer work stations which are essentially catalogue items. In small shops, management tends to be closer to the floor and more intimately familiar with production methods and processes than in larger enterprises. Small employers can avail themselves of such other sources of additional technical expertise as workers' compensation insurance carriers, industry associations and OSHA consultation and outreach programs.

Ergonomics works. It's time to get down to the business of applying ergonomics.

FEM/BCS:mkh/fcg  
opeiu494afl-cio

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**TESTIMONY OF**  
**AMERICAN SOCIETY OF SAFETY ENGINEERS ("ASSE")**

**On the Matter of:**

**U.S. Department of Labor**  
**Occupational Safety and Health Administration**

**Proposed Standard on Ergonomics**

**Presented by**  
**John H. Cheffer, CSP, PE**

**April 13, 2000**

Chairmanwoman Kelly and esteemed members of this Subcommittee: My name is John Cheffer. I am a Professional Engineer (PE), Certified Safety Professional (CSP), and Chairman of the American Society of Safety Engineers (ASSE) National Governmental Affairs Committee. ASSE, founded in 1911, with almost 33,000 members, is the oldest and largest Society of safety professionals in the world. We are dedicated to the protection of people, property, and environment on a worldwide basis.

My testimony focuses on how ASSE views the proposed OSHA ergonomics standard and how it could potentially impact small business. It is also appropriate to point out that through my professional life, I have personally worked with hundreds of small businesses on safety and health issues, including ergonomics.

ASSE wants to be clear on the following point: The Society is a supporter of OSHA as we believe the Agency maintains a national focus on the importance of occupational safety and health, and there is a need for a functional and understandable ergonomic standard that enables all employers to recognize problems and learn how to solve them. However, ASSE is concerned that the flaws in the proposed rule - such as the single incident trigger and its interference with established state worker's compensation programs -- and the rule's complexity with respect to small business entity compliance may result in the rejection of the entire standard. That is the precise reason

why ASSE is the only organization that wrote an alternative proposal for OSHA's consideration.

With respect to small business issues, a key question involves the cost and complexity of performing an ergonomic analysis. OSHA has provided insufficient information to enable the small business owner or operator to understand the ergonomics issue and the proposed standard, or to determine what actions must be taken in order to identify and correct ergonomic hazards. ASSE is at a loss to see how a small business employer without specialized training will be able to use the standard to prevent work-related musculoskeletal disorders ("WMSDs"). The current proposal is much too complex for the average employer to use as a tool to address ergonomic issues.

ASSE believes that the Agency has underestimated the costs involved in implementing and maintaining compliance with the standard. The Agency gives the perception that ergonomic evaluation and controls are not that difficult to understand and are inexpensive to implement. However, ergonomics and cumulative trauma disorders are very complicated technical issues. Most ergonomics problems cannot be corrected through low-tech solutions such as having an employee stand on a box, or propping up a computer monitor with a phonebook, as OSHA has suggested.

ASSE asked OSHA if it conducted any studies or research on how many small business people can work the NIOSH Lifting Formula. The Agency does not appear to have adequately studied this issue. For example, while the NIOSH formula, Snook and Cirello tables, and RULA are specifically referenced in the Preamble, we do not believe that the typical small business person will be able to learn all of this in the hour of training allotted in the Preamble's cost assessment. Later in the Preamble, OSHA acknowledges that more training may be necessary depending upon the specifics of the operation, but this additional training is apparently not factored into its cost estimates.

ASSE recently completed a survey of our members and other safety professionals on the issue of consultation. A total of 4,500 safety professionals were surveyed. While we readily acknowledge that this is not a scientific evaluation, it does give an excellent "snap shot" into cost considerations. Our data indicate that the average hourly billing rate for an ergonomic audit/evaluation is approximately \$108 per hour for each consultant. This is an across the board average, and costs would probably be higher on the East or West coasts.

The basic problem with cost projection is that there are so many variables involved in performing a quality ergonomic evaluation, including the size and nature of the workplace and the workforce. The time required to conduct an evaluation at a small business involved with material handling or manufacturing would certainly be

more extensive than an audit in an office setting, and the "fixes" could be much more costly as well. Along with the initial consultant's visit, there would be costs associated with report preparation, follow-up consultation, potential revisions to an action plan, and implementation of the recommendations. Based upon our data and experience, the OSHA time estimates in the proposed rule are inaccurate with respect to implementation of a work-related musculoskeletal disorder prevention program.

With respect to the cost of correcting ergonomic hazards at a small retail or service business, ASSE cannot give an overall estimate because of the variety of work environments. However, I have personally worked on issues which have run anywhere from \$15 (e.g., changing table legs) to completely reengineering a work process, which costs thousands of dollars. Each situation is different -- that is the key difficulty with assessing the impact of OSHA's proposed ergonomics standard. There is no a one-size-fits-all approach to ergonomics, and our core belief is that it is impossible to provide a one-size-one-average-cost.

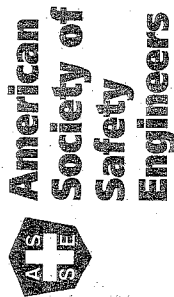
Another issue is whether OSHA could have identified successful ergonomic intervention controls. On January 8-9, 1997, ASSE had the opportunity to work with OSHA on a very successful conference titled: *Ergonomics, Effective Workplace Practices and Programs*. There were approximately 1,000 participants representing both the



private and public sector. The conference focused on different approaches to ergonomics. The results were excellent, and it would have been useful for OSHA to point to some of these intervention strategies in the proposed rule's preamble for consideration by interested stakeholders. Such examples could show how ergonomics hazards have been effectively and efficiently addressed in the workplace by employers.

In summary, although ASSE's overall experience with OSHA has been very positive and we believe that a standard is needed, OSHA should not finalize the rule as drafted in the November 1999 proposal. OSHA must find an alternative method of protecting U.S. workers from work-related ergonomic injuries while not adversely impacting American small business. ASSE stands ready to work with both the agency and Congress in ensuring that a standard is eventually implemented that is both economically and technically feasible.

I thank you for your time today and would be pleased to answer any questions that you may have.



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### About the Society

Founded in 1911, the American Society of Safety Engineers (ASSE) is the world's oldest and largest professional safety organization. ASSE's mission is to foster the technical, scientific, managerial and ethical knowledge, skills and competency of safety, health and environmental professionals for the protection of people, property and the environment, and to advance the status and promote the advancement of the safety profession.

The Society's 32,600 members manage, supervise and consult on safety, health and environmental issues in industry, insurance, government and education. Safety professionals help prevent accidents, injuries and occupational diseases; create safer environments for work and leisure; and develop safe products in all areas of human activity.

Currently, ASSE is guided by a 15-member Board of Directors, which consists of eight regional vice presidents; three council vice presidents; and the Society president, president-elect, senior vice president, vice president of finance and executive director. The Board is guided in decision-making by five standing committees and four councils on - Practices & Standards, Professional Affairs, Professional Development and Member/Region Affairs.

### Networking Nationally

ASSE has 149 chapters, 55 sections and 54 student sections within eight regions nationwide. Chapters offer localized membership services, networking and professional development opportunities through seminars, conferences, meetings and newsletters.

Through its 12 divisions, ASSE offers professional development opportunities and technical assistance in various career paths. These divisions are: construction, consultants, engineering, environmental, healthcare, industrial hygiene, international, management, mining, public sector, risk management/insurance and transportation.

### Providing Quality Education

ASSE members gain year-round opportunities for professional development through focused seminars, self-study programs, technical publications, CD-ROM training and computer resources. The Society also holds an annual Professional Development Conference and Exposition in June.

ASSE awards continuing education units (CEUs) to seminar, symposia and conference attendees and to self-study program participants in order to maintain their Certified Safety Professional (CSP) designation. Many of the Society's education programs offer CM points to satisfy maintenance requirements for CIH designations. The Society provides on-site seminars to corporations and government entities internationally, and jointly sponsors programs with other organizations.

### Serving Members

To serve the unique needs of safety professionals, ASSE provides the following membership services:

- *Professional Safety Journal* and *Society Update* Newsletter
- Representation in Legislative and Regulatory Issues
- Industry Standards-Making Process
- Academic Standards for Safety Education
- Continuing Education Training Seminars
- Leadership Conference for Chapter Officers
- JobLine Employment Service and Membership Directory
- Professional Development Conference and Exposition
- Technical Publications
- Occupational Safety and Health, Industrial Hygiene and Ergonomics Self-Study Course\*
- Full-Motion, Interactive CD-ROM Training

- Localized Networking and Professional Recognition.
- Insurance Programs (Group, Medical & Professional Liability)
- Approved for college credit by the American Council on Education

### Setting the Standard

As secretariat for seven American National Standards Institute accredited committees, the Society continues to expand its role in the standards-making process. The standards are: A17.64.1 Safety Requirements for Workplace Floor and Wall Openings, Stairs and Lifting Systems; Z87.1 Eye and Face Protection; Z117.1 Safety Requirements for Confined Spaces; Z359.1 Fall Arrest Systems, Subsystems and Components; Z390.1 Accepted Practices for Hydrogen Sulfide (H<sub>2</sub>S) Safety Training Programs; Z490.1 Criteria for Best Practices in Safety, Health and Environmental Training; and Z590 Criteria for Establishing Levels of Competence and Certification in the Safety Profession.

Through its activities at the university level, the Academic Accreditation Council, now the Professional Educational Standards Committee, works to maintain a high standard of preparation for future safety professionals and ensures that the content of academic programs is relevant to the needs of the safety profession and the constituencies it serves.

As a member of the Accreditation Board for Engineering & Technology (ABET), ASSE encourages the incorporation of safety principles and courses into engineering program curricula nationwide and establishes curriculum standards for associate, baccalaureate and master's degree programs. ASSE also participates in site visits to colleges and universities to accredit safety programs. ABET and ASSE have accredited 11 baccalaureate and master's safety degree programs nationwide.

ASSE maintains a strong commitment to professional certification via participation on the Board of Certified Safety Professionals. To help individuals earn the CSP designation, the Society offers the CSP Refresher Guide and in-depth continuing education and training seminars,

which are held throughout the year at metropolitan locations nationwide. In addition, self-study courses are offered to help individuals prepare for specialty examinations, maintain professional credentials or obtain college credit.

### Recognizing Excellence

Outstanding accomplishments in the safety and health profession are recognized through a variety of awards programs. The highest honor, ASSE Fellow, honors individuals with broad, significant, career-long contributions to the profession and the Society. Other awards include the Edgar Monsanto Queeny Safety Professional of the Year Award, J&H Marsh & McLennan Scrivener Editorial Award and Veterans of Safety Professional Paper Awards.

Student awards include the Zurich Commercial Insurance John E. Anderson Safety Student of the Year Award, Safety Equipment Distributors Association (SEDA) Scholarships, Mine Safety Appliances Company Outstanding Student Section Award and J&H Marsh & McLennan Student Paper Awards. ASSE also sponsors Charles V. Culbertson Outstanding Volunteer Service Awards, President's Awards, Chapter Achievement Program and Long Service Recognition.

### Speaking Out

To ensure that safety and health remain a key focus for the country, Paton Boggs LLP continues to represent ASSE's national legislative and regulatory interests in Washington, D.C.

The Society prepares position statements in response to, and in anticipation of, important safety and health legislation and regulation, and publishes regular "ASSE Perspectives, monthly Regulatory News" and bi-monthly "Governmental Affairs" columns in *Professional Safety Journal*. The Governmental Affairs Committee (GAC) also publishes ASSE positions and correspondence on the Society's web site (<http://www.ASSE.org>).

The Society enhances the image of the safety profession and its practitioners via extensive communications programs and by maintaining frequent contact with the safety and health trade press. ASSE also conducts research on various topics, including compensation and needs assessments.

### Shaping the Future

ASSE takes an active role in shaping the future of the safety profession. The Industry Relations Committee maintains a liaison with other professional societies and groups worldwide that share concerns, goals and strategies which impact members and the profession at large.

The GAC maintains ongoing contact with government agencies including the Occupational Safety and Health Administration, Environmental Protection Agency, Consumer Product Safety Commission, National Highway Traffic Safety Administration and the National Institute for Occupational Safety and Health.

Recognizing growth in the profession, as well as a need for even more comprehensive services, ASSE's Board of Directors chartered the ASSE Foundation in 1990. Designed to provide professional development and financial resources to qualified individuals and non-profit organizations, the Foundation seeks to advance safety and health development, research and education in the public interest. The Foundation's long-range vision is to provide scholarships and research for the safety profession.



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**ASSE SUPPORTS AN ERGONOMIC STANDARD,  
QUESTIONS OSHA'S PROPOSAL**

**Des Plaines, Illinois (March 2, 2000)** - In its comments filed today with the Department of Labor on the proposed Occupational Safety and Health Administration (OSHA) ergonomics standard, the American Society of Safety Engineers (ASSE) expressed a need for such standards, but outlined several major concerns that must be addressed before moving forward. Sparked by the possibility that the current negative debates being waged countrywide on this issue could result in the standard being totally rejected, the ASSE also provided a counter proposal, based on input from its 33,000 members, which offers a more reasonable and user friendly approach to the control of workplace musculoskeletal disorders and ergonomic exposures than the current OSHA proposal.

"This proposed standard can be of significant benefit to employees, employers, professional safety and health organizations, and the country overall if and when it is finalized," ASSE's President Frank H. Perry, PE, CSP, said in a letter to OSHA. "ASSE will continue to support OSHA in the creation of a feasible ergonomic standard, based on good science and sound technology, which will benefit all stakeholders, however, we urge OSHA to consider our counterproposal in an effort to assure that an effective standard is adopted."

Today is the final deadline for public comments on an ergonomics standard proposed last winter by OSHA which would require employers in manual handling and manufacturing operations to implement ergonomics programs in their workplaces. However, the provisions of the standard could be triggered in any workplace (agriculture, maritime operations and construction industries are not included in the proposed rule) so long as one musculoskeletal disorder (MSD) is reported. MSD's are associated with repeated trauma, including carpal tunnel syndrome and other conditions that result from repetitive motions. They are also known as cumulative trauma disorders.

"In addition, many of our members, who work for all types of industries, have developed and implemented cutting edge ergonomic safety programs that have led to significant decreases in the number of workplace MSDs," Perry continued. "In light of this and other facts we believe that OSHA should consider a more incremental approach to the ergonomics issue and promulgating a standard."

Perry suggested the agency could promulgate a regulation addressing lifting and back injuries followed by other workplace MSD standards and regulations. ASSE suggests that OSHA consider utilizing the Meat Packing Guidelines as a basic approach that can later be strengthened when the agency obtains more scientific and technical data and other information on effective workplace MSD intervention controls.

The ASSE is also urging OSHA to develop a more reasonable standard which enhances occupational safety and health, and leave the issue of payment for rehabilitation, social issues and workers' compensation reengineering to the existing federal and state laws and regulations governing these areas. "We have concerns about the apparent social engineering agenda contained in the current OSHA proposal which

overshadows the prevention aspects of the standard," Perry continued. The ASSE also believes that the 'one case' trigger called for in the standard is poor policy because many ergonomic problems arise off-the-job and in the absence of a clear triggering incident, getting at the root cause is extremely problematic. "If the cause is not in the workplace, trying to fix the workplace will not reduce or eliminate injuries," Perry stated.

OSHA's proposal, Perry noted, as written is cumbersome, confusing and unclear because it does not adequately explain what the standard actually requires for 1) a workplace ergonomic program, 2) the standard of proof to establish the program, and 3) how the workers restriction /payment portions of standard will do anything to prevent workplace MSDs. The proposal, Perry stated, also needs to better focus on overall safety and health issues and not shift the focus to compliance with ergonomics. "We believe it would be poor policy to allow ergonomics to become the primary driver of a safety and health program," Perry said.

The ASSE urges OSHA to promulgate this as a safety standard, not as a health standard as they are proposing to do and believe that ergonomic injuries should not be treated in a different manner than other workplace injuries.

ASSE's comments on the OSHA ergonomics proposal and a copy of ASSE's counterproposal are posted on ASSE's web site at <http://www.asse.org/ngcomm34.htm>

ASSE officials will be testifying in a series of public hearings on the OSHA proposal slated to be held in Washington, D.C. in March and May, and in Chicago and Portland, Oregon, this April.

Founded in 1911, the ASSE is the world's oldest and largest professional national safety organization. It's 33,000 members manage, supervise and consult on safety, health and environmental issues in industry, insurance, government and education nationally and globally.

-- 30 ---

[Click here to go back to ASSE NEWS.](#)

| <b>Correspondence, Statements, and Testimony</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ASSE Letter                                      | March 1, 2000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Letter to ASSE                                   | U.S. Department of Labor<br>Occupational Safety and Health Administration<br>Attn: Mr. Charles Jeffress, Assistant Secretary of Labor<br>200 Constitution Avenue, NW (S.2315)<br>Washington, DC 20210                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Board of Directors                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Chairman and Section                             | <b>OSHA PROPOSED ERGONOMICS STANDARD</b><br><b>[Docket No. S-777, RIN No. 1218-AB36]</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Annual Conference                                | Assistant Secretary Jeffress:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Conference Proceedings                           | The American Society of Safety Engineers (ASSE), on behalf of its nearly 33,000 members, submits the following comments concerning OSHA's proposed Ergonomic Program Rule, (64 Federal Register, 65768 11/23/99).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Conference Proceedings                           | Enclosed are a series of documents along with this statement which are requested to be officially made part of the docket. ASSE's review of the proposed standard indicates that even though some changes have been made, its content and tenets are still consistent with the original February, 1999 working draft. Thus, the ASSE June, 1999 comments are still highly relevant to this proposal. The enclosed documents include:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Conference Proceedings                           | <ul style="list-style-type: none"> <li>• ASSE June, 1999 Correspondence on the OSHA Working Draft</li> <li>• ASSE June, 1999 Counter Proposal to the OSHA Ergonomics Working Proposed Rule</li> <li>• National Registry of Safety Professionals and Other Registrants</li> <li>• Background Information of the Board of Certified Safety Professionals (BCSP)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Conference Proceedings                           | <b>ASSE Perspective Regarding The Proposed Rule</b><br>A major element of the Society's mission is to support sound regulatory actions based on good science and resulting knowledge and actions which enable the development of effective safety and health standards designed to facilitate the identification and control of hazardous conditions and practices. From such standards, hazard control methods, procedures, and programs are initiated to promote positive and pro-active approaches to safety and health. An integral element of these techniques is quality training and educational requirements, which communicate the necessary hazard recognition, control, and avoidance information. This methodology, when properly implemented, has the potential to effectively reduce our nation's workplace injury and illness toll. ASSE takes the following stance concurring promulgation of a mandatory ergonomics standard: |
| Conference Proceedings                           | We commend the Agency for their efforts to develop a standard addressing a significant problem in today's working environments. ASSE wants to be clear about our view of the need for a functional ergonomic standard. We reaffirm our support for many of the technical elements of the proposal, particularly those which follow elements found in the "red meat" guidance document. However, there is a concern that the end result of the debates and other potential actions relating to the proposal will result in the rejection of the entire standard. Such a result will most impact employees, the very people the proposal intends to protect.                                                                                                                                                                                                                                                                                     |
| Conference Proceedings                           | ASSE perceives the proposal falling short of its original goals of sound science, adaptability for small employers, utilization of safety and health professionals, and creates an over-reliance on the role of health care providers and employees. The Preamble attempts to mandate and mandate too much responsibility on both employers and employees. Through the use of select sections, such as Quick Fix                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

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and Grandfathering, the Agency maintains the proposed standard does not pose an unusual burden upon the private sector, and thus, by default upon safety and health professionals. In reality the proposal is actually casting a wide net of adverse responsibility on the private sector and consequently on our members. These issues are of great concern as we recognize the measure of performance will be how compliance program managers decide to interpret and enforce the eventual standard, not what the authors indicate they meant. Another issue is the capability of compliance officers to accurately measure and understand the programs at the sites they visit. While many ergonomic solutions can be considered logical and evident, those situations requiring critical analysis and innovative solutions may not be understood by the untrained observer. For these reasons a logical, clearly stated document that employers, employees, safety professionals, and compliance officers can understand is the best public policy.

Specific aspects of the proposal may force safety professionals into a no-win regulatory situation regarding injury causation that is currently adequately handled by state workers' compensation statutes. During the draft comment period ASSE commented extensively about OSHA's February, 1999 draft proposal. We concluded the original proposal was much easier to understand than the current document. While OSHA's draft was a reasonable starting point, ASSE offered a counter-proposal which is again recommended to the Agency. The ASSE counter-proposal remains a sound discussion document that addresses the specifics of the safety related ergonomic issues employees and employers face on a daily basis.

The most disquieting element of the current proposal is its significant departure from previous standards making. This proposal leans heavily toward correcting issues that should be properly addressed by revising 29 CFR, Part 1904, if incident reporting is a real issue, or, if wages are an issue, by Wage and Hour standards applications. ASSE sees the proposal potentially diminishing the abilities of safety and health professionals and practitioners to address actual hazards and exposures in the workplace. The proposed standard will over-focus employers on this issue, to the exclusion of more important hazards and exposures as well as putting safety professionals at odds with employers and employees as they are forced to address social issues instead of safety issues.

Conclusions of ASSE's perspectives:

- ASSE supports the development of a stand-alone ergonomic standard. This standard should be performance oriented. It should be applicable to all employers and describe the basic tenets and best practices necessary for successfully developing and managing an effective ergonomic program. The standard needs to be supported by a cohesive outreach effort melding the resources of OSHA, business associations, professional societies and academia. Such a program can be supported by other positive reinforcement actions such as penalty reductions for good faith efforts by employers; or, because of the significant anticipated costs to employers, granting tax credits for the creation/maintenance of an acceptable program.
- The establishment of basic ergonomic management programs and increasing employee awareness and involvement on these issues is not a burden to employers when compared to other safety and health compliance requirements. In fact, most efficient and effective ergonomic initiatives will usually "dovetail" with other existing safety and health programs.
- ASSE believes there is science justifying the creation of such a standard. ASSE accepts that the National Academy of Science (NAS) ergonomics study released two years ago indicated an overriding basis for an ergonomic standard. However, ASSE supports enhancing the knowledge base through continued research into the causation, identification, and prevention of ergonomic injuries.

ASSE Key Concerns With This Initiative

There are many ASSE members with cutting-edge ergonomic programs in effect. Member provided data and anecdotal information indicates that these programs have led to significant decreases in the numbers of workplace musculoskeletal

disorders (WMSDs). While OSHA's dedication to reducing workplace injuries, illnesses, and fatalities is well recognized, careful analysis will show that the proposed standard may not have the expected positive impact on the reduction of WMSDs in the workplace. Consequently OSHA should review the June 1999 ASSE counter proposal which offers a more reasonable and user friendly approach to the control of WMSDs and ergonomic exposures than the current proposed rule. There is a need to cull out of the proposal, from a sound scientific standpoint, those provisions that will diminish the effectiveness of the standard.

Realistically OSHA should start over again and use the ASSE counterproposal as the basis for a reasonable working standard. It is important that OSHA consider a more incremental approach to the ergonomics issue. If the ASSE counterproposal is not acceptable to OSHA, perhaps the Agency could promulgate a regulation addressing lifting and back injuries followed by other WMSD standards/regulations. Another possibility would be to utilize the Meat Packing Guidelines as a basic approach that can later be strengthened as the Agency obtains more scientific and technical data and other information on effective WMSD intervention controls.

ASSE notes that some of the recommendations and suggestions of its original June 1999 comments to OSHA were incorporated into the current version of the proposed rule. Although we appreciate OSHA's responsiveness, this standard still encompasses requirements that are not reflective of sound public policy. To this end, the following issues must be resolved by OSHA before the standard is finalized:

#### Unnecessary Resistance to the Standard

Hundreds of ASSE members have contacted the Society in support of an ergonomics standard. But, there is consensus that some sections of the proposal, (e.g., the work restriction program resulting in unwarranted expense) will generate unneeded resistance. There is concern within ASSE that the current proposal could very well result in throwing the baby out with the bath water.

There is equal concern about the apparent social engineering agenda contained in the document which overshadows the prevention aspects of the proposal. Although an ergonomics standard is needed, if the Agency's proposal is defeated, we fear there might not be another opportunity in the foreseeable future to try again. We urge OSHA to propose a more reasonable standard which enhances occupational safety and health, and leaves the issue of payment for rehabilitation, social issues and workers' compensation reengineering to the existing federal and state laws and regulations governing these areas.

#### WMSD Versus MSD

ASSE questions why OSHA stopped using the term WMSD (workplace muscular skeletal disorder) and substituted MSD (muscular skeletal disorder). It is important that the standard specifically recognize that the rule will only address workplace ergonomic issues, and recommend that OSHA use the term WMSD to make this differentiation. This proposal will create the situation where safety professionals, on behalf of their employers, coworkers, clients, and associates, will spend significant time and resources to address, manage, and control MSDs that have nothing to do with the workplace. In addition, the definition and symptoms of an MSD are consistent with those described in medical science books addressing exercise and sports activity overexertion, thus, encouraging the reporting of injuries that have nothing to do with workplace exposures and hazards. The proposed standard and the resulting real and implied responsibilities ascribed to safety and health professionals and practitioners will lead to unwarranted OSHA citations and penalties, criminal sanctions (if the standard of compliance equals a health standard,) and lawsuits.

#### Format Issues

The original 1998/1999 working draft was a much more reasonable and understandable standard than the current proposal. Virtually every ASSE member who reviewed the working document in February 1999 commented that the format of the original proposal was easy to follow and understand. Such an approach would have been beneficial to small businesses or other business entities that do not have a safety professional on-staff or have access to a knowledgeable consultant.



However, there is now a consensus that the current draft is a significant regression from the 1998/1999 document. The proposed rule is cumbersome, confusing, and unclear. The Society has been reviewing the document since it was published and still find it unclear as to what the standard actually requires for 1) a workplace ergonomic program, 2) the standard of proof to establish the program, and 3) how the worker restriction/payment portions of standard will do anything to prevent WMSDs.

The Preamble is very confusing and mainly consists of OSHA's justification for the proposed rule, (specifically the material on workers restriction program). A detailed review of worker compensation statutes is irrelevant to such a standard. All of the justification language should be eliminated from the preamble, and if used at all, be included as non-mandatory appendix for those who would have interest in reading it. The preamble should explain the intent of the standard, provide employer and employee comment and OSHA's reaction to such comments, provide interpretations, offer insights to future enforcement mechanisms, and provide technical insight on the standard itself. As drafted however, the Preamble fails to adequately explain these areas, and instead, is dedicated to self-justification by OSHA of the standard.

#### Loss of Focus on Overall Safety and Health

The structure of this standard will de-emphasize an overall efficient/effective safety and health management program and shift the focus and resources to that of compliance with the proposed ergonomic standard. A sound ergonomic program should be part of an overall efficient/effective safety and health program. It would be poor policy, and an unfortunate consequence, to allow ergonomics to become the primary driver of a safety and health program.

#### Mechanization Versus Human Labor

ASSE strongly favors the establishment of a stand-alone ergonomic standard. The Society has been dedicated to the protection of people, property, and the environment since 1911, thus, protection of the worker is of paramount importance to us. Our concern is that if the standard will not reduce the number of WMSDs, and is considered to be unreasonable and unduly expensive, it could encourage employers to eliminate permanent jobs and consider other alternatives such as using off-shore suppliers, increased mechanization of the workplace, and changing work practices/procedures to reduce its workforce.

Since the proposed rule was published in November 1999 we have received many calls from members working in the insurance industry or consulting asking for cost/benefit information on the proposal. There are increasing attempts by companies to correlate the financial impact of the standard with that of mechanizing specific job functions, (e.g. instead of paying a worker to run a shrink-wrap machine, will the standard now make it more economically feasible to move it off-shore).

#### Safety Standard - Not a Health Standard

There is significant disagreement with the OSHA position that ergonomics is a health issue and that the rule should be promulgated as a health standard. Most cumulative trauma disorder is the result of soft tissue damage, consequently this a workplace injury issue. The standard should be promulgated as a safety standard. If an employee had a soft tissue injury in the workplace due to a "pinching" incident, the relevant safety standards would be applicable. Why are soft tissue ergonomic injuries being treated in a different manner when it would be more consistent with OSHA policy to process this initiative as a safety standard.

#### Quick Fix

ASSE supports the intent of the Quick Fix provision. However, we are puzzled why OSHA thinks an employer will know in four months whether or not the control method has worked. If the incident involves one worker, and that worker is part of worker restriction program, then the worker may not be part of the process to eliminate the WMSD. Under the OSHA scenario it is possible the employer would have to correct a WMSD exposure without having the key players involved. There needs to be a longer intervention period. A minimum of nine months seems more realistic.

Responsible Person Concept

The apparent intent of this concept is to promote a team approach to ergonomic programs and establish some documented levels of responsibility. However, the proposed standard seeks to identify specific individuals to be responsible for the establishment of programs and the initiation of corrective action. In many cases, these employees will be the staff safety professional or perhaps third-party consultants. The primary mission of the safety professional is to provide information to management supported by good science and sound technology. ASSE's concern is that during implementation and interpretation of the standard, OSHA could hold safety professionals responsible for workplace ergonomic issues beyond their control. Clarification is needed on the following issues:

- Would prompt communication of identification of hazards and suggested courses of action or corrections to responsible management leadership, by safety professionals, meet the intent of the standard?
- Would a safety professional be potentially held personally liable under the Occupational Safety and Health Act if his/her suggested corrective action was not taken and the result was an ergonomic injury to an employee?
- What would be the tort liability of safety professionals arising from workplace ergonomic injuries?
- When will OSHA provide rationale in its Preface/Preamble addressing these concerns and clarifying the exposures of the "responsible person" ?
- Will, and if not why not, the language of the standard provide such a shield for the safety professional is his or her assigned staff/non-employer role?

One Case Trigger

ASSE believes that retention of the "one case" trigger cannot be substantiated by accepted recognized practices and procedures regularly employed in the safety profession. While we acknowledge the "one case" trigger may not necessarily require the implementation of the standard, this requirement is a "lightning rod" for resistance by employers. This specific section is not supported by good science and sound technology as one case of a WMSD is simply not indicative of systemic problems. Finally, this provision is confusing and appears to be a stutter step approach to addressing an issue which other standards make much easier.

One of the biggest issues to our members is determining when an ergonomic injury is work-related. The workplace ergonomic analysis provisions of the proposed rule are designed to address this issue, but such analyses often reach unclear and disputed conclusions. Many ergonomic problems arise off-the-job, and in the absence of a clear triggering incident, getting at the root cause is extremely problematic. If the cause is not in the workplace, trying to fix the workplace will not reduce or eliminate injuries. Thus, we see the "one case" trigger as being poor policy. OSHA has heard this point repeatedly from ASSE and other stakeholders, however, we hope it will not be again ignored. Small Business Issues  
There is insufficient information to enable the small business owner or operator to understand the ergonomics issue and the proposed standard. ASSE is at a loss to see how a small business entity without specialized training will be able to use the standard to prevent WMSDs. The original draft was much more understandable to small business, whereas the new proposal will be considered by most of them to be virtually incomprehensible.

Work Restriction Program

This standard must not establish the tenet of irrefutable presumption of guilt, a presumption of guilt that our members will be forced to address, manage, and try to control. In some industries this issue might not arise, but this standard will impact much less obvious cases that cannot be readily resolved through root cause analysis. It could lead to the creation of an OSHA equivalent to Superfund that would only lead to an endless and expensive rise in the rates of litigation. This issue is perhaps summarized by the question -- when is a potential or existing ergonomic hazard permanently controlled?

We believe the Work Restriction Protection provision will have a significantly negative impact on the different state worker compensation systems. The long term impact of such a policy will be the placement of adverse burdens on safety professionals, and their employers, clients, and workers they are bound professionally to protect. As OSHA improperly makes an assumption that any MSD is work-related, the potential result of this policy could be to mire safety professionals in trying to manage worksite fixes to address a series of open-ended medical situations unrelated to actual workplace hazards or incidents.

The OSHA analysis, included in the Preamble addressing this issue, remains vague and unresolved. We understand it to say that while injuries, in general, are decreasing and similar decreases are experienced with physical stress, strain and sprain, (reference Liberty Mutual and BLS data) OSHA believes there is significant underreporting of ergonomic injuries. It appears OSHA believes this is occurring only with ergonomic injury. Such a scenario seems inconsistent with history and even the Agency's own statements. Also, OSHA's own survey of employer recordkeeping accuracy showed that the overwhelming majority of employers do report accurately.

The proposed rule also would provide employees with time off of work at 90% pay after taxes. The proposed rule, in effect, will provide a pay raise to those who are not at work since there will not be any commuting cost or other expenses associated with going to work. With the entire country moving toward efficient and effective rehabilitation of workers through improved medical management systems, why is the Agency would pursuing a policy which encourages a person to stay home?

This section (WRP) should be removed in its entirety. The objective of OSHA is to prevent injuries, illnesses, and fatalities. It is not to address how individuals are compensated during rehabilitation. There are already a whole series of federal and state laws addressing this issue. ASSE is convinced these provisions will be fought out eventually in the courts by industry organizations with OSHA's position not prevailing.

#### Grandfathering Clauses

The grandfathering clause is functionally ineffective, particularly for the small employer since the program must still be equivalent to what OSHA requires. The grandfathering concept is too vague. Based upon previous experience, compliance officers may enforce the standard in an arbitrary manner due to lack of training, certification, and experience. Such deficiencies could lead to chaos through different interpretations of whether hazards and exposures are limited to a given case. ASSE members and safety professionals who have already established ergo programs may have to jump through many hoops to convince a compliance officer that their program meets the requirements of the standard. Finally, the standard of proof is going to present significant problems.

#### Data and Cost Considerations

Careful review of the existing materials indicates that OSHA has not provided accurate case cost data. The Agency has significantly underestimated the costs necessary to implement and maintain the standard. As an example, while it appears that OSHA is planning on selective enforcement, the Agency is trying to give the perception that ergonomic evaluation and controls are not that difficult to understand and implement. However, ergonomics and cumulative trauma disorders are very complicated technical issues. Has OSHA conducted any studies or research on how many business people can work the NIOSH Lifting Formula for a multiple step lift with a twisting action in it? While the NIOSH formula, Snook and Ciriello tables, and RULA are specifically referenced in the Preamble, we do not believe that the typical business person will be able to learn all of this in the hour of training allotted in the Preamble's cost assessment. However, later on in the Preamble OSHA discusses how more training may be necessary depending upon the specifics of the operation. This issue needs to be addressed more thoroughly to avoid additional legal challenges related to the economic feasibility and the Agency's compliance with Regulatory Flexibility Act (RegFlex).

#### Competency Issues

The standard will surely trigger a significant need for trained safety professionals. However, ASSE was distressed to learn that OSHA does not recognize the

importance of using competent safety and health professionals and qualified consultants to conduct or direct ergonomic programs. OSHA should encourage employers to use staff safety professionals, or contract with those safety professionals who have the competence and expertise to conduct ergonomic related activities.

A historical concern of ASSE is that the safety profession is heavily regulated in regard to how a function/practice is to be conducted, but, there has been little if any guidance addressing the level of competence of those who perform these activities. OSHA may have to define the competence of safety professionals in the future as related to its proposed standards. ASSE stands ready to assist when this issue arises. The Society has advocated professional competence for almost ninety (90) years. Accordingly, we have the resources, expertise, and history to assist with this issue, (e.g. ANSI Z590 proposed rule, National Registry of Safety Professionals and Other Registrants, introduction of legislation defining competence in numerous states).

#### Third Party and Record Confidentiality

ASSE is very concerned that OSHA believes the establishment of an ergonomic program can be justified through hazards identified in an insurance audit or consultant's report. This infers that consultant/insurance reports must be made available to a compliance officer during an inspection. We suggest an approach to that introduced in the 1997 version of the SAFEAct, where an administrative law judge would decide based on an in-camera-review whether the Agency's request for consultants' audit reports is warranted. ASSE further notes:

- OSHA would base the establishment of a program on the report of a consultant. OSHA has opposed the use of consultants for voluntary third party audits and evaluations and has criticized their level of integrity, knowledge, and ability. However, in this case OSHA would deem the report of a consultant as authoritative when deciding whether or not an ergonomics program must be implemented. We find these positions to be inconsistent, and request clarification. If OSHA mistrusts safety and health consultants to such a degree as it previously expressed in Congressional hearings, why would the Agency now take their reports as gospel for the sake of enforcing this standard.
- OSHA must ensure some privacy for consultant/insurance reports in order to motivate employers to take viable action to foster a safe and healthful workplace.
- ASSE believes that ensuring privacy for consultant/insurance reports increases the level of responsibility that the private sector will take for the safety of its workforce.
- Ensuring privacy of consultant/insurance reports encourages accurate recordkeeping. Having accurate data is a key component in identifying potential or latent workplace hazards.

There are still a significant number of employers in the United States who do not have ergonomic programs. Thus, the creation of this standard could place a renewed national focus on the importance of ergonomic management programs. If/when the standard is promulgated, there is little question that assistance in creating and maintaining efficient/effective ergonomic management programs will be needed. The needed level of expertise is beyond the skills of many companies not employing on-staff safety professionals. In order to meet the expected need of consultation services, OSHA should consider reviewing a pilot program for voluntary third party ergonomic audit and evaluations, and work with the accredited private sector professional certification bodies, public and private recognized registries, and with credible/professional membership organizations to help ensure that consultants have an acceptable level of competence. We think the private sector might be more willing to accept the tenets of a standard if there were an employer support process similar to the one proposed in the SAFEAct.

Employee Involvement

OSHA believes that the employee may be the best person to recommend changes to their job. However, it is true only if employees are well trained and have accessible guidance. The experience of ASSE's members (who perform thousands of ergonomic consultations per year) is that even employees who have been well trained miss very important issues when dealing with a multi-factorial problem, which most ergonomic issues are.

While there needs to be a section in the standard addressing employee involvement, we are concerned that the philosophy of the proposed standard is not consistent with most business environments. Most working environments include employee communication at some level in the work process. While there clearly needs to be language in the standard including employees, the tone and mandates of the standard lead us to question the intent of OSHA. The Agency has written a standard which addresses a 1930's management philosophy. ASSE suggests that there should be employee participation language similar to the February 1999 working draft, which included employee involvement but did not bog the document down with unneeded and unclear minutia.

Employee involvement is a great asset to a program, and it needs to be emphasized. However, it must remain in balance with management accountability. While ASSE generally tries not to comment on employer/employee relations issues, the standard places too much emphasis on employee involvement to the point of having employees control the ergonomics programs. This imbalance could improperly shift OSHA's role from a safety and health enforcement agency to a reviewer of employee/employer relations programs.

The relationship of employees to employers is a subject central to the Occupational Safety and Health Act of 1970 (OSHA Act). The OSHA Act encourages employers and employees to jointly work to reduce the number of hazards in the workplace. It should stimulate employers and employees to institute and perfect safety programs. ASSE questions the ultimate intent of the emphasis on employee involvement. We cannot understand, nor rationalize a skewed emphasis which apparently goes well beyond a beneficial relationship between employers and employees.

Health Care Professionals

There is great and good concern that the proposed rule allows health care professionals to provide ergonomic consultations in the workplace regardless of their occupational safety and health professional background. In fact, OSHA's belief that it is important to single out healthcare professionals as being qualified to perform ergonomic evaluations, and not recognize safety professionals or industrial hygienists in the proposal is poor public policy and is indefensible.

The proposed standard appears to allow health care professionals unfettered access to the workspace. It seems the opinions of health care professionals are virtually unquestionable. The proposal also specifically recognizes they have the opportunity to suggest workplace changes. While some health care providers are qualified to provide such consultation, many others lack the background, experience, or technical education to provide such consultation. Including health care professionals, *certe-blanche*, does not make sense from any perspective and we vigorously oppose this provision. There is an urgent need for OSHA to look at the issue of credentials for those professionals qualified to perform ergonomic evaluations.

Comments in the Preamble would indicate that some employers, particularly in rural areas, are more concerned with access to health professionals (doctors, physicians assistants and nurse practitioners,) and not as concerned with the qualifications of such providers. As OSHA has focused on the importance of health in this standard, ASSE is perplexed that the Agency apparently is not calling for a higher level of knowledge and competency for those health care professionals listed as qualified to administer to injured workers.

Training Issues

A significant portion of the proposal is dedicated to the importance of training. Significantly, the Society is the secretariat of the accredited American National Standards (ANSI) project titled; Z490, Criteria for Best Practices in Safety, Health,

and Environmental Training. This standard is a work in progress which, when created/approved, will have significant impact on safety, health, and environmental training and federal/state legislation and regulation impacting such training. The Morella Amendment to the National Technology Transfer and Advancement Act of 1995 requires that national voluntary consensus be considered for implementation during formal rule making. Most importantly, OSHA has a representative on the Z490 committee creating the proposed rule, and we recommend that the agency consider recognizing/citing the standard in the rule after it is approved through the ANSI process.

#### Other Issues

- ASSE appreciates the additional thirty (30) days to extend the public comment period. However, we are concerned by the OSHA position that only those stakeholders who arranged to physically testify may submit additional comments to rebut statements made in the public hearings. OSHA leadership also stated a policy that interested parties can send his/her own personal comments to their respective associations/societies for submission to the record, if the organization chose to testify at one of the public hearings. This policy will force organizations like ASSE to do one of two things. ASSE must either submit comments that the Society does not agree with from a philosophical/technical perspective, or there will be a screening of views and comments from interested stakeholders. This is poor public policy. The general public should be able to send in a rebuttal comment to any statement entered into the record during the hearings.
- If an employer worksite has one WMSD occur in several different jobs, it appears that the standard requires that the employer "attack" all of these problem jobs at once. This issue becomes significant since it impact draws away resources from other important safety and health initiatives to meet the requirements of this standard.
- ASSE supports involving employees in a workplace ergonomic program. However, ASSE also concern that the Agency is trying to use this standard in an attempt to prohibit traditional safety incentive programs. We recommend that the language proposed in the regulation not be used to prohibit traditional safety incentive programs. ASSE defines such programs as those activities which are part of a broader safety and health initiative and are in place to enhance the program and procedures, not merely as a focus on "accident reduction." Compliance officers need to be trained to recognize the distinctions between effective incentive programs which are part of a broader safety and health program, and not simply serving as the entire program or the primary element of it. Incentive programs must emphasize accurate reporting of work-related injuries/illnesses irrespective of the effect on the incentive program award status.
- While ASSE had the opportunity to provide insight to OSHA on the ergonomics issue through stakeholder meetings and correspondence, the proposed standard was circulated to organizations prior to its publication in the Federal Register. All stakeholders should have equal opportunity to provide insight on this proposed rule under the usual and prescribed rules of public notification.
- The "IS/IS NOT" tables of Manual Handling Jobs and Manufacturing Jobs, in the Definitions Section, appear reasonable and should be retained without change.

We hope our comments will be of assistance to OSHA. This proposed standard can be of significant benefit to employees, employers, professional safety and health organizations, and the country overall if/when finalized. ASSE will continue to support OSHA in the creation of a feasible ergonomic standard, based on good science and sound technology, which will benefit all stakeholders. We thank you for your attention to this matter, and if we can be of assistance please feel free to contact the Society.

Sincerely yours,

Frank H. Perry, CSP, PE  
Society President, 1999-2000

Copy To: ASSE Board of Directors  
ASSE Council on Professional Affairs  
ASSE Governmental Affairs Committee  
ASSE Contact List

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see also:

[ASSE Update on the OSHA Ergonomic Draft Standard Update \(1/00\)](#)

[ASSE Request for Comment Period Extension - OSHA Ergonomic Draft Standard \(12/99\)](#)

[ASSE Statement on the OSHA Proposed Ergonomic Program Standard \(5/99\)](#)

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[Click here](#) to go back to the ASSE Correspondance, Statement, and Testimony page.

**Correspondence, Statements, and Testimony**

December 17, 1999

U.S. Occupational Safety and Health Administration  
 Attn: Mr. Charles Jeffress, Assistant Secretary of Labor  
 OSHA/DOL (S-2315)  
 200 Constitution Avenue, NW  
 Washington DC, 20210

**REQUEST FOR COMMENT PERIOD EXTENSION OSHA PROPOSED  
 ERGONOMIC STANDARD**

Assistant Secretary Jeffress:

The purpose of this letter from the American Society of Safety Engineers (ASSE) is to formally request that the comment period for the draft OSHA Ergonomics Program Standard be extended. Due to the significant size of the draft standard, our members interest, and the need to conduct a more detailed analysis we believe a comment due date of 2/1/2000 is too short. ASSE requests that the comment period be extended to April 3, 2000, as we believe this would then be adequate enough time for ASSE and other stakeholders to complete a review and prepare comments.

We have seen from some media reports that you have already decided that an extension period is not appropriate. However, we are hoping that after receiving our letter and hearing from other stakeholders you will reconsider your decision.

Thank you for your attention to this matter as we look forward to working with you on this issue in the future. If you should have any questions or issues please do not hesitate to contact the Society.

Regards,

Frank H. Perry, CSP, PE  
 Society President, 1999-2000

Copy To: ASSE Board of Directors  
 ASSE Council on Professional Affairs  
 ASSE Governmental Affairs Committee  
 ASSE Contact List

FHP/TF/CORRS1266  
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[Click here](#) to go back to the ASSE Correspondance, Statement, and Testimony page.





**Correspondence, Statements, and Testimony**

January 12, 1999

To: ASSE Board of Directors  
ASSE Chapter Presidents  
ASSE Chapter Governmental Affairs Chairs:

From: Timothy R. Fisher, CSP, ARM  
Manager, Professional Affairs and Standards

RE: OSHA ERGONOMIC DRAFT STANDARD UPDATE

This is an informational update for you on what is currently taking place with ASSE and the Society comment to OSHA on the draft ergonomic standard. It is requested that you circulate this information to your chapter members or other safety professionals who may have interest in this issue. The Governmental Affairs Committee (GAC) is currently working on a draft comment to OSHA which will follow-up on the statement and alternative proposal we submitted to OSHA during 6/99. When the follow-up comment is approved, it will go out to all of the chapters and be placed on the website.

Our review of the draft standard indicates that even though significant changes have been made, the philosophy, contents, and intent are, for the most part, still consistent with the original OSHA working draft. The ASSE 6/99 comments are still more than relevant to the revised draft. These comments are located on the ASSE website (<http://www.asse.org>) in the governmental affairs section in the folder titled: "ASSE Statements, Testimony, and Correspondence". Our suggestion is that if you are preparing comments for your associates, clients, employer, or yourself, you may wish to use these materials as guidance when preparing such a statement. The comments are:

\*\*\* ASSE 6/99 Correspondence on the OSHA Working Draft  
\*\*\* ASSE 6/99 Counter Proposal to the OSHA Ergonomics Working Draft Standard

On 12/17/99 ASSE sent a formal letter OSHA requesting that the comment period for the draft OSHA Ergonomics Program Standard be extended until 4/3/2000. The position of ASSE is that due to the significant size of the draft standard, member interest, and the need to conduct a more detailed analysis, a comment due date of 2/1/2000 is too short. The Society pointed out that an additional sixty (60) days should be adequate enough time for ASSE and other stakeholders to complete a review and prepare comments. While we have not yet received a formal response to our request, we have been told informally there will not be any extensions to the comment period.

Also, attached to this notice is the information off of the OSHA website addressing the upcoming hearings. ASSE will testify as a national organization in Chicago during the final phase of the public hearings. Society leadership chose Chicago for a variety of reasons, and our hope is that the statement will receive attention from OSHA, the ASSE membership, the general public, and the press.

Of importance is that if you, your associates, clients, or employer intends to testify the final date to file a notice to appear is 1/24/2000. It is important that you realize that there is a difference between filing comments and making a presentation at the hearing. Written comments can be filed up to 2/1/2000, but if you intend to testify you must file an intent to appear by 1/24/2000.

Thank you for your attention to this matter, and if you should have any questions or concerns please feel free to contact the Society.

Number of Pages

Regards - Tim Fisher at ASSE... (OSHA Information Follows Below)

Number of Pages

#### Public Participation -- Notice of Hearing

##### Key Dates:

January 24, 2000 - Filing deadline for the "Notice of intent to appear"  
 February 1, 2000 - Postmark or fax deadline for written comments, e-comments  
 and written testimony  
 February 22- March 17, 2000 - Hearing in Washington DC  
 March 21-31, 2000 - Portland, Oregon  
 April 11-21, 2000 - Chicago, Illinois

##### A. Written Comments

Interested persons are invited to submit written data, views and arguments concerning the proposed standard. Responses to the questions and issues raised by OSHA at various places in the proposal are particularly encouraged. These comments, including materials such as studies or journal articles, must be postmarked by February 1, 2000.

##### Written submissions must clearly identify:

The provisions of the proposal that are being addressed,  
 The position taken with respect to each issue, and  
 The basis for that position.

##### Mail: Comments must be submitted in duplicate to:

OSHA Docket Office, Docket No. S-777  
 U.S. Department of Labor, 200 Constitution Avenue, N.W., Room N-2625  
 Washington, D.C. 20210  
 (202) 693-2350.

Facsimile: Comments limited to 10 pages or less may be transmitted by facsimile to (202)-693-1648 by February 1, 2000.

Electronic: Written comments may also be submitted electronically through the OSHA Homepage at [www.osha.gov](http://www.osha.gov). Electronic comments must be transmitted by February 1, 2000. Please note that you may not attach materials such as studies or journal articles. If you wish to include such materials, you must submit them separately in duplicate to the OSHA Docket Office at the address above. When submitting such materials to the OSHA Docket Office, you must clearly identify your electronic comments by name, date, and subject, so that we can attach them to your electronic comments.

All written comments, along with supporting data and references, received within the specified comment period will be made a part of the record and will be available for public inspection and copying at the above Docket Office address. All timely written submissions will be made a part of the record of the proceeding.

##### B. Notice of Informal Public Hearing

Pursuant to section 6(b)(3) of the Act, an opportunity to submit oral testimony concerning the issues raised by the proposed standard, including economic and environmental impacts, will be provided at the informal public hearing scheduled to begin at 9:30 a.m., February 22, 2000, in the auditorium of the Frances Perkins Building, U.S. Department of Labor, 200 Constitution Avenue, N.W., Washington, D.C. 20210.

Regional hearings will also be held March 21-31, 2000, in Portland, OR, and April 11-21, 2000, in Chicago, IL. Actual times and addresses for the location of the regional hearings will be announced in a later Federal Register notice.

##### C. Notice of Intention to Appear at the Hearing

Persons desiring to participate at the informal public hearing must file a notice of intention to appear at the hearing by January 24, 2000. The notice of intention to appear must contain the following information:

The name, address, and telephone number of each person to appear;  
 The capacity in which each person will appear;  
 The approximate amount of time required for the presentation;  
 The specific issues that will be addressed;  
 A brief statement of the position that will be taken with respect to each issue;  
 Whether the party intends to submit documentary evidence and, if so, a brief summary of that evidence; and  
 The hearing at which the party wishes to testify.

Mail: The notice of intention to appear may be sent to:  
 Ms. Veneta Chatmon  
 OSHA Office of Public Affairs, Docket No. S-777  
 U.S. Department of Labor, 200 Constitution Avenue, N.W., Room N-3649  
 Washington, D.C. 20210  
 (202) 693-2119.

Facsimile: A notice of intention to appear also may be transmitted by facsimile to (202) 693-1634, by January 24, 2000.

Electronic: A notice of intention to appear may be submitted electronically through the OSHA Homepage at [www.osha.gov](http://www.osha.gov) by January 24, 2000. Notices of intention to appear will be available for inspection and copying at the OSHA Docket Office at the address above.

D. Filing of Hearing Testimony and Documentary Evidence Before the Hearing  
 Any party requesting more than 10 minutes for presentation at the informal public hearing, or who intends to submit documentary evidence at the hearing, must provide the complete text of the testimony, and documentary evidence to Ms. Veneta Chatmon, at the address above. These materials must be postmarked by February 1, 2000. Testimony and documentary evidence must be submitted either in quadruplicate, or 1 original (hardcopy) and 1 disk (3 1/2) in WP 5.1, 6.1, 8.0 or ASCII. Any information not contained on disk, e.g., studies, articles, etc., must be submitted in quadruplicate to Ms. Veneta Chatmon. One copy of the testimony and supporting documentary evidence must be suitable for copying and must not be stapled. Notices of intention to appear, hearing testimony and documentary evidence will be available for inspection and copying at the OSHA Docket Office.

Each submission will be reviewed in light of the amount of time requested in the notice of intention to appear. In instances where the information contained in the submission does not justify the amount of time requested, a more appropriate amount of time will be allocated and the participant will be notified of that fact prior to the informal hearing.

Any party who has not substantially complied with this requirement may be limited to a 10-minute presentation, and may be requested to return for questioning at a later time. Any party who has not filed a Notice of Intention to Appear may be allowed to testify, as time permits, at the discretion of the Administrative Law Judge.

OSHA emphasizes that the hearing is open to the public, and that interested persons are welcome to attend. However, only persons who have filed proper Notices of Intention to Appear at the hearings will be entitled to ask questions and otherwise participate fully in the proceedings.

E. Conduct and Nature of the Hearings  
 The hearings will commence at 9:30 a.m. on the first day. At that time, any procedural matters relating to the proceeding will be resolved. The hearings will reconvene on subsequent days at 8:30 a.m.

The nature of an informal rulemaking hearing is established in the legislative

history of section 6 of the OSH Act and is reflected by OSHA's rules of procedure for hearings (29 CFR 1911.15(a)). Although the presiding officer is an Administrative Law Judge and questioning by interested persons is allowed on crucial issues, the proceeding is informal and legislative in type. The Agency's intent, in essence, is to provide interested persons with an opportunity to make effective oral presentations that can be carried out expeditiously in the absence of procedural restraints or rigid procedures that might unduly impede or protract the rulemaking process.

Additionally, since the hearing is primarily for information gathering and clarification, it is an informal administrative proceeding rather than an adjudicative one; the technical rules of evidence, for example, do not apply. The regulations that govern hearings and the pre-hearing guidelines to be issued for this hearing will ensure fairness and due process and also facilitate the development of a clear, accurate and complete record. Those rules and guidelines will be interpreted in a manner that furthers that development. Thus, questions of relevance, procedure and participation generally will be decided so as to favor development of the record.

The hearing will be conducted in accordance with 29 CFR Part 1911. It should be noted that §1911.4 specifies that the Assistant Secretary may upon reasonable notice issue alternative procedures to expedite proceedings or for other good cause. The hearing will be presided over by an Administrative Law Judge who makes no decision or recommendation on the merits of OSHA's proposal. The responsibility of the Administrative Law Judge is to ensure that the hearing proceeds at a reasonable pace and in an orderly manner. The Administrative Law Judge, therefore, will have all the powers necessary and appropriate to conduct a full and fair informal hearing as provided in 29 CFR Part 1911, including the powers:

- To regulate the course of the proceedings;
- To dispose of procedural requests, objections and comparable matters;
- To confine the presentations to the matters pertinent to the issues raised;
- To regulate the conduct of those present at the hearing by appropriate means;
- In the Judge's discretion, to question and permit the questioning of any witnesses and to limit the time for questioning; and

In the Judge's discretion, to keep the record open for a reasonable, stated time (known as the post-hearing comment period) to receive written information and additional data, views and arguments from any person who has participated in the oral proceedings.

OSHA recognizes that there may be interested persons or organizations who, through their knowledge of the subject matter or their experience in the field, would wish to endorse or support the whole proposal or certain provisions of the proposal. OSHA welcomes such supportive comments, including any pertinent data and cost information which may be available, in order that the record of this rulemaking will present a balanced picture of public response on the issues involved.

At the close of the hearings, the Administrative Law Judge will set a post-hearing comment period for those persons participating in the hearings. The first part of that period will be for the submission of additional data and information to OSHA. The second part will be for the submission of briefs, arguments and summations. Only those persons who have submitted a proper Notice of Intention to Appear at the hearings will be entitled to participate in the posthearing comment period.

#### F. Certification of Record and Final Determination After the Informal Public Hearings

Following the close of the hearings and post-hearing comment period, the presiding Administrative Law Judge will certify the record to the Assistant Secretary of Labor for Occupational Safety and Health. The Administrative Law Judge does not make or recommend any decisions as to the content of the final standard.

The proposed standard will be reviewed in light of all oral and written submissions received as part of the record, and a permanent Ergonomics Program Standard will be issued, based upon the entire record in the proceeding, including the written comments and data received from the public.

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[Click here](#) to go back to the ASSE Correspondance, Statement, and Testimony page.

## Correspondence, Statements, and Testimony



June 4, 1999

U.S. Department of Labor  
Occupational Safety and Health Administration  
Attn: Mr. Charles Jeffress, Assistant Secretary of Labor  
200 Constitution Avenue, NW (S.2315)  
Washington, DC 20210

#### OSHA PROPOSED ERGONOMICS REGULATION

Assistant Secretary Jeffress: The purpose of this letter is to submit comments from the American Society of Safety Engineers (ASSE) to address the proposed *OSHA Ergonomic Program Standard*. Our summary position is as follows:

- ASSE supports the concept of a federal standard addressing ergonomics.
- ASSE believes there is science justifying the creation of such a standard.
- ASSE commends OSHA for getting the draft standard to this stage of the process.
- ASSE has significant concern with specific portions of this proposal. The biggest concern is that many ASSE members have contacted the national headquarters and spoke of the need for such a standard, but that some of the sections of the proposal will generate unneeded resistance, (e.g. medical management/removal). The view has been raised that this proposal might result in the throwing of the *baby out with the bath water*. The overriding concern of ASSE is that such a standard is needed, but if this is defeated, there might not be another opportunity in the foreseeable future to try again.

ASSE positions are based on consensus and do not reflect complete member unanimity. Our members are involved in the development and implementation of standards, methods, procedures, systems, and devices for the purpose of reducing, controlling, or eliminating hazardous exposures. Our interests are solely those of professional practitioners whose charge is to protect our nation's resources. For the purpose of this comment, ASSE embarked on an extensive review and analysis of the draft proposal, the science behind it, and its underlying principles. The Society created a blue ribbon committee of members from academia, public sector, industry, commercial interests, consulting, engineering, organized labor, and the ASSE divisional membership, to review the draft standard, comment, and proposed alternative. We estimate that approximately 120 ASSE members reviewed the OSHA proposal and our response before its release. We believe such an extensive review is significant and indicates that there is some science and thinking behind the proposal.

A major element of the Society's mission is to support sound actions which enable the development of effective safety and health standards designed to facilitate the identification and control of hazardous conditions and practices. From such standards, hazard control methods, procedures, and programs are initiated to promote positive and pro-active approaches to safety and health. An integral element of these techniques is mandatory quality training and educational requirements, which communicate the necessary hazard recognition, control, and avoidance information. This methodology, when properly implemented, has the potential to effectively reduce our nation's workplace injury and illness toll.

#### Position

The above complete, systematic approach to workplace safety and health can be found in most sections of the currently proposed standard. After review by the ASSE Executive Committee, Council on Practices and Standards, Council on Professional Affairs, Governmental Affairs Committee, Standards Development Committee, Management Division, Consultants Division, and the Health Care Division the following is offered:

*Ergonomics is a national issue, which affects the safety profession and members of the American Society of Safety Engineers (ASSE). The Society believes that ergonomic systems benefit the private sector. Controlling ergonomic hazards can increase productivity, quality, profits, and the country's ability to compete on a global level. To these ends, ASSE congratulates OSHA on publishing a draft proposal on ergonomics, which is easily understandable and is designed to improve workplace safety and health. While we do have significant concern with the proposal we believe the Agency should be commended for getting a second version of the standard out for public comment.*

*ASSE supports the development of a stand-alone ergonomic standard. This standard should be performance oriented. It should be applicable to all employers and describe the basic tenets and best practices necessary for successfully developing and managing an effective ergonomic program. The standard needs to be supported by a cohesive outreach effort melding the resources of OSHA, associations, professional societies, academia and business. Such a program could be supported by other positive reinforcement actions such as penalty reductions for good faith efforts by employers, or granting tax credits for the creation/maintenance of an acceptable program.*

The Society believes there is not a one-size-fits-all approach to ergonomics. Control measures should be designed to eliminate ergonomic stresses specific to the results of the ergonomic evaluation and; provide for effective follow-up mechanisms. Safety and health professionals, ergonomists, engineers, and other trained specialists can provide valuable assistance in various aspects of the improvement process. Efficient/effective systems are more successful when there is a partnership between management and employees. Successful ergonomic systems incorporate employee participation and results in discussion across all levels and directions of an organization.

The Society supports the use of voluntary national consensus standards when appropriate, and is currently a member of the Z365 Standards Committee, the American National Standard addressing cumulative trauma disorders. Research should continue in both the public and private sectors. Public sector agencies, such as the National Institute of Occupational Safety and Health (NIOSH), should continue researching ergonomic related issues and identifying sound hazard control mechanisms. The Society has consistently took the position that if research and data justify the need for a mandatory federal standard, the standard should:

1. Be performance based and not use a one-size-fits-all approach to ergonomics.
2. Require an ergonomic evaluation, and that the evaluation be performed by a person competent in ergonomic related issues. Emphasis should be placed on improvement versus overly detailed specifications. Safety and health professionals, ergonomists, engineers, and other trained specialists can provide valuable assistance in the evaluation process.
3. Be created through private/public sector partnership, such as the negotiated rulemaking process, or the multiple stakeholders input process as exemplified by the proposed OSHA Safety and Health Program Standard.

There is no question that ergonomics is a concern in the United States and there is a need from the Federal government to maintain a focus on the importance of occupational safety and health which includes ergonomics. However, we have concern with this proposed draft standard since it does not meet the three (3) tenets



cited above. We make the following observations:

- A primary concern of ASSE is that the standard should address how to prevent ergonomic injuries. Too much of the standard is based on actions to take place after a reported ergonomic injury. Many of our members also made the point that medical management should be removed in its entirety. The objective of OSHA is to prevent injuries, illnesses, and fatalities. It is not to address how individuals are compensated during rehabilitation. There are already a whole series of laws addressing this issue.
- OSHA claims the initiative is a performance based standard, however, many of our members believe it is a specific guideline as to how a safety professional should approach ergonomics in the workplace. We understand this is a paradox due to current practices in American business. As a professional safety society we support the concept of a performance based standard which allows safety professionals to design/implement their own proven intervention controls. However, this is also a legal issue, which requires some specific guidelines. We do believe OSHA has attempted to incorporate the concepts of specific requirements with performance based standards.
- If the proposed standard will be performance based, it is crucial that OSHA Compliance Officers be thoroughly trained in evaluating ergonomic programs as a safety professional and not from the perspective of a compliance officer. ASSE maintains that this standard provides OSHA with an unprecedented opportunity to provide significant professional development opportunities for its staff.
- The standard does not address who is competent to provide ergonomic evaluations. Perhaps we missed it, however, we did not find anything which provided guidance on the qualifications needed to perform ergonomic evaluations. We believe such consultations/guidance will usually be given by safety professionals, safety engineers, ergonomists, industrial engineers, and industrial hygienists. We consider this issue to be of primary significance. Our concern is that this draft standard positions health care professionals as potentially being able to provide consultation on ergonomics in the workplace regardless of their occupational safety and health professional background. Health care professionals have unfettered access to the workspace, their opinions are virtually unquestionable, and it appears to us that they have the opportunity to suggest workplace changes. Many employers may see this as defacto OSHA endorsement of health care providers as the top choice for assistance with ergonomic related issues. We are certain there are health care providers qualified to provide such consultation, but we believe many of these professionals do not have the background, experience, or technical education to provide such consultation. We strongly suggest that OSHA look at the issue of required credentials and specifically cite safety professionals with accredited certification, licensing/registration or ergonomic expertise as being qualified to perform ergonomic evaluations.
- While we acknowledge that ASSE has had the opportunity to provide insight through stakeholder meetings and correspondence; we were concerned to learn the draft standard was apparently circulated to some specific organizations earlier in the review process, (e.g.: ORC), but professional safety and health organizations were not given this same access. Our belief is that the professional safety and health organizations should have equal opportunity to provide insight on this draft standard.
- Some ASSE members commented the structure of this standard will remove the emphasis from that of an overall efficient/effective safety and health management program to that of compliance with the proposed ergonomic standard. We believe a sound ergonomic program should be part of an overall efficient/effective safety and health program. Several ASSE members raised the concern that the proposed standard would force an organization to focus its primary attention on ergonomics and not on

enhancing the overall safety and health program.

#### Research and Scientific Support

ASSE has reviewed the research, data, and anecdotal evidence of cumulative trauma disorders. We acknowledge there continues to be ongoing debate addressing the findings and value of existing research. We agree with OSHA that there is a preponderance of data and findings indicating the creation of a standard addressing *work-related musculoskeletal disorders* (MWSDs) is warranted. However, we also continue to stress that ongoing research needs to take place to identify additional concerns and efficient/effective ways to address them. The bottom line for ASSE is that even though ongoing research should continue, there is ample data/evidence supporting the go-ahead with a standard.

Perhaps the need for ongoing research regarding the nature of the ergonomic issue is best illustrated by last year's report by the Liberty Mutual Research Center suggesting the company's worker compensation ergonomic claim incidents may have peaked and might be ready to decline. As technology takes hold in the office environment, and industries change their production methodology, research will be important to identify new development/issues of concern. Another example is that people working in the needle craft industry have the potential for high incidences of upper extremity (UE) RSI's. However, the industry unfortunately is moving off shore and for all practical purposes might be gone in a few years. As offices include the latest technology, scanning, voice recognition, voice/eye/thought control of the technology, the UE RSI problems diminish markedly. The same can be said for many other industries.

ASSE believes that due care is required to ensure that the ergonomics standard addresses legitimate ergonomic hazards while avoiding adverse outcomes. One potential adverse outcome would involve the perceived loss of jobs involving high risk from the employer's viewpoint. A second potential adverse outcome involves *false positive* situations in which a safe job is called unsafe, or, more importantly, employees with congenital or normal aging symptoms are treated, and even mistreated, in a work-related context. Such cases are inevitable an overly sensitive ergonomic standard creates the perception of an ergonomic epidemic. A third potential adverse outcome involves the inappropriate allocation of limited safety budget/resources. In particular, if care is not taken the ergonomic standard could result in inappropriate high budgets and resource allocations to speculative issues (e.g.: computer keyboards), instead of important well documented hazards for which proven reduction strategies do exist.

Many of the ASSE reviewers also commented that the ergo issue has risen in stature because of the office ergo "epidemic", and that a large number of the ergo cases being cited were reported during the last half of the decade. But, is that data reflective of the actual MMH/RSI situation? The old MMH, low back injury, stressors remain. We are not sure if the draft standard is clear that these incidents traditionally represent the vast majority of reported cases and consume the most worker compensation dollars.

#### Format of the Standard

Virtually every ASSE member reviewing the draft standard for the purpose of this comment stated the format was easy to follow, and was not hard to understand. OSHA's use of questions and answers also drew positive feedback from the ASSE membership. Comments were made that such an approach should be beneficial to small business or business entities that do not have a safety professional on-staff or have access to a knowledgeable consultant. ASSE has consistently spoken in favor of *Plain English* regulations and standards and there is little question this initiative meets these guidelines. Finally, there was a unanimous consensus that the draft is a significant improvement over the document which was circulated in 1994 and 1995. On this point, ASSE also commends the agency.

#### 1910.500 Coverage of the Standard

The current version of the standard basically includes all manufacturing operations,

manual/material handling operations, and tasks that have been identified as *Problem Jobs*. Our belief is that most of the jobs currently being performed in the United States could eventually fall into what is considered to be a *Problem Job* due to the threshold being set at one incident of a reported work-related musculoskeletal disorder (WMSDs). The members of the Society reviewing the standard also expressed puzzlement as to why maritime, construction, and the agricultural industry are exempt. Several comments were made that if any industry needs to be seriously reviewed for a standard on ergonomics it is probably the agricultural industry. Agricultural workers are exposed to significant ergonomic exposures when one looks at their working environment which includes awkward bending motions, performing tasks they may not have the physical strength for, repetitive motion, and poor, if any, worksite mechanization. Since OSHA has historically tried to stay away from the agricultural industry, we would like to know if there are any preliminary plans by any government agency to address the issue of agricultural safety as a comprehensive issue and ergonomics specifically. In addition, we suggest it would be appropriate for OSHA to issue some type of forecast of if/when there will be construction and maritime ergonomic standards.

#### 1910.501 What is the Purpose of this Standard

ASSE agrees the objective of this standard should be to reduce the number and severity of WMSDs. We agree with OSHA that there is no such thing as a One Size Fits all Approach to ergonomics and we commend OSHA for recognizing this fact. However, we continue to have concern that this performance based standard has very specific implementation guidelines. Any ergonomic program implemented by an employer should certainly be based on the issues faced in that specific worksite. We know from past criticism of OSHA that the idea of dictating how ergonomics should be specifically managed in the workplace was an issue of concern.

#### 1910.502 What is my Basic Obligation

[A] Several members who reviewed the draft standard commented that the Ergonomics Program Standard Flowchart was self-explanatory and explained the tenets/requirements of the program in clear-to-understand language. ASSE agrees employers have a legal and moral responsibility to ensure corrective action is taken to alleviate potentially dangerous safety and health situations.

[B] ASSE also agrees with the basic program elements with the exception of medical management. The goal should be to prevent WMSDs. While the standard clearly states its intent is to focus on prevention, a significant portion of the proposal is designed to address the diagnosis and treatment process. ASSE members reviewing the draft standard commented there are already a plethora of state/national laws addressing the rehabilitation issue and protecting the rights of injured workers. The suggestion is to strike the medical management portions of the standard and refer to applicable state and national rehabilitation laws for injured workers. Point (6) also refers to Program Evaluation. We suggest that this should be changed to Program Evaluation and Continuing Improvement. Our belief is that evaluation of a program does not necessarily mean improvement. OSHA discusses ongoing improvement in other sections of the draft standard, thus, we think it is appropriate to include ongoing improvement as part of the basic elements

[C] ASSE takes the position that a threshold for this standard of one MSD to identify a *Problem Job* is unreasonable. We suggest as an alternative for sites with existing safety/health program, the standard kick in for significant ergonomic problems. A consensus was reached by ASSE members reviewing the draft standard, that a more reasonable approach would be for the standard to take effect if WMSDs make-up more than 10% of a site's recordable injuries/illnesses averaged over the last three years. Our thinking along these lines is that promulgating this standard is controversial to begin with. A threshold of one WMSD to identify a *Problem Job* is difficult to defend, and is almost certain to generate even more resistance to the draft standard. Some ASSE members commented that this approach goes against the tenets of good science. If there is a WMSD reported, the first step should be to conduct a thorough worksite hazard analysis. However, in this case one reported WMSD could trigger the implementation of the standard. As an example, the issue could be resolved through the purchase of an electric lifting table. In such a situation there certainly would not be a need to implement program

elements such as medical management.

ASSE also maintains that public policy making should be based on the concept of incrementalism. Ongoing scientific research will assist in identifying more root causes and better ways to calculate incidence rates. The standard should be not be promulgated with the idea it will not be revised for a significant period of time. ASSE has significant experience in standards writing through its ongoing work with ANSI and ASTM. Our experience indicates to us that promulgating minimum criteria when addressing new standards is a more efficient/effective way to proceed. We do not see any advantage in proposing a threshold, which probably cannot be successfully defended, and is almost certain to generate even more unneeded resistance.

[D] ASSE is very concerned with the example provided in Table C of 1910.502 [C] on page 4 of the draft standard, which could force the establishment of an ergonomic program due to a hazard being identified through an insurance or consultant report. This could insinuate that consultant/insurance reports would be made available to a compliance officer during an inspection. We suggest an approach to that introduced in the 1997 version of the SAFEAct where an administrative law judge would make an unbiased decision on the release of consultant audit reports. To support this position we point to the following:

1. Our first reaction is to be puzzled why OSHA would base the establishment of a program on the report of a consultant. OSHA has opposed the use of consultants for voluntary third party audits and evaluations citing their level of integrity, knowledge, and ability. However, in this case OSHA is using the report of a consultant as an authority when deciding whether or not the program should be implemented. We find these two (2) positions to be inconsistent, and we ask for clarification. If OSHA mistrusts safety and health consultants to such a degree why is the Agency taking their report as gospel for the sake of this standard.
2. Ensuring some privacy of consultant/insurance reports motivates employers to take viable action to ensure a safe and healthful workplace.
3. Ensuring some privacy of consultant/insurance reports increases the level of responsibility that the private sector must take for the safety of its workforce.
4. Ensuring some privacy of consultant/insurance reports encourages accurate recordkeeping. Having accurate data is a key component in identifying potential or latent workplace hazards.
5. Employers should be protected against the release of information which, if misused, could result in harm to that employer's reputation, its employees' safety and health, or its financial stability.

#### 1910.503 Management Leadership and Employee Participation

Employee involvement is a great asset to a program, and it needs to be emphasized. However, it must remain in balance with management accountability. While ASSE generally tries not to comment on employer/employee relations issues, we believe this is an instance of a regulation which could inappropriately sway the balance. We believe the standard places too much emphasis on employee involvement to the point of leaving the impression of employee control of the ergonomics programs. Our concern is that this proposal has the potential of OSHA moving away from a safety and health enforcement agency to a reviewer of employee/employer relations programs. While employer/employee relations is addressed in the Occupational Safety and Health Act, we believe the intent was not to enter into what we consider to be a gray area at best.

The relationship of employees to employers is a subject central to the Occupational

Safety and Health Act of 1970 (OSHA Act). The OSHA Act speaks of encouraging employers and employees in a joint effort to reduce the number of hazards in the workplace; of stimulating employers and employees to institute and to perfect existing safety programs. The OSHA Act also recognized the separate but interdependent responsibilities and rights with respect to achieving safe and healthful working conditions.

ASSE supports the requirement that management not discourage employees from being actively involved in a workplace ergonomic program. However, ASSE also has concern that the Agency might use the proposed language in 1910.503[a] in an attempt to prohibit traditional safety incentive programs. We recommend that the language proposed in the regulation not be used to prohibit traditional safety incentive programs. Compliance officers need to be trained that incentive programs are to be part of a broader safety and health program, not serving as the entire program or the primary element of it. Incentive programs must incorporate an emphasis on employees accurately reporting any work-related injury/illness irrespective of the effect on the incentive program award status.

#### 1910.504 Hazard Identification and Information

Our members suggested that hazard identification should be one of the priority elements of the programs. However, we do have significant concern with the requirement in 1910.504(d), which would require an employer to provide information in languages employees use and at levels they understand. We see this requirement as being unrealistic and unmanageable for many safety professionals. As an example, one of the reviewers of this standard works in a plant that has over 5,500 employees and works twenty-four (24) hours each day. Of interest is the fact that this plant's workforce is known to speak twenty-three (23) different languages. Would this plant have to provide information in Congolese for the thirteen (13) employees from Congo since Congolese is the language they primarily use, and they have limited command of English. The standard appears to make the judgment that most employees will speak English or another common foreign language, (e.g. Spanish). However, the truth is that many immigrants entering the United States today come from countries speaking languages virtually unknown in the United States. Is it realistic to expect a plant to be able to provide information in twenty-three separate languages? This does not even begin to look at the issues addressing different levels of literacy and cultural differences. We suggest that the section read as follows:

*You may use any form of communication, including information sheets, videotapes, or classes. You must provide information in a way that employees are able to understand, (e.g. giving them the opportunity to ask questions and receive answers).*

#### 1910.505 Job Hazard Analysis and Control

We are puzzled with the OSHA assertion in (ii) that ergonomic concerns with one position are indicative of ergonomic concerns with other similar positions. While many positions might display similar characteristics it does not necessarily mean the position is a *Problem Job*. This type of approach actually goes against the intent of this program element. Instead of mandating the standard cover such positions, we suggest a more efficient/effective approach is to conduct a hazard identification before mandating all of the program elements. Such an approach would certainly be a more efficient/effective use of safety and health resources and would not take away from other worthwhile programs.

We agree that engineering controls should be the first option in alleviating WMSDs. While this type of approach could be the most expensive from the short-term perspective, our experience is that engineering controls are the most efficient/effective approach in the long-term. We also strongly agree with OSHA that administrative and work practice controls are of significance.

ASSE also agrees with the OSHA position that if an organization is striving to improve processes/procedures, but still has WMSDs, it does not mean there has been a violation of the standard. The approach cited in the draft standard appears to be a reasonable balance of the uncertain issues addressing workspaces and

WMSDs.

#### 1910.506 Training

A significant portion of this standard is dedicated to the importance of training. Significantly, the Society is the secretariat of the accredited American National Standards (ANSI) project titled; *Z490, Criteria for Best Practices in Safety, Health, and Environmental Training*. Our belief is that this standard as a work in progress, when created/approved, will have significant impact on safety, health, and environmental training and federal/state legislation and regulation impacting such training. The Morella Amendment to the National Technology Transfer and Advancement Act of 1995 requires that national voluntary consensus be considered for implementation during formal rule making, thus, the significance of this rule. Most importantly, OSHA has an official on the Z490 committee creating the draft standard, and we recommend that the agency consider recognizing/citing the standard in the rule after it is approved through the ANSI process.

#### 1910.507 Medical Management

The language addressing medical management is a serious concern, and we suggest it be removed in its entirety. The consensus of most ASSE reviewers is that this section violates the Occupational Safety and Health Act 29USC 653 (b)[4]. The following were suggested as the key concerns with this section:

- Circumvents existing state laws/regulations
- It will create a new class of ADA victims
- Creates additional liability exposures for employers, equipment manufacturers, and government safety and health entities.
- Will generate significant resistance to the proposal.
- The standard should concentrate on preventing ergonomic injuries, and not address medical management issues.

First, the OSHA proposal appears to presume that all health care professionals (HCP) are equally capable of diagnosing, evaluating and treating WMSD's. This proposal also appears to make the judgment that health care professionals are qualified to conduct workplace ergonomic hazard analysis and recommend control methods. The reality is that the vast majority of HCPs are not trained in the occupational field, and have neither the occupational background or expertise to be making recommendations which are not that of a medical nature. This means the potential for misdiagnosis and mismanaged WMSDs becomes significant. It seems that OSHA needs to specifically emphasize the need for HCPs who are trained in occupational medicine as the ones to address the medical aspects of WMSDs. In addition, We believe it is fair to say there is the potential for conflict when these specialists, doctors, nurses, ergonomists, and safety practitioners view similar cases.

In fact, ASSE is puzzled by OSHA's position on this issue. The draft standard places great faith in healthcare professionals as third party reviewers. However, at the same time OSHA continues to express concern with the integrity and honesty of safety consultants. We find this ironic when one looks at the actions the federal government is taking to address the perceived abuses of the Medicare system by healthcare professionals. We find this approach inconsistent in regard to the use of the private sector when addressing safety and health issues.

In addition, we also note that in 1910.507[c](4) a health care professional must be given the opportunity to conduct workplace walkthroughs. Since the health care professional will also be making recommendations on work restrictions, recovery periods, etc...one of our primary concerns is that the language in the standard could potentially establish health care professionals as defacto workplace ergonomic

consultants even though they probably do not have the overall background to be conducting such evaluations. We strongly suggest that other qualified safety professionals also be cited in the draft standard.

#### Other Issues

**Recordkeeping:** The paperwork reduction act and recent internal OSHA procedures are committed to streamlining recordkeeping, however, this draft standard creates significant new amounts of recordkeeping. Does the proposal create a conflict with the paperwork reduction act?

**Definitions:** Several reviewers suggested that the definitions, or lack of definitions, is perhaps the single greatest issue. How can OSHA measure a program and how is an employer to determine success? For example:

- What does effective medical management mean?
- Prolonged means extended and many times.
- Repeated means prolonged.
- Routine means regular.
- Substantial means requiring exertion of considerable force.

**Third Party Audits/Evaluations:** There are still a significant number of organizations in the United States which do not have ergonomic programs, thus, the creation of this standard will place a renewed national focus on the importance of occupational safety and health in this country. If/when the standard is promulgated, there is little question of there being a need for assistance in creating and maintaining efficient/effective ergonomic management programs. We believe the needed level of expertise is outside the area of expertise for many organizations. In order to meet the expected need of consultation services, OSHA should consider reviewing a system for voluntary third party audit and evaluations, and work with the accredited private sector professional certification bodies, both public and private recognized registries, and membership organizations to ensure that consultants have an acceptable level of competence.

#### Possible Drivers for More Support of the Proposed Rule

During our review of the proposed standard, some evaluators suggested that it is an excellent opportunity for OSHA to build more support of safety and health programs for the federal government as a whole. These are some of the suggestions:

- OSHA should compile data relating specifically to the additional cost to employers to create, implement, and maintain ergonomic management programs that comply with the rule. The data should then be used to negotiate tax credits with the Internal Revenue Service (IRS). This approach could be of significant benefit to small employers, and get more buy-in from associations/societies representing business interests. Perhaps we now have a unique opportunity to use the tax code as a driver for effective ergonomic management programs.
- Could there be a mechanism established which would allow lower fines for employers who have made a good faith effort to comply with the standard. ASSE is specifically asking if there could be a way to tie this proposal to Vice President Gore's taskforce report on reinventing government?

We hope our comments will be of assistance to OSHA. This proposed standard could be of significant benefit to employees, employers, professional safety and health organizations, and the country overall if/when finalized. ASSE will continue

to support OSHA in the creation of an ergonomic standard which is of benefit to America. We thank you for your attention to this matter, and if we can be of assistance please feel free to contact the Society.

Sincerely Yours,

Fred F. Fleming, CSP, OHST  
Society President, 1998-1999

Copy To: ASSE Board of Directors  
ASSE Council on Professional Affairs  
ASSE Governmental Affairs Committee  
ASSE Contact List

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encl.

click below to view a copy of the working draft

[AMERICAN SOCIETY OF SAFETY ENGINEERS \(ASSE\) WORKING DRAFT](#)

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**Correspondence, Statements, and Testimony**

**AMERICAN SOCIETY OF SAFETY ENGINEERS  
(ASSE) WORKING DRAFT**

---DO NOT CITE OR QUOTE---  
REWORKED FROM THE OSHA DRAFT ERGONOMIC  
PROGRAM STANDARD

**ASSE Working Draft of a Counterproposal to the OSHA Proposed  
Ergonomics Program Standard**

**Subpart U - Ergonomics**

1910.500 Does this standard cover me?

1910.501 What is the purpose of this standard?

1910.502 What is my basic obligation?

1910.503 Management leadership and employee participation

1910.504 Hazard identification and information

1910.505 Job hazard analysis and control

1910.506 Training

1910.507 Program evaluation

1910.508 What records must I keep?

1910.509 When must my program be in place?

1910.510 Where can I get more information?

1910.511 What are the key terms in this standard?

Working Draft of Appendix A (Non-Mandatory) - Frequently Asked Questions

Appendix B (Non-Mandatory) - Information on Recordable WMSDs under OSHA  
Recordkeeping Regulations (29 CFR 1904)

Appendix C (Non-Mandatory) - Information on Job Hazard Analyses

Appendix D (Non-Mandatory) - Information on Evaluating Ergonomic Programs

NOTE: The terms in this standard that are defined in 1910.512 are  
underlined the first time they appear in the regulatory text.

**§ 1910.500 DOES THIS STANDARD COVER ME?**

(a) This standard is limited to workplaces in general industry. In these

workplaces, this standard covers you if you have:

1. Manufacturing operations; OR
2. Manual handling operations;
3. If WMSDs make-up more than 10% of a site's recordable injuries/illnesses averaged over the last three years. For this standard, a WMSD is limited to one that meets these criteria:
  - i. It is recordable on your OSHA 200 logs, or would be recordable if you were required to keep OSHA logs; AND
  - ii. It occurred in a job where the WMSD hazards present are reasonably likely to cause or contribute to the type of MSD reported; AND
  - iii. A significant part of the injured employee's regular job duties involves exposure to these WMSD hazards (i.e., not incidental exposure).

(b) This standard does not cover maritime, construction or agricultural activities.

#### **§ 1910.501 WHAT IS THE PURPOSE OF THIS STANDARD?**

The purpose of this standard is to reduce the large number and severity of WMSDs employees have been experiencing. To accomplish this, you must set up an ergonomics program in your workplace to identify and control hazards that are reasonably likely to be causing or contributing to the WMSDs. The kind of program you need depends on the extent of the problem in your workplace. If the problems are limited, your program can be limited.

#### **§ 1910.502 WHAT IS MY BASIC OBLIGATION?**

##### **(a) What is my basic obligation under this standard?**

You must set up an ergonomics program in your workplace to control WMSD hazards.

NOTE: You may set up an ergonomics program for all of the jobs in your workplace, but you only are required to set it up in manufacturing and manual handling operations, and in other jobs where there are WMSDs.

##### **(b) What are the elements of an ergonomics program?**

The basic elements of an ergonomics program are:

1. Management leadership and employee participation;
2. Hazard identification and information;
3. Job hazard analysis and control;
4. Training;
5. Program evaluation and continuing improvement.

**[c] In manufacturing and manual handling operations, when must I set up an ergonomics program?**

To determine when you must set up each element of the ergonomics program in your manufacturing and manual handling operations, follow this table:

| If...                                                                                                                                                                                                                                                                                       | You must set-up these elements in manufacturing and manual handling operations                                                                                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>It is after [insert effective date]</li> <li>If WMSDs make-up more than 10% of a site's recordable injuries/illnesses averaged over the last three years</li> </ul> <p>OR:</p> <ul style="list-style-type: none"> <li>Known hazards exist</li> </ul> | <ul style="list-style-type: none"> <li>Management Leadership and Employee Participation</li> <li>Hazard Identification and Information</li> <li>Job hazard analysis and hazard control</li> <li>Training</li> <li>Program Evaluation and ongoing improvement</li> </ul> |

NOTE: When a known WMSD hazard exists or WMSDs are reported in a manufacturing or manual handling job, this is called a "PROBLEM JOB."

**(d) In other jobs in my workplace, when must I set up an ergonomics program?**

You do not have to set up an ergonomics program in jobs other than manufacturing or manual handling until WMSDs make-up more than 10% of a site's recordable injuries/illnesses averaged over the last three years. When this threshold is reached after [insert the effective date], you must set up all the elements of the ergonomics program for that job.

**(e) What if I already have set up ergonomics program?**

If you already have set up an ergonomics program, you may continue it, provided you can show that:

1. Your existing program satisfies the basic obligation of each of the five program elements (Paragraph (a) of each program element); AND
2. Any part of your program that differs from any of the rest of the requirements of this standard fulfills the intended purposes of each requirement; AND
3. You have implemented and evaluated your program before [insert effective date]; AND
4. Your program is eliminating or controlling WMSD hazards to the extent feasible.

**§ 1910.503 MANAGEMENT LEADERSHIP AND EMPLOYEE PARTICIPATION**

**(a) What is my basic obligation?**

You must demonstrate management leadership of your ergonomics program. Employees (and their designated representative) must have ways to report problems, get responses and be involved in the program. You must not have policies or practices that discourage employees from making reports or recommendations or from participating in the program.

**(b) What must I do to provide management leadership?**

You must:

1. Assign and communicate responsibilities for setting up and managing the ergonomics program so managers, supervisors, staff safety and health professionals, and employees know what is expected of them and how you will hold them accountable for meeting those responsibilities;
  2. Provide managers, supervisors, and staff safety and health professionals with the authority, resources, information and training necessary to meet their responsibilities;
  3. Examine your existing policies and practices to ensure they encourage reporting and do not discourage reporting;
  4. Identify at least one person to:
    - i. Receive and respond promptly to reports about signs and symptoms of WMSDs, WMSD hazards and recommendations;
    - ii. Take action, where required, to correct identified problems; and
- (5) Communicate with employees about the program and their concerns about WMSDs.

**[c] What ways must employees have to participate in the ergonomics program?**

Employees (and their designated representative) must have:

1. A way to report signs and symptoms of WMSDs and WMSD hazards,
2. Prompt responses to their reports and recommendations;
3. Training
4. Access to information about the ergonomics program and its effectiveness

**§ 1910.504 HAZARD IDENTIFICATION AND INFORMATION.**

**(a) What is my basic obligation?**

You must identify WMSDs and WMSD hazards in manufacturing operations, manual handling operations and if WMSDs make-up more than 10% of a site's recordable injuries/illnesses averaged over the last three years. You must provide information about WMSDs and WMSD hazards to all employees in those jobs. You must conduct hazard identification and provide information periodically.

**(b) What must I do to identify WMSDs and WMSD hazards?**

You must:

(1) Set up a way for employees to report WMSD signs, symptoms and hazards, and to make suggestions about controlling them. When an employee reports signs or symptoms of a WMSD, you must check out the report to determine whether you must provide medical management; and (2) Review safety and health records you already keep to look for WMSDs and WMSD hazards.

**[c] What information must I provide to employees?**

You must provide this information to current and new employees in manufacturing operations, manual handling operations, and other jobs with WMSDs:

Hazards that are reasonably likely to be causing or contributing to WMSDs; and

How to recognize the signs and symptoms of WMSDs, and the importance of early reporting of signs and symptoms;

(3) How to report signs and symptoms of WMSDs and WMSD hazards, and make recommendations.

**(d) What methods must I use to inform employees?**

You may use any form of communication, including information sheets, videotapes, or classes. You must provide information in a way that employees are able to understand (e.g., giving them the opportunity to ask questions and receive answers).

**§ 1910.505 JOB HAZARD ANALYSIS AND CONTROL.**

**(a) What is my basic obligation?**

You must analyze problem jobs. If there are WMSD hazards in those jobs, you must implement measures to eliminate or control the hazards to the extent feasible.

**(b) What must I do to analyze a problem job?**

You must:

(1) Include in the job hazard analysis each or a representative sample of:

- i. Employees in the problem job; and
- ii. Employees who perform the same physical work activities but in another job. This is called a similar job. If employees in a similar job are exposed to the same WMSD hazards as employees in the problem job, the similar job also is a problem job. You must also conduct a job hazard analysis of a similar job to learn if the ergonomics program must include that job and those employees;

(2) Ask those employees:

- i. Whether they are experiencing signs or symptoms of WMSDs;
- ii. Whether they are having difficulties performing the physical work activities of the job, and

- iii. Which physical work activities they associate with the problem;
- 3. Observe employees performing the job in order to identify job factors that need to be evaluated; and (4) Evaluate those job factors to determine which ones are reasonably likely to be causing or contributing to the problem.

NOTE: The purpose of job hazard analysis is to pinpoint the cause of the problem. If the cause is obvious, you may move directly to controlling the WMSD hazards without conducting all of the steps of job hazard analysis.

**[c] Once I have identified the cause of the problem, what must I do to control it?**

You must:

- (1) Identify, evaluate and implement feasible control measures (interim and permanent) to control the WMSD hazards. This includes prioritizing the control of WMSD hazards, where necessary;
- (2) Track your progress in controlling the WMSD hazards, particularly if you need to prioritize control of the hazards;
- (3) Communicate results of the job hazard analysis to other areas in your workplace (e.g., procurement, human resources, maintenance, design, and engineering) whose assistance may be needed to successfully control the WMSD hazard; and
- (4) Identify hazards when you change, design or purchase equipment, processes and facilities to prevent new problems from being brought into the workplace.

NOTE: Where solutions are obvious and you can eliminate the problem quickly, you may move directly to implementing controls without following all of the steps of the control process.

**(d) What kind of controls must I use?**

- (1) Engineering controls, where feasible, are the preferred method for controlling WMSD hazards. Work practice and administrative controls also can be an important part of a successful ergonomics control plan. You may use any combination of these measures, as interim and permanent controls, that will control WMSD hazards.
- (2) Personal protective equipment (PPE) may be used as an interim control, but it must not be used as a permanent control where other controls are feasible. Where PPE is used, you must provide it at no cost to employees.

**(e) What if WMSDs are still occurring in a problem job even after I have implemented feasible permanent controls?**

The report of a WMSD by itself is not a violation of this standard. If WMSDs are still occurring in a problem job after you have set up the ergonomics program and implemented the controls that are feasible, you are in compliance with this standard if you also do these steps as part of your ergonomics program:

- 1. You promptly check out employee reports of signs and symptoms of WMSDs to determine whether you must provide medical management;
- 2. You promptly identify and analyze the WMSD hazards, and develop a plan for controlling them;

3. You track your progress in implementing the plan and measure your success in eliminating or reducing WMSDs further; and
4. You continue to look for solutions for the problem job and implement feasible ones as soon as possible.

**§ 1910.506 TRAINING.**

**(a) What is my basic obligation?**

You must provide training about the ergonomics program and WMSD hazards periodically and at least every 3 years. You must provide training at no cost to employees.

**(b) Who must I train?**

You must provide training to at least the following persons:

1. All employees in problem jobs, and all employees in similar jobs identified through a job hazard analysis;
2. Their Supervisors
3. All persons involved in setting up and managing the ergonomics program.

**(c) In what subjects must I train these employees?**

To determine what subjects training must cover, follow this table:

| FOR...                                                         | You must provide training so they understand and know at least                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Employees in Problem Jobs, similar jobs, and their supervisors | <ul style="list-style-type: none"> <li>• How to recognize WMSD signs and symptoms, and the importance of early reporting.</li> <li>• How to report WMSD signs, symptoms and hazards,</li> <li>• WMSD hazards in their jobs and the general measures they must follow to control WMSD hazards.</li> <li>• Job-specific controls and work practices that have been implemented in their jobs.</li> <li>• The ergonomics program and their role in it.</li> <li>• The requirements of this standard</li> </ul> |

|                                                                    |                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Persons involved in setting up and managing the ergonomics program | <ul style="list-style-type: none"> <li>• The ergonomics program and their role in it.</li> <li>• How to identify and analyze WMSD hazards</li> <li>• How to identify, evaluate, and implement measures to control WMSD hazards</li> <li>• How to evaluate the effectiveness of ergonomics programs</li> </ul> |
|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**(d) When must I train these employees?**

To determine when employees must be trained, follow this table:

|                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Employees in Problem Jobs, similar jobs, and their supervisors     | <ul style="list-style-type: none"> <li>• When the program is first set up in their jobs.</li> <li>• When they are initially assigned to problem jobs.</li> <li>• After control measures are implemented in their jobs.</li> <li>• Periodically as needed (i.e., significant changes to the job, new WMSDs or WMSD hazards are identified in the job, unsafe work practices observed) and at least every 3 years.</li> </ul> |
| Persons involved in setting up and managing the ergonomics program | <ul style="list-style-type: none"> <li>• When they are initially assigned to setting up and managing the ergonomics program.</li> </ul> <p>Periodically as needed (i.e., program deficiencies revealed in evaluation, significant changes in ergonomics program) and at least every 3 years.</p>                                                                                                                            |

**§ 1910.507 PROGRAM EVALUATION.****(a) What is my basic obligation regarding program evaluation?**

You must evaluate your ergonomics program and controls periodically, and at least every 3 years, to ensure that it is in compliance with this standard.



**(b) What must I do to evaluate the ergonomics program?**

You must set up the following procedure to evaluate the effectiveness of the ergonomics program and control measures:

1. You must monitor program activities to ensure that all the elements of your ergonomics program are functioning;
2. You must select effectiveness measures, both activity and outcome measures, and use them to evaluate the program and the controls to ensure that they are in compliance with this standard; and
3. You must establish baseline measurements so you will have a starting point for measuring the effectiveness of the program and the controls.

**[c] What must I do if the evaluation indicates my program is not controlling WMSD hazards?**

You must correct the deficiencies in your program promptly.

**§ 1910.508 What Records Must I Keep****(a) Do I have to keep records of the ergonomics program?**

You must keep written records of the program if:

- (1) You have more than one worksite or establishment in which this job is performed by employees; OR
2. The job involves more than one level of supervision; OR
3. The job involves shift work.

**(b) Do I have to keep records if I have very few employees?**

NO. If you do not have 10 or more full-time employees (including temporary and contingent employees) at any time during the preceding year, you are not required to keep written records of your ergonomics program. This section does not apply to you.

**[3] What records of the ergonomics program must I keep and for how long?**

To determine what records you must keep and how long you must keep them, follow this table:

| You must keep these records         | For at least this long           |
|-------------------------------------|----------------------------------|
| Employee reports and your responses | 3 years                          |
| Results of job hazard analysis      | 3 years                          |
| Plans for controlling WMSD hazards  | or                               |
| Evaluations of program and controls | until replaced by updated record |

**§ 1910.509 WHEN MUST MY PROGRAM BE IN PLACE?****(a) When does this standard become effective?**

This standard becomes effective 60 days after [insert publication date of final rule].

**b. When do I have to be in compliance with this standard?**

We are providing you with start-up time to set up your ergonomics program and implement controls. You must implement the requirements of this standard as soon as possible, but not later than the compliance start-up deadlines listed in this table:

|                                                                                                                                                                                                                                         |                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| <ul style="list-style-type: none"> <li>• Management leadership and employee participation</li> <li>• Hazard identification and information</li> </ul>                                                                                   | [Insert 1 year after the effective date]  |
| <ul style="list-style-type: none"> <li>• Job hazard analysis</li> <li>• Interim controls</li> <li>• Training</li> </ul>                                                                                                                 | [Insert 2 years after the effective date] |
| <ul style="list-style-type: none"> <li>• Feasible permanent controls</li> <li>• Program evaluation</li> <li>• Process to address problem jobs</li> <li>• where WMSDs are still occurring even after controls are implemented</li> </ul> | [Insert 3 years after the effective date] |

**(c) If I do not have a problem job until after part of the compliance start-up period has passed, when must I be in compliance with this standard?**

If you do not have any problem jobs until after the start-up deadline has passed for implementing certain program requirements, you must implement those requirements as soon as possible but not later than the deadlines listed above or below, whichever is longer.

**(d) If I do not have a problem job until after ALL of the compliance start-up deadlines have passed, how long do I have to set up an ergonomics program and implement controls?**

If you do not have a problem job until after all the compliance start-up deadlines have passed, you must meet the following deadlines for addressing them:

|        |                                                         |
|--------|---------------------------------------------------------|
| For... | You must implement the requirements as soon as possible |
|--------|---------------------------------------------------------|

|                                                                                                                                                                                                                      |                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
|                                                                                                                                                                                                                      | after the problem is identified, but not later than: |
| <ul style="list-style-type: none"> <li>• Management leadership and employee participation</li> <li>• Hazard identification and information</li> </ul>                                                                | 30 days                                              |
| <ul style="list-style-type: none"> <li>• Job hazard analysis where there are WMSDs</li> </ul>                                                                                                                        | 60 days                                              |
| <ul style="list-style-type: none"> <li>• Interim controls</li> <li>• Training</li> </ul>                                                                                                                             | 90 days                                              |
| <ul style="list-style-type: none"> <li>• Feasible permanent controls</li> <li>• Program evaluation</li> <li>• Process to address jobs in which WMSDs and</li> <li>• WMSD hazards have not been eliminated</li> </ul> | 1 year                                               |

NOTE: If you have manufacturing or manual handling operations, you must have implemented management leadership and employee participation, and hazard identification and information no later than [insert 1 year after the effective date].

**(e) Is there some point at which I can discontinue certain aspects of my program?**

YES. However, as long as you have problem jobs, you must maintain all the elements of the ergonomics program in this standard. If you do not have a problem job for 3 years, you only have to continue the elements listed in this table:

|                                                   |                                                                                                                                                                                                               |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| If you                                            | And, if WMSDs have not made-up more than 10% of a site's recordable injuries/illnesses averaged over the last three years.                                                                                    |
| Have manufacturing and manual handling operations | <ul style="list-style-type: none"> <li>• Management leadership and employee participation.</li> <li>• Hazard identification and information.</li> <li>• Maintain implemented controls and training</li> </ul> |

|                            |                                                                       |
|----------------------------|-----------------------------------------------------------------------|
|                            | related to those controls.                                            |
| Have other jobs with WMSDs | Maintain implemented controls and training related to those controls. |

#### § 1910.510 WHERE CAN I GET MORE INFORMATION?

##### (a) Where can I get further information about this standard?

(1) Informational appendices follow this standard:

- i. Working Draft of Appendix A (Non-mandatory) -- Frequently asked questions;
- ii. Appendix B (Non-mandatory) -- Information on recordable MSDs under OSHA recordkeeping regulations (29 CFR 1904);
- iii. Appendix C (Non-mandatory) -- Information on conducting job hazard analyses;
- iv. Appendix D (Non-mandatory) -- Information on evaluating ergonomics programs and selecting effectiveness measures.

(2) You also can get information from the OSHA Website at <http://www.osha.gov>.

##### (b) Are these appendices mandatory?

NO. The material in the appendices to this standard is informational. It is not intended to create any additional obligations or detract from the requirements of this standard.

#### § 1910.511 WHAT ARE THE KEY TERMS IN THE STANDARD?

Administrative controls are procedures and methods, typically instituted by the employer, that significantly reduce daily exposure to WMSD hazards by altering the way in which work is performed. Examples of administrative controls for WMSD hazards include:

Employee Rotation Redesign of work methods

Job task enlargement Alternative tasks

Adjustment of work pace Rest breaks

(e.g., slower pace)

Exercise programs (e.g., stretching) are not prohibited, but they are not administrative controls under this standard.

**Effectiveness measures** are the indicators used to assess whether an ergonomics program and controls are successfully controlling WMSD

hazards and reducing the number and severity of WMSDs. Effectiveness measures include both activity and outcome measures.

**Activity measures** are indicators used to measure interim accomplishments in building and maintaining an ergonomics program. These measures are used to assess the functioning of the various activities in your program (e.g., number of hazards identified, number of employees trained). Outcome measures are indicators used to quantitatively assess long-term success of the program and interventions that have been put into place (e.g., number of lost workdays, number of hazards controlled, severity of WMSDs).

**Engineering controls** are physical changes to jobs that control exposure to WMSD hazards. Engineering controls act on the source of the hazard and control employee exposure to the hazard without relying on the employee to take self-protective action or intervention. Examples of engineering controls for WMSD hazards include changing, modifying or redesigning the following:

\*\*\*Workstations \*\*\*Equipment

\*\*\*Tools \*\*\*Materials

\*\*\*Facilities \*\*\*Processes

**Ergonomics** is the science of fitting jobs to people. Ergonomics encompasses the body of knowledge about physical abilities and limitations as well as other human characteristics that are relevant to job design. Ergonomic design is the application of this body of knowledge to the design of the workplace (i.e., work tasks, equipment, environment) for safe and efficient use by workers. Good ergonomic design makes the most efficient use of worker capabilities while ensuring that job demands do not exceed those capabilities.

**Ergonomics program** is a systematic process for anticipating, identifying, analyzing and controlling WMSD hazards.

**A process** is the activities, procedures, and practices that you set up to control WMSD hazards. Systematic means these actions are ongoing and conducted on some routine basis that is appropriate to the conditions of your workplace.

**Job factors** are workplace conditions and physical work activities that must be considered when conducting a job hazard analysis in order to determine whether WMSD hazards are present in a job. This standard covers the following job factors:

| This standard covers these job factors    | Including these components of job factors                                                                                                                    |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Physical demands of the work tasks or job | <ul style="list-style-type: none"> <li>• Force</li> <li>• Repetition</li> <li>• Work Postures</li> <li>• Duration</li> <li>• Local contact stress</li> </ul> |

|                                         |                                                                                                                                                                         |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Workstation layout and space<br>reaches | <ul style="list-style-type: none"> <li>• Work Reaches</li> <li>• Work Heights</li> <li>• Seating</li> <li>• Floor Surfaces</li> <li>• Contact Stress</li> </ul>         |
| Equipment used and objects<br>handled   | <ul style="list-style-type: none"> <li>• Size and Shape</li> <li>• Weight and weight distribution</li> <li>• Handles and grasp surfaces</li> <li>• Vibration</li> </ul> |
| Work organization                       | <ul style="list-style-type: none"> <li>• Work recovery cycles</li> <li>• Work rate</li> <li>• Task variability</li> </ul>                                               |

**Known hazard** means hazards in your workplace that you know are reasonably likely to cause or contribute to a WMSD. The following are known hazards covered by this standard:

- WMSD hazards identified in prior OSHA inspections.
- WMSD hazards identified in self audits. WMSD hazards identified and communicated to you by HCPs.
- Accepted WMSD workers' compensation claims.

**Manual handling operations** are physical work activities meeting these criteria:

1. They involve lifting/lowering, pushing/pulling, or carrying; AND
2. They involve exertion of considerable force because the particular load is heavy OR the cumulative total of the loads during a workday is heavy (i.e., substantial loads); AND
3. These manual handling work activities are a significant part of the employee's regular job duties.

Manufacturing operations cover a range of jobs that are directly involved in producing durable and non-durable goods. Manufacturing production jobs involve working supervisors and all non-supervisory employees who engage in fabricating,

processing, assembling, and other services closely associated with manufacturing production. In this standard, manufacturing operations are limited to those that meet these criteria:

1. They are performed in manufacturing industries; AND
2. They are production jobs performed by employees and their supervisors in those industries; AND
3. The production work activities are a significant part of the employee's regular job duties.

While each job must be considered on the basis of its actual duties, the following table lists job categories that typically fall inside and outside this definition:

| Examples of Manufacturing Production Jobs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Examples of Jobs that typically are not manufacturing jobs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Assembly line jobs producing:</li> </ul> <p>Products (durable and non-durable)</p> <p>Subassemblies</p> <p>Components and parts</p> <ul style="list-style-type: none"> <li>• Paced Assembly Jobs</li> </ul> <p>(assembling and disassembling)</p> <ul style="list-style-type: none"> <li>• Piecework assembly jobs</li> </ul> <p>(assembling and disassembling) and other time critical assembly jobs</p> <ul style="list-style-type: none"> <li>• Product inspection jobs</li> </ul> <p>(e.g. Testers, weighers)</p> <ul style="list-style-type: none"> <li>• Meat, poultry, and fish cutting and packing</li> <li>• Bindery jobs</li> <li>• Machine Operation</li> <li>• Machine Loading/unloading</li> <li>• Apparel construction jobs</li> <li>• Food preparation assembly line workers</li> </ul> | <ul style="list-style-type: none"> <li>• Administrative personnel</li> <li>• Clerical staff Supervisors and managers who do not perform production job</li> <li>• Technical staff (e.g., engineering, product development)</li> <li>• Analysts and programmers</li> <li>• Sales and marketing</li> <li>• Buyers/procurement</li> <li>• Customer service employees</li> <li>• Mail room</li> <li>• Security guards</li> <li>• Cafeteria personnel</li> <li>• Grounds personnel (gardeners, grounds keepers)</li> <li>• Jobs in power plant in manufacturing facility</li> <li>• Janitors</li> </ul> |

|                                                                                                                                                                                                                  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <ul style="list-style-type: none"> <li>• Commercial baking jobs</li> <li>• Cabinetmaking</li> <li>• Tire building</li> <li>• Warehouse jobs in manufacturing facilities</li> <li>• Rework specialists</li> </ul> |  |
| Maintenance Personnel                                                                                                                                                                                            |  |

NOTE: Some jobs that are not manufacturing production jobs may still be manual handling jobs under this standard.

**Musculoskeletal disorders (MSDs)** are injuries and disorders of the muscles, nerves, tendons, ligaments, joints, cartilage and spinal disks. Examples of MSDs include:

\*\*\*Epicondylitis \*\*\*Carpal Tunnel Syndrome

\*\*\*Synovitis \*\*\*Muscle strains

\*\*\*Raynaud's phenomenon \*\*\*Sciatica

\*\*\*Tendinitis \*\*\*Rotator cuff tendinitis \*\*\*De Quervains' disease  
\*\*\*Carpet layers knee \*\*\*Trigger finger \*\*\*Low back pain

**No cost to employees** means that training, medical management and other requirements of this standard are provided to employees free of charge and while they are "on the clock."

**Periodically** means that a process or activity, such as records review or training, is performed on a regular basis which is appropriate for the conditions in your workplace. Periodically also means that the process or activity is conducted as needed, such as when significant changes are made in your workplace. Return Personal protective equipment (PPE) are interim control devices worn or used while working to protect employees from exposure to WMSD hazards. In this standard, PPE includes items such as gloves and knee pads. Return Physical work activities are the physical demands, exertions or functions of the task or job.

**Representative sampling** is a strategy to adequately characterize exposure of a group of employees (i.e., employees in a problem job) by analyzing the exposure of a subset of that group rather than all members of the group. The employees selected for representative sampling analysis must be those who you reasonably believe to have the greatest exposure to WMSD hazards in the problem job, including each workshift, so you correctly characterize and do not underestimate the exposure of any employee in the problem job. Return Resources mean the provisions necessary to develop, implement and maintain an effective ergonomics program. Resources include monetary provisions (e.g., equipment to perform job hazard analysis, training materials, controls) as well as other provisions (e.g., time to conduct job hazard analysis or review safety and health records). Return Safety and health records are information generated at or for your workplace. Records include, for example, OSHA 200 logs, workers' compensation claims, WMSD-related medical reports and infirmity logs, employee reports of WMSDs or WMSD hazards, and



insurance or consultant reports prepared for your workplace.

**Signs (of WMSDs)** are objective physical findings that are the basis for an OSHA recordable MSD. Examples of signs of WMSDs include:

\*\*\*Decreased range of motion \*\*\*Decreased grip strength

\*\*\*Loss of function \*\*\*Deformity Swelling

\*\*\*Cramping \*\*\*Redness/loss of color

**Symptoms (of WMSDs)** are physical indications that your employee may be developing an WMSD. Symptoms can vary in their severity depending on the amount of exposure your employee has had. Often symptoms appear gradually as muscle fatigue or pain at work that disappears during rest. Usually symptoms become more severe as exposure continues (e.g., tingling continues when your employee is at rest, numbness or pain makes it difficult to perform the job, and finally pain is so severe that the employee is unable to perform physical work activities).

Examples of symptoms WMSDs include:

\*\*\*Numbness \*\*\*Burning

\*\*\*Pain \*\*\*Tingling

**We** means the Assistant Secretary of Labor for the Occupational Safety and Health Administration, U.S. Department of Labor, or the Assistant Secretary's designee.

**Work practice controls** are controls that reduce the likelihood of exposure to WMSD hazards through alteration of the manner in which a job or physical work activities are performed. Work practice controls also act on the source of the hazard. However, instead of physical changes to the workstation or equipment, the protection work practice controls provide is based upon the behavior of managers, supervisors and employees to follow proper work methods. Work practice controls include procedures for safe and proper work that are understood and followed by managers, supervisors and employees. Examples of work practice controls for WMSD hazards include:

- Safe and proper work techniques and procedures that are understood and followed by managers, supervisors and employees.
- Conditioning period for new or reassigned employees.
- Training in the recognition of MSD hazards and work techniques that can reduce exposure or ease task demands and burdens.

**Work-related** means that the physical work activities or workplace conditions in the job are reasonably likely to be causing or contributing to a reported MSD. For this standard, an MSD is work-related if:

1. WMSD hazards are present in a job where an MSD has been reported; AND
2. The hazards are reasonably likely to cause or contribute to the type of MSD reported; AND
3. A significant part of the employee's regular job duties involves exposure to these WMSD hazards (i.e., not incidental exposure).

**You** means the employer as it is defined by the Occupational Safety and Health Act

of 1970 (29 U.S.C. 651 et seq.).

## **Working Draft of Appendix A**

### **Frequently Asked Questions**

The information in this appendix provides brief answers to some general questions that have been raised at various points during this rulemaking process. More extensive answers to these and other questions can be found in the preamble to the proposed standard, and in outreach and compliance assistance materials.

#### **Scope**

**Q: If this standard covers me, must I set up an ergonomics program for my entire workplace?**

**A: NO.** You may set up an ergonomics program for your entire workplace, but you are only required to set it up in the jobs that are covered by this standard: manufacturing production jobs, manual handling jobs, and if WMSDs make-up more than 10% of a site's recordable injuries/illnesses averaged over the last three years.

**Q: If this standard covers me, do I have to go out and analyze all my jobs right away?**

**A: NO.** This standard does not require you to go out and immediately analyze all your jobs.

#### **Basic obligation**

**Q: Must all employers have the same ergonomics program?**

**A: NO.** OSHA recognizes that your program will vary depending on factors such as workplace size and the extent and nature of the problem. For example, you may be able to have a very limited program if your problems are limited, while programs in other workplaces may be more substantial because of the complexity of problems there. In addition, you may be able to have a simple program if the causes and solutions to your problems are obvious and the problems can be eliminated quickly. In these cases, the standard does not require your program to include all the steps of the job hazard analysis and control plan process. In workplaces where causes and solutions are less certain, the program will need to contain all the steps of job hazard analysis and control.

**Q: Must I have a separate ergonomics program?**

**A: NO.** Your ergonomics program may be a component of a broader program, such as a safety and health program or integrated management program. However, the ergonomics component must still meet all of the requirements of this standard.

**Q: Will I be penalized if my existing program differs from the specific requirements of this standard?**

**A: NO.** You will not be penalized if your existing program differs from the specific requirements in this standard, provided that you can show that:

1. Your existing program satisfies the basic obligation of each of the six program elements (Paragraph (a) of each program element); AND
2. Any part of your program that differs from any of the rest of the requirements of this standard fulfills the intended purposes of each requirement; AND

3. You have implemented and evaluated your program before [insert effective date]; AND
4. Your existing program is eliminating or controlling WMSD hazards to the extent feasible.

#### Management leadership and employee participation

**Q: How must I meet the management leadership requirements of this standard, especially if I have a small business?**

**A:** You may use any effective means to meet these obligations. If you do not have managers or supervisors or if you normally perform these types of duties yourself, you may carry out these obligations instead of delegating the responsibility to other persons.

#### Hazard identification and information

**Q: Can I take action before a problem becomes an OSHA recordable?**

**A: YES.** OSHA is aware that many of you use or would like to use a more preventive approach for identifying problems and determining when you need to take action. Many of you use employee surveys or reports of WMSD symptoms. Medical research and information from stakeholders indicate that the earlier an WMSD is addressed, the more likely the WMSD will be reversible.

**Q: May I provide my employees with information that has been developed by others?**

**A: YES.** You may use information others have developed in order to satisfy the requirements of this standard, provided that your employees are able to understand this information. For example, you may use information we will provide in compliance assistance materials or information developed by trade associations and other organizations.

#### Job hazard analysis and hazard control

**Q: If I have a problem job in one workplace, must I conduct a job hazard analysis of similar jobs in my other establishments?**

**A: NO.** You are not required to expand your job hazard analysis beyond this workplace to jobs and employees in your other establishments. Of course, if those establishments have their own problem jobs, you must set up an ergonomics program there.

**Q: When is my job hazard analysis adequate?**

**A:** We consider your job hazard analysis to be adequate if it covers the following job factors, where applicable:

| Your job hazard analysis is adequate if it covers these jobs factors | Including these components of job factors                                                                |
|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Physical demands of the work tasks or job                            | <ul style="list-style-type: none"> <li>• Force</li> <li>• Repetition</li> <li>• Work postures</li> </ul> |

|                                    |                                                                                                                                                                         |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                    | <ul style="list-style-type: none"> <li>• Duration</li> <li>• Local contact stress</li> </ul>                                                                            |
| Workstation layout and space       | <ul style="list-style-type: none"> <li>• Work reaches</li> <li>• Work heights</li> <li>• Seating</li> <li>• Floor surfaces</li> <li>• Contact stress</li> </ul>         |
| Equipment used and objects handled | <ul style="list-style-type: none"> <li>• Size and shape</li> <li>• Weight and weight distribution</li> <li>• Handles and grasp surfaces</li> <li>• Vibration</li> </ul> |
| Environmental conditions           | <ul style="list-style-type: none"> <li>• Cold and heat</li> <li>• Glare (as related to awkward postures)</li> </ul>                                                     |
| Work organization                  | <ul style="list-style-type: none"> <li>• Work-recovery cycles</li> <li>• Work rate</li> <li>• Task variability</li> </ul>                                               |

**Q: What factors should I consider in prioritizing the control of WMSD hazards?**

**A:** There are many different ways in which you can prioritize the control of WMSD hazards. While most of you address the worst problems first, you also may consider these factors in setting priorities:

1. The number of employees affected;
2. The severity of the WMSDs reported or identified;
3. The availability of controls; and (4) The ability of interim measures, such as employee rotation, to protect employees while permanent solutions are developed and implemented.

**Training**

**Q: Under the standard, may I use outside trainers or send employees to trainers?**

**A: YES.** You are free to train employees yourself or use outside trainers. However, employees are trained, you must make sure that the training is effective; that is, you must make sure that employees know and understand the material that this standard requires they be trained in.

**Consultation**

**Q: Under the standard, may I use outside consultants to provide assistance in complying with the standard?**

**A: YES.** You are free to utilize the services of a qualified consultant, and in some situations it is highly encouraged if you do not have safety and health professionals on-staff. During your selection it is important to select a consultant who has the credentials to provide this type of technical insight. You may wish to consider utilizing the services of a consultant with an accredited certification, (e.g.: CSP/CI(H), an appropriate license/registration (e.g. PE in safety, industrial engineering), or a consultant with a satisfactory combination of experience/education. This would also address the competencies your in-house staff should have when they address the standard.

**Program evaluation**

**Q: Will I be allowed to select the measures I use for conducting my program evaluation or will you specify the effectiveness measures I must use?**

**A:** You are free to select your own measures for evaluating the effectiveness of your program, provided that your effectiveness measures include both activity and outcome measures. Below are a list of activity and outcome measures stakeholders told us they use to measure the effectiveness of their ergonomics programs. This list is provided purely for guidance purposes. You are not required to use these measures:

| Examples of Activity Measures                                                                                                                                                                                                                                                                                                                                     | Examples of Outcome Measures                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Plan to implement ergonomics program has been developed.</li> <li>• Number of employee reports and recommendations.</li> <li>• Average time between employee reports and your response</li> <li>• Length of time since the last review of safety and health records.</li> <li>• Number of hazards identified.</li> </ul> | <ul style="list-style-type: none"> <li>• Number of OSHA recordable MSDs.</li> <li>• Reported symptoms of WMSDs.</li> <li>• WMSD incidence rates per job title.</li> <li>• Number of workers' compensation claims.</li> <li>• Number of lost-workdays WMSDs.</li> <li>• Average lost workdays per WMSD.</li> </ul> |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Number of employees who have received ergonomics information.</li> <li>• Number of jobs analyzed.</li> <li>• Number of jobs awaiting analysis.</li> <li>• Number of employees interviewed for job analyses and remaining to be interviewed.</li> <li>• Number of symptom surveys conducted.</li> <li>• Number of jobs controlled.</li> <li>• Number of job changes made.</li> <li>• Number of employees trained and waiting to be trained.</li> <li>• Number of worker hours devoted to the ergonomics program.</li> <li>• Annual expenditures on program and controls.</li> </ul> | <ul style="list-style-type: none"> <li>• Severity rate of WMSDs.</li> <li>• Symptom survey results.</li> <li>• Annual medical costs for WMSDs.</li> <li>• Average medical costs per WMSD.</li> <li>• Annual workers' compensation costs.</li> <li>• Average workers' compensation costs per WMSD Number of job transfer requests per job title.</li> <li>• Employee absentee rates per job title.</li> <li>• Annual employee turnover rates per job title.</li> </ul> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Q: Why must I use both activity and outcome measures when I evaluate the effectiveness of my ergonomics program?**

**A:** Activity and outcome measures are both important to adequately determine whether an ergonomics program is effective. Activity measures help identify whether the elements of your program are functioning as a systematic process. This type of measure lets you know whether "mid-course" corrections are needed to achieve targeted long-term goals and whether the program is set to respond quickly to problems that arise in the future. Activity measures also provide you with a way to measure interim or "in-process" accomplishments that you achieve on the path to building a program that is effective in eliminating or reducing WMSDs and WMSD hazards. This particularly important if it takes time before quantitative successes can be measured. Outcomes measures, on the other hand, are the most telling in terms of defining a successful program because they measure quantitative "bottom-line" results. They identify whether you are eliminating or reducing WMSDs, WMSD hazards and related costs.

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[Click here](#) to go back to the ASSE Correspondance, Statement, and Testimony page.

**OSHA's Proposed Ergonomics Standard:  
Its Impact on Small Business**

On April 13, 2000 at 10:15 am, the Subcommittee on Regulatory Reform and Paperwork Reduction of the Committee on Small Business will hold a hearing in Rayburn House Office Building, Room 2360 to examine the impact of OSHA's proposed ergonomics standard on small business and seek input on modifications that might reduce the impact on small business while ensuring that employees of small businesses are adequately protected.

- OSHA issued a proposed standard to protect employees in all industries other than construction, the maritime trades, and agriculture against musculo-skeletal disorders ("MSDs") that stems from stresses on the muscles, nerves, or bones of the human body and constitute a core element of an employee's job. For example, if an employee is required to constantly move heavy boxes as a result of his or her job, the employee may strain the back. The proposed standard is designed to protect employees against such disorders.
- The standard requires employers to take certain actions depending upon the type of work activities performed by the employee. Because of this, the impact of the proposed standard may affect employees within the same business differently. Employers who have employees who are involved in manufacturing or perform manual handling (lifting or pushing of heavy objects – the weight of objects was not defined by OSHA) must immediately train their managers on MSD hazards, provide those employees with information on MSD hazards, and institute a reporting mechanism for employees that incur a MSD in the workplace resulting from a core element of their job. Employers who have employees that do not perform manufacturing or manual handling need not take the training and reporting actions until a MSD is reported to the employer.
- Once a MSD is reported, all employers must take the same actions. They must analyze the job to see what hazard caused the MSD, determine the corrective action that needs to be taken to ensure that all individuals with the same job responsibilities do not incur a MSD, send employees to an appropriate health care provider, and restrict the work of the injured employee by either transferring the employee to another job in which they will not be exposed to the ergonomic hazard that gave rise to the injury or, if no alternative job is available, allow the worker to stay home (for up to six months) until the injury is resolved at 90% pay.
- The Subcommittee is holding a hearing to examine the proposed standard because OSHA itself found that the proposed standard would have a significant economic impact on a substantial number of small businesses. In particular, the Subcommittee members are interested in investigating potential alternatives that reduce the burdens imposed on small businesses while ensuring that all workers are protected from hazards that may give rise to MSDs.

- Committee members are concerned that the proposed standard identifies a problem but provides no guidance on how to fix the problem. The preamble to the proposed rule is about 300 pages in the Federal Register and the accompanying economic analysis is another 1,100 pages. To fully understand the implications of the proposed standard, small business owners would have to review all of that material. This is an excessive burden on small owners, most of whom have enough problems simply running their businesses. In contrast, large businesses will have staffs that can analyze this material and make appropriate implementation.
- Small business owners, in order to try and comprehend the proposed standard, will likely have to hire expensive outside consultants to advise them on how to establish a program dictated by the proposed standard and the appropriate corrective actions needed to fix a problem job. Given competitive considerations, small business owners may not be able to pass those costs on to customers.
- The proposed standard, although written in plain English, is not easily understood. The requirements are so vague that a small business owner may never be able to ascertain whether they are taking appropriate actions or doing enough to reduce injuries until an OSHA inspector enters the premises. And given the vagaries of the proposed standard, it certainly is conceivable that two OSHA inspectors reviewing the same actions of the same business owner could reach different conclusions on compliance. If the proposal is designed to protect workers, then compliance should be self-evident. This rule does not make compliance self-evident.
- Some of the requirements may exacerbate problems. Nothing in the proposed standard requires small business owners to contract with ergonomics experts to help them resolve problems. In fact, OSHA believes that all of the actions required by the proposed standard (including fixing the problem job) can be performed by small business owners. However, given their lack of expertise an action taken by the employer in good faith actually could, unwittingly, exacerbate rather than reduce the problem. If OSHA is interested in protecting workers, it needs to provide substantially more detailed guidance so small business owners can comply and, more importantly, protect their workers.
- The provisions for protecting workers by giving them leave or reassigning them evidences OSHA's lack of understanding of how small businesses operate. Few have well-defined job responsibilities among their workers, the flexibility to reassign personnel, or the ability to easily hire replacement workers particularly for jobs requiring unusual skills.
- OSHA appears to have underestimated the costs and relative ease with which small businesses could implement the proposed standard. If OSHA wishes to work in partnership with small business owners to improve the health of small business



employees, OSHA will have to do more to help small businesses including providing much more detailed guidance in whatever final standard is issued by OSHA.

JAMES M. TALENT, MISSOURI  
CHAIRMAN

NYDIA M. VELÁZQUEZ, New York

Congress of the United States  
House of Representatives  
106th Congress  
Committee on Small Business  
2301 Rayburn House Office Building  
Washington, DC 20515-0515

February 17, 2000

Hon. Charles Jeffress  
Administrator  
Occupational Safety and Health Administration  
United States Department of Labor  
200 Constitution Avenue, N.W., Room N-2625  
Washington, DC 20210

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OSHA  
DOCKET OFFICE  
2000 FEB 17 P 2:52

**RE: DOCKET NO. S-777, ERGONOMICS PROGRAM**

Dear Administrator Jeffress:

On November 23, 1999, the Occupational Safety and Health Administration ("OSHA") published a proposed rule, 64 Fed. Reg. 65,768, which would require employers to establish ergonomics programs in an effort to reduce and prevent musculo-skeletal disorders ("MSDs"). I concur with OSHA's conclusion that MSDs can be painful and incapacitating to employees. Nor is there any doubt that MSDs lower productivity of workers and impose costs on employers. I also agree with OSHA that employers should provide their employees with safe workplaces by eliminating MSDs if they can. Where I disagree with OSHA is that, in the guise of being flexible, OSHA has abdicated its statutory responsibility to draft a comprehensible and useful regulatory standard.

A reading of the preamble, the questions that OSHA propounds in the preamble, and the vagueness of the proposed standard reveal the painfully obvious – OSHA has no idea how to solve the problem of MSDs. Instead of developing a standard that gives small businesses guidance and assistance in implementing physical changes to the workplace that reduce and eliminate MSDs, it left it up to employers to figure out how to prevent or eliminate MSDs. These vast regulatory crevices into which small businesses will inevitably fall will be filled by the unfettered discretion of OSHA inspectors as they determine compliance. This "gotcha" approach to regulation will discourage all employers, but especially small business owners, from supporting and potentially complying with the rule. In effect, OSHA expended substantial resources to craft a proposed standard that will accomplish little or nothing to improve worker safety.

OSHA commenced development of an ergonomics standard eight years ago and has been studying issues related to ergonomics for more than a decade. It should have

been possible to determine the practices most likely to reduce MSDs and promulgate them in a regulation which a lay person could understand. Instead, OSHA proposes to require that employers eliminate or substantially reduce MSDs to an unspecified degree without telling employers how to do so. Employers then will have to experiment with different solutions at considerable cost; in the meantime employees continue to be subjected to risks from MSDs which the best practices might eliminate or substantially reduce.

Evidently, OSHA believes that most small employers do not care about worker safety, could easily eliminate MSDs if they did care, and need the motivation of fines and penalties to rectify the situation rather than real direction from the government. As I have often stated in hearings before the Small Business Committee, OSHA's attitude hurts workers, demoralizes small business owners, and undermines the credibility of OSHA.

I think an entirely different approach is necessary if OSHA seeks to achieve its goal of providing a safer workplace. OSHA must provide specific standards and guidance for reducing or eliminating MSDs. In other words, tell small businesses not what the problem is but what tangible, specific practices are needed to solve the problem. OSHA should withdraw the current proposal and reintroduce a new proposal that actually informs the regulated community on the best methods for preventing known MSD hazards. In the alternative, OSHA should simply delay enforcement against small businesses until it has prepared specific steps that each business can take to eliminate known MSDs in the workplace.

**1. OSHA's Procedures did not Provide Small Business with Sufficient Opportunity to Comment on the Proposed Standard**

OSHA issued the proposed standard shortly before the Thanksgiving holiday on November 23, 1999. At that time, it had not yet electronically released the full economic analysis and regulatory flexibility analysis. Even when the documents were released, OSHA had to supply corrections, including corrections to key portions of the economic analysis. Those corrections were published on December 30, 1999. Despite these delays and the overall size of the docket, OSHA initially provided the regulated community a little more than 70 days to comment on the proposal. Given the holiday season, the need to make final preparations for Y2K conversion, and the size of the docket, small businesses could not effectively comment on the impact of the proposed standard in the time given by OSHA.<sup>1</sup>

OSHA then was faced with more than 1,100 requests for extensions of time, including one from the Committee on Education and Workforce that I cosigned. OSHA's response was that extensions of time would not be granted because the regulated

<sup>1</sup> Pursuant to § 6(b) of the Occupational Safety and Health Act, 29 U.S.C. § 665(b)(2), OSHA only is required to give the commenting public 30 days to respond to a proposed standard. Courts have upheld standards in which parties attacked OSHA for not granting the regulated community sufficient time to analyze a large complex docket. *E.g., AFL-CIO v. OSHA*, 965 F.2d 962, 969 n.8 (11<sup>th</sup> Cir. 1992) (noting that 47 days adequate to respond to in one rulemaking 428 distinct permissible exposure levels).

community had from February, 1999 to familiarize itself with the advanced notice of proposed rulemaking and the standard in the notice of proposed rulemaking is substantially similar to the standard in the advanced notice.<sup>2</sup> Commenters thus prepared their responses assuming that the February 1, 2000 date would hold. A mere five calendar days (two of which included a weekend) before the close of the comment period OSHA extended the comment period by 30 days. Most commenters already had completed or nearly completed their comments and only then did OSHA decide to provide a limited extension.

This is emblematic of OSHA's failure to understand the circumstances facing small business owners. They have limited time to assess the impact of the proposed standard on their operations. They then operate under that premise to prepare comments. Then all of a sudden, in direct contradiction to OSHA's public statements, a brief extension of time is granted. While this gives the small business community a better chance to analyze the proposed standard, it also requires many small business owners to revisit something they had already completed or nearly completed. In short, OSHA has conducted this rulemaking in the same manner that it would expect the regulated community to comply with the proposed ergonomics standard – do it once and then OSHA will give you the opportunity to do it all over again until you get it right.<sup>3</sup>

## II. A Brief Description of the Standard

OSHA assigns employees into three generic categories: a) employees engaged in manufacturing; b) employees involved in manual handling; and c) all other employees who are referred to as "general industry" employees. The proposed standard applies to all three types of workers. However, employers are required to treat these categories of employees differently with respect to the implementation of an ergonomics program. Employers who have employees engaged in manufacturing or manual handling jobs<sup>4</sup> must install a management leadership program to prevent MSDs, educate employees on the hazards of MSDs, and establish a reporting system for employees to utilize when they get a MSD. Employers with employees in general industry jobs need to institute these three elements only after an employee incurs a covered MSD.<sup>5</sup> For all employers and

<sup>2</sup> OSHA's argument presumes that the panel process mandated by the Small Business Regulatory Enforcement Fairness Act would not change the substance of the standard as elucidated in the advanced notice. If that was the case, then the panel process undertaken by OSHA was nothing more than a formalistic sham to comply with the letter but not the spirit of the law.

<sup>3</sup> Of course, one difference exists between filing a comment letter and complying with the proposed ergonomics standard. The full weight of OSHA's police powers will force a small business owner to do the ergonomics program over again until the small business owner gets it right – or at least right in the eyes of a particular OSHA inspector.

<sup>4</sup> OSHA does not specifically define manufacturing or manual handling jobs but gives examples of each and presumably employers can discern whether an employee does manufacturing, manual handling, or is in the general industry category.

<sup>5</sup> It is important to note that a manufacturer is likely to have all categories of employees and potentially could have a staggered implementation of an ergonomics program, i.e., some areas of the employer's establishment will have parts or all of an ergonomics program before other areas in the same establishment.

employees, a covered MSD<sup>6</sup> is one incurred by the employee because it represents a core element of the employee's job.<sup>7</sup>

Once an employee incurs a covered MSD, this triggers various obligations depending upon the nature of the employee's job. For manufacturing and manual handling employees, the employer will simply have to finish the process of implementing an ergonomics program. Employers with general industry employees who incur a covered MSD will have to implement the full program at that point. The components of an ergonomics program after a covered MSD is reported are: a) job hazard analysis; b) fixing the hazard; and c) imposing worker protection restrictions that limit the employee's exposure to the hazard until it is eliminated or substantially reduced. Job hazard analysis requires the employer to ascertain what factors in the job caused the MSD. The employer then is required to discuss the work environment with the employee and determine what administrative, engineering, or other controls are required to eliminate or substantially reduce the hazard that created the MSD. The employer then is required to institute those same controls for all employees who would face the same risk. Finally, the employer is required to either move the employee to a position that will not expose the employee to the MSD hazards during recuperation at full pay or permit the employee to stay home for a period of up to six months at 90% pay. In lieu of this complete program, an employer can undertake a so-called "quick fix" which is to provide engineering or other controls that immediately eliminate the hazard leading to the MSD.<sup>8</sup>

In sum, the proposed standard fundamentally tells employers how to manage employees in a very specific context. Unlike other OSHA standards, it is completely devoid of specific, identifiable actions that can be directed at the causes of MSDs in order to eliminate them.

### III. The Proposed Standard Does Not Satisfy OSHA's own Principles which Guided the Rulemaking

The initial regulatory flexibility analysis ("IRFA") lays out the principles which guided the development of the proposal: 1) the standard should maximize worker protection in a cost-effective manner by focusing on those jobs or establishments with the highest risk and where the solutions for MSD problems are known; 2) the standard should incorporate best practices that have been shown to be effective; 3) it should be written in plain language; 4) it should recognize the unique needs of small business and be

<sup>6</sup> A covered MSD can either be an actual injury such as carpal tunnel syndrome or the symptoms of a MSD.

<sup>7</sup> For example, a computer programmer who is walking through the mailroom and decides to help a mailroom employee lift a box and then gets a back injury from the lifting of the box would have a workplace MSD but would not be a covered MSD because lifting boxes is not a core element of the computer programmer's job. These incidental MSD injuries are not covered by the proposed standard.

<sup>8</sup> The "quick fix" is actually not that quick in the sense that an employer has up to three months to determine whether the "quick fix" actually works. If not, the employer must establish a full ergonomics program. The "quick fix" does not eliminate an employer's obligation to institute the management leadership, employee training and communication components of the ergonomics program.

performance-oriented and flexible; 5) it should permit the grandfathering of existing ergonomics programs that are effective; and 6) the proposed standard should be tiered so that businesses, particularly small businesses, can avoid implementing an ergonomics program if the risk to their employees is low. Had OSHA proposed a standard that satisfied these principles, it certainly would have produced a rule that small businesses would understand and could comply with in a cost-effective manner. More importantly, OSHA's compliance with these principles would have produced a regulation providing specific actions that actually would prevent MSDs in the workplace, thereby protecting workers. OSHA's belief that the proposed standard actually meets the aforementioned principles only further demonstrates its failure to understand the real world in which small businesses operate.

#### **A. The Proposed Standard Fails to Protect Workers in a Cost-Effective Manner**

When one strips away the hundreds of pages of regulatory prose, OSHA essentially asserts that its proposal is the most cost-effective standard that will provide protection to workers who are at the greatest risk of incurring MSDs. In fact, nothing could be further from the truth.

OSHA argues that the standard is cost-effective because it provides a flexible framework that allows employers to discover the best mechanism for preventing MSDs for a particular job. That conclusion is based on the assumption that the small business owner has the information necessary to select the most cost-effective solution. Of course, given the proposed standard, the small business owner will have to seek that knowledge from someone other than OSHA since the type of guidance a small business owner might want is completely absent in the regulatory text. The small business owner is then left with this standard from OSHA – keep trying solutions until one works. That could take months or years and certainly might not be cost-effective at all. During this time, small businesses will incur substantial costs investing in fixes that do not work. Meanwhile workers will not be protected as small business owners try to find that needle in the haystack solution that may reduce or eliminate the hazard. If this is supposed to be cost-effective regulation for small business owners, OSHA needs to reconvene its Small Business Regulatory Enforcement Fairness Act panel and hear again from small business owners. OSHA probably would hear a conclusion much different than the one reached in its IRFA.

An example will prove illustrative. A catalog retailer with a call center has one employee from the call center complain of soreness and swelling in the wrist. The employer determines that this may be the first signs of carpal tunnel syndrome. A new ergonomically correct keyboard is purchased for the employee.<sup>9</sup> Since each employee in the call center also could incur the same symptoms, the job is considered a “problem job” under the proposed standard, 64 Fed. Reg. at 66,043, and the employer would have to purchase new keyboards for all employees. Another employee could report lower back pain because of the way they are sitting to use the new keyboards. The employer then

<sup>9</sup> An ergonomically designed keyboard costs approximately \$70. See <[www.staples.com](http://www.staples.com)>.

might have to purchase ergonomic footrests in an effort to alleviate the problem.<sup>10</sup> This might solve the problem for one employee but another may still be getting lower back pain or the footrests counter the aid of the keyboards so the employer decides to purchase ergonomically correct chairs for all of the problem job employees, i.e., all call center representatives.<sup>11</sup> If the ergonomic chairs did not solve the problem, the employer then might be faced with purchasing entire new modular workstations.<sup>12</sup> After these changes, it could take months or even years for an employer to determine whether the problem is solved.<sup>13</sup> For a call center with ten employees, the cost in equipment would conservatively run to \$5,800. Worst of all, there would be no assurance that the employer has implemented the best practices for eliminating or reducing MSDs because OSHA will not tell the employer what those practices are. Nevertheless, an employer still could be liable for a violation of the proposed ergonomics standard after doing all this if an OSHA inspector determines that the employer failed to implement those controls that would eliminate or substantially reduce MSDs.

Nothing in the proposed standard demonstrates that these costs will fix the problem faced by the employees or result in a determination of compliance. Even if this is not the most cost-effective solution, employers might be willing to try if it solved the problem. Unfortunately, there is no guarantee that it will. In short, the proposed standard's incremental control efforts in which non-expert employers are asked to solve complex bio-mechanical problems helps neither employers, nor more significantly, employees.

The absence of a cost-effective standard that will protect workers is illustrated further by the proposed standard's compliance trigger of one covered MSD. In essence, OSHA treats the risk of obtaining a MSD for all employees in an identical manner. OSHA reaches this conclusion despite substantial data that not all types of jobs face the same risk of incurring a MSD. The Bureau of Labor Statistics found that 60% of the MSDs which resulted in time off from work occurred in less than 28% of the workforce.<sup>14</sup> 64 Fed. Reg. at 65,777. In addition, OSHA presents statistics that reveal the incidence of MSDs per 10,000 workers can range from 1 in international banking to 1,448 in the manufacturing of building supplies and furnishings. Preliminary Economic Analysis and Initial Regulatory Flexibility Analysis, Exh. 28-1, at Table ES-1 ("Economic Analysis"). Finally, OSHA

<sup>10</sup> Ergonomic footrests cost about \$50. *See id.*

<sup>11</sup> Adjustable height and back chairs can run anywhere from \$200 to \$600 or more. *See id.* For purposes of calculating a total cost, I will assume that employers would purchase the least expensive chair.

<sup>12</sup> A modular workstation can be purchased for a minimum of \$160. *See id.*

<sup>13</sup> If one follows the proposed standard's "quick fix" mechanism, the employer has three months to determine whether that particular fix works. Thus, an employer engaged in resolving the MSD problems in a call center might take an entire year to make the replacements of all the various components in the graduated manner suggested by the proposed standard. A "quick fix" in a more complex work environment might take substantially longer than a year.

<sup>14</sup> Even this may overstate the actual incidence of MSDs in the United States since the BLS statistics are not based on information provided by health care providers. Employees with a sore back, wrist, etc., could simply call the employer and say that they are not coming in because of the injury. This would then be recorded as a missed workday from a MSD even though the employee may not have been suffering from a MSD caused at work.

notes that reporting a lost work day from MSDs in general industry reached 37 cases per 1,000 full time workers in 1997. *Id.* at 69. Given these “alarming” statistics, OSHA concluded that it was necessary to treat all MSDs and all employees in an identical manner once a covered MSD occurs.

Yet, this assumption will not necessarily provide protection to the workers that may need it the most. Most small business owners will have limited resources to resolve these problems.<sup>15</sup> The rule does not state how small business owners are to resolve these resource dilemmas. A small business owner might only treat the worker with lower risk because the cost is lower. I fail to see how the proposed standard, by treating all workers equally despite data to the contrary, provides a cost-effective means of providing protection to the workers that face the greatest risk.

One method for creating a cost-effective rule that truly protects workers is to permit employers who already are providing employees with safe workplaces to continue without making any changes. OSHA proposes to grandfather existing ergonomics programs. Proposed 29 C.F.R. § 1910.908. An employer need not institute a new program if the existing program “satisfies the basic obligation section of each program element in this program....” *Id.* at § 1910.908(a). In addition, the employer must evaluate the program to ensure that they are “functioning properly and that you are in compliance with the control requirements of § 1910.921.” *Id.* at § 1910.908(c). The most obvious evidence of the effectiveness of an existing program is the absence of MSDs or MSD-related injuries in the workplace. Yet, the proposed standard does not accept the existence of an already safe workplace as evidence of compliance. Rather than continuing existing practices, small business owners will have to hire consultants to determine whether their existing programs to protect workers are sufficient and, if they are not, what steps they must take to comply with OSHA’s standard. So OSHA will force small businesses to spend money to obtain no greater protection for their employees than currently exists. I certainly do not understand how that constitutes cost-effective regulation or improving the safety of the workplace.

**B. The Proposed Standard does not Take into Account the Unique Needs of Small Business because it Creates a Competitive Advantage for Large Businesses**

Even if the proposed standard can be interpreted to limit the amount of equipment that the employer must purchase for all employees in a given job description, the proposed standard fails to understand the workplace dynamics of small businesses. If a small business owner purchased new equipment to solve the MSD problem of one or a group of employees, the purchase may create jealousy among employees or, in other ways, poison the collegiality of the work environment. To avoid this situation, a small business owner will have to purchase equipment for all of its employees. On the other hand, a large business could purchase new equipment for an employee or group of employees in one

<sup>15</sup> See III B, *infra* (noting that large business per unit compliance costs will be lower prohibiting small businesses to pass through costs to their customers).



location without employees in other sites (possibly hundreds or thousands of miles away) learning of the purchase, much less becoming jealous because certain employees appeared to receive preferential treatment. Thus, large businesses will be able to tailor their ergonomic solutions to specific jobs or employees while small businesses will have to provide this equipment to all employees irrespective of whether they are at risk for MSDs.

Nor is the tailoring of equipment purchases the only way in which large employers benefit relative to small employees. Large employers have the personnel and resources to perform the job hazard analysis and determination of the appropriate fixes without seeking expensive outside consultants. Small employers generally do not have personnel or human resources departments, much less personnel with expertise in human factors engineering or ergonomics. Thus, small businesses will be forced to hire expensive outside consultants. This will raise the cost disproportionately for small businesses without necessarily providing employees any greater assurances of a safer workplace.

The aforementioned disparate impacts pale in comparison to that created by the worker restriction protection ("WRP") portion of the proposed standard. Many small businesses simply do not have alternative positions available for placement of employees who incur a covered MSD. Thus, many small businesses will have no alternative but to force their employees to take the paid leave to satisfy the WRP portion of the proposed standard. In turn, the paid leave will require small business owners to find replacement employees and train them.<sup>16</sup> Large businesses have more employees and greater flexibility to reassign work or otherwise handle any short-staffing due to the implementation of the WRP. Thus, small businesses will face paying two workers for the job done by one while large businesses simply shift work responsibilities around within its existing labor force thereby reducing the large businesses WRP costs.

Finally, the disparate impact on small businesses will be reflected in their ability to compete with larger businesses. For example, if an employer has to install a platform in a factory, the large business can spread that cost over a larger output thereby reducing, on a per unit basis, the cost of production relative to the cost incurred by a business with smaller output. Small businesses competing against these large businesses will not be able to pass the cost of compliance on to their customers because the customers will be able to obtain the same product at a lower price from large businesses. Simple economic logic dictates that OSHA's assertion on the ability of small businesses to pass through cost increases due to regulatory requirements is wrong.

OSHA, in the guise of protecting workers, should not impose a regulatory regime that plays into the financial, personnel, and scale advantages of large businesses. My concern over the regulatory advantage given to large businesses in terms of lower proportional costs would be overcome if the standard actually provided small business owners with assurances of compliance and a safer workplace for their employees. But the standard does not.

<sup>16</sup> In its economic analysis, OSHA failed to calculate the cost of hiring and training these temporary workers.

### C. The Proposed Standard is Incomprehensible Despite Being Written in Plain English

OSHA drafted the proposed standard in compliance with the President's executive order mandating regulations be written in plain English. The purpose of the executive order is not an idle exercise in regulatory drafting; rather it is to ensure that the public and the regulated community would understand the regulation and their responsibilities. OSHA has complied with the letter of the executive order but not its spirit.

It remains a basic principle of American jurisprudence that ignorance of the law is no defense to liability. However, that foundation rests on the bedrock concept that laws and regulations need to be written in a manner that a reasonable person would understand whether or not the action taken would constitute a violation of the law. *See, e.g., Grayned v. City of Rockford*, 408 U.S. 104, 108-109 (1972). The plain English version of these regulations cannot hide the fact that an employer, the lawyer for the employer, and any consultants retained by the employer would be unable to ascertain whether any particular ergonomics program complies with the proposed standard or achieves its ultimate objective – protecting employees.

For example, the proposed rule does not apply to agriculture, construction, or maritime operations but defines none of those terms. *See* Proposed 29 C.F.R. § 1910.904. Would a forest products company that also grows trees be covered by the proposed rule? What about a company that harvests trees? And if tree harvesting is covered, would not harvesting of crops or the picking of fruit also be covered? What about the packing of fruit? What if the packing of fruit for shipment to wholesalers and retailers was done at the orchard? What if it was done at a separate facility? Would a cabinetmaker be covered if they made a cabinet in a workroom? Would the answer change if the cabinetmaker constructed the cabinet on the premises of the person purchasing the cabinet? None of these questions are answered by the simple assertion that agriculture, maritime, and construction industries are outside the scope of the current rule. And if small businesses cannot ascertain whether they are involved in industries even covered by the proposed standard, the proposed standard provides no demonstrable improvement to the safety of employees.

In another example of vague regulatory language, the proposed standard requires that the employer must “eliminate MSD hazards, reduce them to the extent feasible, or materially reduce them....” *Id.* at § 1910.917. OSHA apparently believes that the interpretation of this section is self-evident. Nothing could be further from the truth. OSHA does not define the term “reduce to the extent feasible.” The standard “reduce to the extent feasible” may be interpreted differently by employers, employees, and OSHA inspectors. For example, an employer or OSHA inspector may conclude that the term means that if the cost of reducing the hazard is too expensive it is not feasible. In another example, a minor league baseball team could adopt a program to prevent rotator cuff tendinitis in its pitching staff. Options may include lowering the mound, pitching

underhand, or removing the pitcher after a certain number of pitches. The first two may well violate the rules of baseball while the last is doable without changing the rules but it would change the nature of the sport. This may be an extreme example. Nevertheless, it starkly demonstrates the potential interpretative difficulties associated with a business' attempt to comply with the proposed standard.

In yet another paragon of obfuscation, the term "materially reduce" is defined as "reducing the duration, frequency, and/or magnitude of exposure to one or more ergonomic risk factors in a way that is reasonably anticipated to significantly reduce the likelihood that covered MSDs will occur." *Id.* at § 1910.945. Key elements of this term are not defined such as "reasonably anticipated" or "significantly reduce." In fact, one could argue that the requirement is merely tautological in that the term "materially reduce" is defined by reference to the nearly identical term of "significantly reduce." Further compounding the lack of an evident standard is that the definition only requires a reduction in the likelihood of a MSD reoccurring. I fail to see how one can ascertain whether safety has been improved based on a reduction in the probability of a MSD occurring. Is compliance a one percent reduction, ten percent reduction, fifty percent reduction? OSHA simply does not say – leaving employers to guess which percentage an OSHA inspector might select.

Even OSHA's best effort at developing a clear standard – the "eliminate MSD hazards" is insufficiently transparent for employers to comprehend. Elimination of the hazard, according to OSHA, can be accomplished by eliminating it or by reducing employee exposure to the MSD hazard such that the MSD would no longer likely occur. *Id.* Of course, elimination is very different from reducing so that it would no longer reasonably occur. The latter contemplates that the hazard still would exist to some degree while elimination means the total absence of the hazard. And the appropriate interpretation of this section is important to employers so they can determine what actions they need to take to provide employees with a safe work environment. Nothing in the regulatory text or the associated documents in the docket provide guidance on this issue.<sup>17</sup>

I could highlight numerous other examples in which the plain language of the standard raises many questions concerning compliance without answering any of them. The plain language grants far too much discretion to OSHA inspectors to find compliance or non-compliance. To paraphrase Justice Stewart, the OSHA inspectors will know compliance when they see it. The Supreme Court in *Grayned* criticized such vagueness because "we assume that man is free to steer between lawful and unlawful conduct, we

<sup>17</sup> The absence of clarity and the need to reference the massive preamble and economic analysis in an effort to understand the rule belies OSHA's assertion that familiarization with the standard will take employers only one hour. OSHA admits that the regulatory text of the standard is not self-explanatory. "The Preamble to the proposed standard provides additional definitions and key terms used in the regulatory text." Economic Analysis at 1077. Furthermore, "[e]xamples of adequate control have been provided in the technological feasibility section of the economic analysis." *Id.* at 1078. We know of no small business owner who could review all of this documentation in one hour. And even if they could, it is unlikely that they would have a sufficient grasp of the standard to implement a program that actually would protect workers after only one hour of study.

insist that laws give the person of ordinary intelligence a reasonable opportunity to know what is prohibited, so that he may act accordingly. Vague laws may trap the innocent by not providing fair warning." *Grayned*, 408 U.S. at 108-09. The proposed standard does not permit a person of ordinary intelligence (or even legal and ergonomic experts) a reasonable opportunity to know what is prohibited or give them fair warning whether a particular ergonomics program can pass muster. OSHA has failed to draft a standard that has a plain meaning despite the utilization of plain language. Employers then will be discouraged from complying because they do not understand the proposed standard. And if employers cannot understand the rule sufficiently to comply, the employees of these small businesses will not see a safer work environment.

#### **D. OSHA Efforts did not Satisfy the Principles in the IRFA**

OSHA specified a number of principles which it claimed were used in developing the proposed standard. OSHA did not meet any of these standards. More importantly, it created a rule rife with obfuscation and hidden costs in the guise of being flexible. Small businesses will pay the penalties during visits from OSHA inspectors and employees will continue to be at risk from MSDs because the proposed standard simply does not work.

#### **IV. OSHA Abdicated its Regulatory Responsibility to Promulgate an Effective Standard that Would Identify Specific MSDs and Provide Small Businesses with Appropriate Solutions to those MSDs**

OSHA did not draft a prescriptive standard but rather a program standard leaving the details of compliance for the employer to determine. *See* Economic Analysis at 72. According to OSHA, the business community, and the small business community in particular, prefers programmatic standards to prescriptive rules that force all businesses into a specific method for compliance. *Id.* OSHA badly misperceives the needs of small business and its employees.

Nearly 100 pages of the proposed standard's preamble are devoted to the medical and bio-mechanical causes of MSDs. Scattered in various portions of this massive docket are suggested solutions to MSDs for specific jobs. None of these are included in the regulatory text and OSHA makes no guarantees that any of them will actually protect employees. Contrast this with OSHA's approach in almost every other standard developed pursuant to § 6(b). Each standard identifies a specific problem, such as exposure to cotton dust, and details a specific solution. OSHA had the opportunity to undertake the same tack in this rulemaking. Instead, OSHA decided that it could not figure out how to solve the problem so it simply identified the problem and left it to employers to cope with compliance.

OSHA contends that it took this approach because the business community does not like prescriptive standards. But there is a significant difference between being flexible and being arbitrary. If there is a hazard, small business owners do not need managerial platitudes – they need solutions. They do not have the resources to be constantly

changing, testing and trying new solutions to ergonomic problems in order to maintain compliance with the shifting tides of the OSHA standard as it might be interpreted by individual inspectors. The proposed OSHA standard leaves small businesses adrift without lifeboats in the ergonomic sea of uncertainty while their employees drown.

An agency that truly cared about protecting workers, rather than dictating employer-employee relations, would research the causes of MSDs, provide employers with information on what jobs can lead to specific MSDs, and then provide them with the engineering, administrative or work practice controls that will eliminate the MSD hazard or, if it is not feasible to eliminate, at least substantially reduce it. OSHA did not do that. Instead it effectively transferred its statutory responsibility to employers.

#### V. Conclusion

The docket in this case states the obvious that MSDs are bad and must be prevented. I could not agree more. What OSHA failed to do in the proposed standard is give the specific steps that a small business owner must take to prevent MSDs. The proposed standard only gives small businesses a process for how they should develop their own solutions to the MSD problem. This represents a complete abdication of OSHA's regulatory responsibility to develop standards that businesses, particularly small businesses, can comprehend and comply with in a cost-effective manner. OSHA should withdraw the current rule and use the information in the docket to issue a revised rule that: a) identifies specific MSDs and their causes; and b) provides small businesses with specific engineering controls necessary to comply with the standard so that MSDs will be eliminated.

Sincerely,



James M. Talent  
Chairman

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U.S. Department of Labor

Assistant Secretary for  
Occupational Safety and Health  
Washington, D.C. 20210

MAY 31 2000

The Honorable Sue Kelly  
Chairwoman, Subcommittee on Regulatory  
Reform and Paperwork Reduction  
Committee on Small Business  
House of Representatives  
Washington, DC 20515

Dear Madam Chairwoman:

Thank you for your letter of May 12 requesting that OSHA respond to follow-up questions from the House Small Business Subcommittee on Regulatory Reform and Paperwork Reduction.

Enclosed are OSHA's responses. If you need any additional information, please contact Mr. Ross Eisenbrey, Director of Policy, at (202) 693-2400.

Sincerely,

A handwritten signature in dark ink, appearing to read "Charles N. Jeffress", is written over the typed name.

Charles N. Jeffress  
Assistant Secretary

Enclosure

**Responses to Questions from House Committee on Small Business  
Subcommittee on Regulatory Reform and Paperwork Reduction  
Submitted for the Record**

1. On page 4 of your testimony, you state that solutions to mismatches between workers and their tasks are right-at-hand, easy to implement, and inexpensive. If that is the case, why did OSHA not identify those fixes in the language of the proposed standard instead of leaving it up to the small business owner to find the solution?

Mr. Jeffress: The preamble to the proposed standard, as well as the preliminary economic analysis, provided hundreds of examples of readily available, widely implemented, and inexpensive solutions to "problem" jobs. In particular, the job hazard analysis and control sections of the preamble (64 FR 65823-65826) and Appendix A to Chapter III of the Preliminary Economic and Regulatory Flexibility Analysis (Ex. 28-1) contain many solutions to mismatches between workers and their tasks. When OSHA issues a final ergonomics standard, the Agency will provide detailed compliance assistance materials, including examples of low-cost solutions for commonly encountered ergonomics problems, as well as the Small Entity Compliance Guide required by the Small Business Regulatory Enforcement Fairness Act. OSHA believes that these materials will provide small business owners with the assistance they need to comply with the standard.

2. In your testimony, you asserted that only 30 percent of small employers with less than 20 employees have addressed ergonomics problems. How many of the 325,000 MSDs occurred in businesses with less than 20 employees?

Mr. Jeffress: OSHA has data only on the percentage of small employers with ergonomics programs, not on the number of MSDs occurring in these small workplaces. This is the case because the Bureau of Labor Statistics (BLS) does not publish data on the number or rate of MSDs by size of establishment or firm. OSHA estimated that 325,000 covered MSDs occur in establishments with fewer than 20 employees, based on the total number of MSDs occurring in each industry, as reported by the BLS, and the percentage of employees in small establishments in each industry. We do not have data on how many of these establishments are stand-alone businesses.

3. Of the MSDs referred to in the answer to question 2, how many occurred in particular industries and/or particular jobs within those industries? For purposes of your answer, please refer to industries by four-digit Standard Industrial Classification and not the classification utilized by OSHA in the proposed standard.

Mr. Jeffress: As noted above, any data on MSDs in small establishments are OSHA estimates rather than BLS estimates. In the proposed standard, OSHA presented economic data by three-digit Standard Industrial Classification code because, among other

things, BLS has limited data on the number of MSDs occurring in four-digit SIC codes, and does not provide data on establishment size and occupational code by four-digit SIC code. We are enclosing the most detailed data OSHA has from the BLS on the number of MSDs involving days away from work by industry and by occupational code.

4. Please provide the Subcommittee with a copy of the Enid Memorial Hospital ergonomics program.

Mr. Jeffress: OSHA does not have a copy of the Enid Memorial Hospital ergonomics program. OSHA staff received information about ergonomics and on injury reduction from Enid Memorial administrators during the course of inspection activities.

5. Under Health Care Financing Administration ("HCFA") regulations, long-term care facilities are required to acquiesce to the wishes of patients when it comes to moving them. Patients that do not wish mechanical lifts to be used are entitled to have themselves physically lifted by long-term care facility workers. How are long-term care facilities supposed to comply with both the requirement of the proposed OSHA standard and the HCFA regulations if they are in conflict?

Mr. Jeffress: OSHA's proposed ergonomics standard allows employers great flexibility in the approaches they may use to reduce employee exposure to MSD hazards. The proposal specifically allows the use of engineering, work practice, and administrative controls. Patient handling tasks can be performed using several methods, including mechanical lifts, lift chairs, and lift teams. This flexibility means that employers may rely on lift teams or other approaches when lifting those patients who wish to be moved by nursing home personnel rather than by mechanical lifts. There is thus no conflict between Health Care Finance Administration regulations and the OSHA proposal.

6. On page 5 and 6 of your testimony, you cite a number of companies with effective ergonomics programs. Using the definitions of small businesses set forth in the regulation of the Small Business Administration, 13 CFR § 121.201 (1999), how many of those companies would qualify as small business?

Mr. Jeffress: All of the examples of companies cited by OSHA have small establishments. Establishments are individual sites. One company may have many establishments. Since the proposed standard only applies on an establishment-wide, rather than company-wide, basis, the OSHA economic analysis focuses on establishments. One company, CR/PL Limited Partnership, appears to be a business that would be classified as small by SBA under 13 CFR § 121.201 (1999). I say "appears to be" because determining whether a given company is in fact owned by a larger entity would require considerable additional research. In addition, Enid Memorial Hospital is a not-for-profit organization that would be classified as a small entity under the Regulatory Flexibility Act.



7. For the companies referred to in question 6, do you have data on the costs that they incurred in developing their ergonomics programs? If you have such data, please provide that data in total dollars and as a percentage of gross revenues?

Mr. Jeffress: OSHA does not have program development cost data for these firms.

8. On page 10 of your testimony, you state that the proposed ergonomics standards only covers those jobs in which MSDs occur as a result of the core element of the job. Who decides what is the core element of a job and have you prepared core element descriptions for all jobs? If you have not prepared such descriptions, how is a small business owner to determine what constitutes the core element of a job for purposes of complying with the proposed standard?

Mr. Jeffress: As proposed, the employer would be the person to determine whether a given task constitutes a core element of the job, using the guidance provided by OSHA in the proposed rule's preamble (64 FR 65782). OSHA has not prepared a list of core element descriptions for all jobs. Many participants in the hearings and other commenters asked for more detail on the core element concept embodied in the proposed rule. OSHA will evaluate all of these comments, as well as the comments received on all other provisions of the standard, before deciding whether the record supports inclusion of the core element concept in any final ergonomics rule. If OSHA determines, based on the record evidence, that this concept is appropriate for a final rule, the Agency will provide further guidance on the concept in the final rule, as well as examples of its application to many jobs, that will help small business owners to determine what constitutes a core element of a job.

9. How do you explain that MSD injuries are down 24% since 1994 without any regulation by the government?

Mr. Jeffress: The number of musculoskeletal injuries and illnesses has followed a pattern similar to that of the total number of all reported occupational injuries and illnesses, which have fallen by 23 percent from 1994 through 1998. MSD injuries and illnesses have declined from 756,000 in 1994 to 593,000 in 1998, according to BLS, a decrease of 22 percent. OSHA believes that this decline in injuries and illnesses is directly attributable to the efforts of OSHA, employers, employees, safety and health professionals, and the health care provider community to increase awareness of safety and health hazards of all types, including ergonomics, and the availability of feasible means of addressing these hazards. However, despite this decline, MSDs have continued throughout this period to constitute 34 percent of all lost workday injuries and illnesses, accounting for nearly 2 million injuries and illnesses every year and costing employers as much as \$20 billion in workers' compensation costs. OSHA believes that a final ergonomics rule will greatly accelerate this downward trend over the next 10 years, preventing nearly 3 million MSDs in that time.

10. On page 8 of your written statement, you note that persons who testify at the public hearings will have an additional ninety (90) days to file written comments after the close of the public hearings. That would mean that the close of the comment period would be sometime during the first or second week of August. Given the size of the record, do you still believe that OSHA can consider all of the material in a rational and thoughtful manner and still meet a January 1, 2001, deadline for issuing a final rule?

Mr. Jeffress: I can assure you that OSHA will not issue a final ergonomics standard until it has comprehensively reviewed and analyzed the record. I do believe, however, that OSHA will be able to consider all of the evidence in the record thoroughly and completely and still issue a final rule on schedule.

11. No one doubts that there are hazards in the workplace that can cause MSDs (some of which may be debilitating). On the other hand, there are other hazards in the workplace, such as indoor air quality, that also can create substantial health hazards for workers. Why has OSHA decided to impose a calendar deadline on promulgating a MSD standard and has not done so for the indoor air quality standard even though the comment period for that standard ended some time ago?

Mr. Jeffress: There are, as your question points out, many serious occupational safety and health hazards confronting workers in American workplaces, and OSHA must set its rulemaking priorities as the Agency's limited resources permit. The indoor air quality standard is a case in point; OSHA continues to work on this important standard and hopes to conclude the rulemaking over the next few years. However, OSHA has been working on an ergonomics standard for a decade, and the Agency believes that completing this rule quickly is essential to prevent the nearly two million U.S. workers who experience these disorders every year from continuing to do so. As I said in my testimony, ergonomic injuries are the largest group of preventable occupational injuries and illnesses in the country today.

12. Your written testimony asserts that the proposed standard will only affect a subset of all employers and employees. However, do you realistically believe that workers who are injured or whose injuries are exacerbated by work (according to one of the witnesses that testified later in the hearings) will not be reporting, in rather short order after issuance of a final standard, MSDs? Can you provide the Subcommittee with any statistics supporting your conclusion that workers will not misrepresent their symptoms or the cause thereof? If you can provide such statistics, please provide all the sources?

Mr. Jeffress: OSHA believes that workers will continue, as they have done in the past, to report at least some MSDs. The Agency also believes that many provisions of the proposed standard, such as the employee involvement, means of reporting, information and training, and work restriction protection provisions, will work together to encourage employees to recognize the signs and symptoms of MSDs and report them to their employers early, before they have progressed to disabling conditions. OSHA believes that the number of MSDs progressing to the stage of

recordable MSDs is likely to decline in jobs and workplaces covered by the standard, because these disorders will be caught before they reach that stage. OSHA does not expect fraud or misrepresentation to be a major problem. A recent report on workers' compensation fraud concludes: "The major reasons for the cost increases associated with the [workers' compensation] system in recent years are not ... associated with fraud, and the largest fraud costs are not associated with workers. For example, the National Council on Compensation Insurance, Inc. estimates that only 2 percent of Workers' Compensation fraud is perpetrated by workers." (Labor Research Association. Workers' Compensation Fraud: The Real Story. Prepared for the Injured Workers Bar Association of New York. June 1998 (Ex. 26-1485).)

13. In calculating the costs of the proposed standard, did you include the cost of finding, hiring, and training replacement workers for those on work restriction protection? If not, why not?

Mr. Jeffress: OSHA did not take account of such costs because doing so would only be appropriate if the OSHA proposal was expected to result in absences from work that would not have taken place in the absence of the OSHA standard. As noted above, OSHA does not believe that work restriction protection or any other aspects of the OSHA standard will cause additional absences; in fact, OSHA believes that, by encouraging early reporting, the proposed standard will reduce absences from work by preventing injuries and illnesses.

14. On page 11 and 12 of your testimony, you criticize cost estimates made by opponents. Yet, you have asserted that it only takes one hour to familiarize yourself with the proposed rule even though on page 1077 of the Economic Analysis, OSHA notes that many definitions and clarifications have been added to the Preamble. Did you calculate the cost of the small business owner reading the preamble and the economic analysis in determining the cost of compliance?

Mr. Jeffress: The one-hour familiarization cost described in the preliminary economic analysis does not include the time that OSHA estimates employers will need to familiarize themselves with all aspects of the standard; instead, this time estimate only includes the time needed for an employer "to determine if the establishment falls within the scope of the standard, and, in the case of establishments with existing ergonomics programs, to determine if their program is one that can be grandfathered in." For the majority of small firms, this will only involve looking at the few paragraphs of the rule under the heading, "Does this standard apply to me?," determining whether they have employees engaged in manufacturing or manual handling jobs, and reassuring themselves that they will not need to do anything in their establishment unless an MSD occurs. OSHA included additional costs in the economic analysis to account for the time needed by managers implementing a basic program, additional costs for employers implementing a full program, and additional costs for employers to investigate any MSD that does

occur to determine whether it was a "covered MSD" as defined by the standard.

15. In both oral and written testimony, Dr. Frank Mirer, head of the UAW's health and safety program, noted that UAW members who will provide various levels of ergonomic analysis undergo at least a modicum (i.e., more than one hour) of training? Do you still believe that your one hour assessment is valid for small business owners to familiarize themselves with the proposed standard?

Mr. Jeffress: OSHA agrees that training will be necessary to those providing various levels of ergonomic analysis. For example, OSHA estimates (over and above the one hour to determine the applicability of the standard to the particular establishment) that managers directing a full ergonomics program will require 16 hours of training. However, such training is not needed simply to review the standard to determine whether the establishment falls within the scope of the standard or can be grandfathered in, as discussed in the answer to Question 14.

16. The proposed standard states that agriculture, construction, and maritime trades are not subject to the proposed standard. That seems simple enough. However, is a person who owns a commercial greenhouse and sells the produce raised in that greenhouse a small retailer who is covered by the proposed standard or an agricultural producer who is not? How is a small business supposed to determine which it is?

Mr. Jeffress: The proposed standard "does not apply to agriculture, construction, or maritime operations." The proposed standard would thus not apply to employees of farms when they are engaged in farming activities. Commenters at the hearing raised issues of the precise coverage of the proposal, and OSHA is carefully considering these and will discuss its findings at the time of publication of the final rule.

17. At the hearing, we discussed the issue of professional sports franchises and professional athletes. Since most sports involve forceful handling of one type or another, will professional sports franchises be required to implement those aspects of the proposed ergonomics rule that apply immediately to businesses with manual handling jobs?

Mr. Jeffress: OSHA believes that relatively few professional athletes perform jobs that would be classified as manual handling under the definition given in the proposed rule, because manual handling would not be a core element of the job. The Agency would apply the same common-sense approach to enforcement in these unusual situations as it now does, for example, to fall protection in the context of circus performers and film stunt persons.

18. Both Mr. Talent, in his comments, and Ms. Woodbury, who testified on panel III, noted that the term "materially reduce" has no clear meaning because it uses many terms that are not defined and includes in its definition the term "significantly reduce" which seems to me to be the same as "materially reduce." What does the term "materially reduce" mean to you?

Mr. Jeffress: To materially reduce, as used in the proposal, means to substantially decrease exposure to the MSD hazard present in the job. As the proposal states, there are many ways to materially reduce hazards, including reducing the frequency, magnitude, or duration of the employee's exposure to the risk factors present in the job causing the injury.

19. Would OSHA consider a two-pronged approach - a more prescriptive approach for businesses that feel comfortable knowing exactly what they have to do for compliance and the more flexible approach outlined in the proposed standard?

Mr. Jeffress: Yes, OSHA will consider this two-pronged approach, as well as alternative approaches permitted by the Occupational Safety and Health Act that satisfy all the judicial, legislative, and executive branch requirements OSHA must meet.

20. As one of the witnesses on the second panel testified, many businesses do not control their work environments because they rent space and the lease may prohibit changes to the physical structure of that space. How will OSHA enforce the proposed standard against employers when their ability to remediate an ergonomic hazard may be hampered by their landlord?

Mr. Jeffress: It is only very rarely necessary to modify the physical structure of a space to address an ergonomic problem. In those rare circumstances where this might be the most cost effective solution to an ergonomic problem, the employer would have to discuss the options with the landlord, just as they would have to discuss such options if they decided to change the physical space to accommodate more employees, to enhance productivity, or to make other physical changes to the work environment to comply with other OSHA standards.

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## Musculoskeletal Disorders involving days away from work, 1996

| SIC Code | Industry                               | Total Cases | Median Days Away From Work |
|----------|----------------------------------------|-------------|----------------------------|
| 0720     | Crop services                          | 514         | 11                         |
| 0740     | Veterinary services                    | 274         | 19                         |
| 0750     | Animal services, except veterinary     | 102         | 5                          |
| 0780     | Landscape and horticultural services   | 3,514       | 6                          |
| 0800     | Forestry                               | NA          | NA                         |
| 0900     | Fishing, Hunting, and Trapping         | 50          | 4                          |
| 1310     | Crude petroleum and natural gas        | 198         | 3                          |
| 1320     | Natural gas liquids                    | NA          | NA                         |
| 1380     | Oil and gas field services             | 671         | 14                         |
| 2011     | Meat packing plants                    | 1,784       | 5                          |
| 2013     | Sausages and other prepared meats      | 1,370       | 7                          |
| 2015     | Poultry slaughtering and processing    | 2,116       | 7                          |
| 2021     | Creamery butter                        | NA          | NA                         |
| 2022     | Cheese, natural and processed          | 447         | 8                          |
| 2023     | Dry, condensed, evaporated products    | 193         | 5                          |
| 2024     | Ice cream and frozen desserts          | 297         | 5                          |
| 2026     | Fluid milk                             | 1,418       | 12                         |
| 2032     | Canned specialties                     | 65          | 5                          |
| 2033     | Canned fruits and vegetables           | 542         | 9                          |
| 2034     | Dehydrated fruits, vegetables, soups   | 234         | 10                         |
| 2035     | Pickles, sauces, and salad dressings   | 153         | 6                          |
| 2037     | Frozen fruits and vegetables           | 444         | 5                          |
| 2038     | Frozen specialties, n.e.c.             | 407         | 8                          |
| 2041     | Flour and other grain mill products    | 599         | 21                         |
| 2043     | Cereal breakfast foods                 | 258         | 9                          |
| 2044     | Rice milling                           | NA          | NA                         |
| 2045     | Prepared flour mixes and doughs        | 294         | 12                         |
| 2046     | Wet corn milling                       | NA          | NA                         |
| 2047     | Dog and cat food                       | NA          | NA                         |
| 2048     | Prepared feeds, n.e.c.                 | 616         | 5                          |
| 2051     | Bread, cake, and related products      | 1,748       | 10                         |
| 2052     | Cookies and crackers                   | 618         | 8                          |
| 2053     | Frozen bakery products, except bread   | NA          | NA                         |
| 2061     | Raw cane sugar                         | 63          | 14                         |
| 2062     | Cane sugar refining                    | NA          | NA                         |
| 2063     | Beet sugar                             | NA          | NA                         |
| 2064     | Candy and other confectionary products | 411         | 6                          |
| 2066     | Chocolate and cocoa products           | 64          | 15                         |
| 2067     | Chewing gum                            | NA          | NA                         |
| 2068     | Salted and roasted nuts and seeds      | NA          | NA                         |
| 2074     | Cottonseed oil mills                   | NA          | NA                         |
| 2075     | Soybean oil mills                      | NA          | NA                         |
| 2076     | Vegetable oil mills, n.e.c.            | NA          | NA                         |
| 2077     | Animal and marine fats and oils        | NA          | NA                         |
| 2079     | Edible fats and oils, n.e.c.           | NA          | NA                         |
| 2082     | Malt beverages                         | 281         | 18                         |
| 2083     | Malt                                   | NA          | NA                         |

## Musculoskeletal Disorders involving days away from work, 1996

| SIC Code | Industry                                | Total Cases | Median Days Away From Work |
|----------|-----------------------------------------|-------------|----------------------------|
| 2084     | Wines, brandy, and brandy spirits       | 189         | 10                         |
| 2085     | Distilled and blended liquors           | 168         | 6                          |
| 2086     | Bottled and canned soft drinks          | 2,230       | 6                          |
| 2087     | Flavoring extracts and syrups, n.e.c.   | 134         | 34                         |
| 2091     | Canned and cured fish and seafoods      | 84          | 5                          |
| 2092     | Fresh or frozen prepared fish           | 766         | 4                          |
| 2095     | Roasted coffee                          | 114         | 6                          |
| 2096     | Potato chips and similar snacks         | 470         | 5                          |
| 2097     | Manufactured ice                        | NA          | NA                         |
| 2098     | Macaroni and spaghetti                  | 48          | 11                         |
| 2099     | Food preparations, n.e.c.               | 807         | 10                         |
| 2110     | Cigarettes                              | NA          | NA                         |
| 2120     | Cigars                                  | NA          | NA                         |
| 2130     | Chewing and smoking tobacco             | NA          | NA                         |
| 2140     | Tobacco stemming and redrying           | NA          | NA                         |
| 2210     | Broadwoven fabric mills, cotton         | NA          | NA                         |
| 2220     | Broadwoven fabric mills, manmade        | NA          | NA                         |
| 2230     | Broadwoven fabric mills, wool           | NA          | NA                         |
| 2240     | Narrow fabric mills                     | NA          | NA                         |
| 2251     | Women's hosiery, except socks           | NA          | NA                         |
| 2252     | Hosiery, n.e.c.                         | 318         | 7                          |
| 2253     | Knit outerwear mills                    | 290         | 5                          |
| 2254     | Knit underwear mills                    | 166         | 4                          |
| 2257     | Wet knit fabric mills                   | 106         | 5                          |
| 2258     | Lace and warp knit fabric mills         | NA          | NA                         |
| 2259     | Knitting mills, n.e.c.                  | NA          | NA                         |
| 2261     | Finishing plants, cotton                | 166         | 10                         |
| 2262     | Finishing plants, manmade               | 192         | 5                          |
| 2269     | Finishing plants, n.e.c.                | 200         | 10                         |
| 2270     | Carpets and rugs                        | NA          | NA                         |
| 2281     | Yarn spinning mills                     | 172         | 16                         |
| 2282     | Throwing and winding mills              | 95          | 3                          |
| 2284     | Thread mills                            | 40          | 9                          |
| 2295     | Coated fabrics, not rubberized          | NA          | NA                         |
| 2296     | Tire cord and fabrics                   | NA          | NA                         |
| 2297     | Nonwoven fabrics                        | 66          | 9                          |
| 2298     | Cordage and twine                       | NA          | NA                         |
| 2299     | Textile goods, n.e.c.                   | 67          | 7                          |
| 2310     | Men's and boys' suits and coats         | NA          | NA                         |
| 2321     | Men's and boys' shirts                  | 483         | 5                          |
| 2322     | Men's and boys' underwear and nightwear | 134         | 8                          |
| 2325     | Men's and boys' trousers and slacks     | 653         | 6                          |
| 2326     | Men's and boys' work clothing           | 556         | 7                          |
| 2329     | Men's and boys' clothing, n.e.c.        | 232         | 5                          |
| 2331     | Women's and misses' blouses and shirts  | 147         | 15                         |
| 2335     | Women's, junior's, and misses' dresses  | 129         | 3                          |
| 2337     | Women's and misses' suits and coats     | 99          | 7                          |

05/31/00 13:35 FAX 2028034643

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012/033

## Musculoskeletal Disorders involving days away from work, 1996

| SIC Code | Industry                                | Total Cases | Median Days Away From Work |
|----------|-----------------------------------------|-------------|----------------------------|
| 2339     | Women's and misses' outerwear, n.e.c.   | 899         | 10                         |
| 2341     | Women's and children's underwear        | NA          | NA                         |
| 2342     | Bras, girdles, and allied garments      | NA          | NA                         |
| 2350     | Hats, caps, and millinery               | NA          | NA                         |
| 2361     | Girls' and children's dresses, blouses  | 96          | 40                         |
| 2369     | Girls' and children's outerwear, n.e.c. | 128         | 10                         |
| 2381     | Fabric dress and work gloves            | NA          | NA                         |
| 2384     | Robes and dressing gowns                | 24          | 1                          |
| 2385     | Waterproof outerwear                    | 28          | 9                          |
| 2386     | Leather and sheep-lined clothing        | 11          | 64                         |
| 2387     | Apparel belts                           | NA          | NA                         |
| 2389     | Apparel and accessories, n.e.c.         | 73          | 10                         |
| 2391     | Curtains and draperies                  | 326         | 5                          |
| 2392     | Housefurnishings, n.e.c.                | 431         | 5                          |
| 2393     | Textile bags                            | 130         | 6                          |
| 2394     | Canvas and related products             | 103         | 3                          |
| 2395     | Pleating and stitching                  | 38          | 4                          |
| 2396     | Automotive and apparel trimmings        | 382         | 14                         |
| 2397     | Schiffli machine embroideries           | 30          | 3                          |
| 2399     | Fabricated textile products, n.e.c.     | 238         | 7                          |
| 2410     | Logging                                 | NA          | NA                         |
| 2421     | Sawmills and planing mills, general     | 1,450       | 7                          |
| 2426     | Hardwood dimension and flooring mills   | 462         | 5                          |
| 2429     | Special product sawmills, n.e.c.        | NA          | NA                         |
| 2431     | Millwork                                | 1,664       | 6                          |
| 2434     | Wood kitchen cabinets                   | 868         | 6                          |
| 2435     | Hardwood veneer and plywood             | 473         | 6                          |
| 2436     | Softwood veneer and plywood             | NA          | NA                         |
| 2439     | Structural wood members, n.e.c.         | 659         | 6                          |
| 2441     | Nailed wood boxes and shooks            | NA          | NA                         |
| 2448     | Wood pallets and skids                  | 679         | 8                          |
| 2449     | Wood containers, n.e.c.                 | NA          | NA                         |
| 2451     | Mobile homes                            | 901         | 4                          |
| 2452     | Prefabricated wood buildings            | 424         | 4                          |
| 2491     | Wood preserving                         | 95          | 2                          |
| 2493     | Reconstituted wood products             | 106         | 6                          |
| 2499     | Wood products, n.e.c.                   | 888         | 21                         |
| 2511     | Wood household furniture                | 1,051       | 5                          |
| 2512     | Upholstered household furniture         | 817         | 10                         |
| 2514     | Metal household furniture               | 160         | 10                         |
| 2515     | Mattresses and bedsprings               | 622         | 5                          |
| 2517     | Wood TV and radio cabinets              | 29          | 8                          |
| 2519     | Household furniture, n.e.c.             | NA          | NA                         |
| 2521     | Wood office furniture                   | 415         | 6                          |
| 2522     | Office furniture, except wood           | 345         | 5                          |
| 2530     | Public building and related furniture   | NA          | NA                         |
| 2541     | Wood partitions and fixtures            | 442         | 5                          |



05/31/00 13:35 FAX 2026034643

OCIA

013/033

## Musculoskeletal Disorders involving days away from work, 1996

| SIC Code | Industry                               | Total Cases | Median Days Away From Work |
|----------|----------------------------------------|-------------|----------------------------|
| 2542     | Partitions and fixtures, except wood   | NA          | NA                         |
| 2591     | Drapery hardware and blinds and shades | 116         | 5                          |
| 2599     | Furniture and fixtures, n.e.c.         | 306         | 7                          |
| 2610     | Pulp mills                             | NA          | NA                         |
| 2620     | Paper mills                            | NA          | NA                         |
| 2630     | Paperboard mills                       | NA          | NA                         |
| 2652     | Setup paperboard boxes                 | 52          | 11                         |
| 2653     | Corrugated and solid fiber boxes       | 908         | 5                          |
| 2655     | Fiber cans, drums and similar products | 91          | 30                         |
| 2656     | Sanitary food containers               | NA          | NA                         |
| 2657     | Folding paperboard boxes               | 385         | 20                         |
| 2671     | Paper coated and laminated, packaging  | 124         | 15                         |
| 2672     | Paper coated and laminated, n.e.c.     | 287         | 5                          |
| 2673     | Bags: plastics, laminated, and coated  | 393         | 5                          |
| 2674     | Bags: uncoated paper and multiwall     | 230         | 9                          |
| 2675     | Die-cut paper and board                | 92          | 12                         |
| 2676     | Sanitary paper products                | 171         | 5                          |
| 2677     | Envelopes                              | 233         | 4                          |
| 2678     | Stationery products                    | NA          | NA                         |
| 2679     | Converted paper products, n.e.c.       | 332         | 6                          |
| 2710     | Newspapers                             | NA          | NA                         |
| 2720     | Periodicals                            | NA          | NA                         |
| 2731     | Book publishing                        | 403         | 7                          |
| 2732     | Book printing                          | 392         | 5                          |
| 2740     | Miscellaneous publishing               | NA          | NA                         |
| 2752     | Commercial printing, lithographic      | 2,410       | 6                          |
| 2754     | Commercial printing, gravure           | 197         | 12                         |
| 2759     | Commercial printing, n.e.c.            | 1,298       | 9                          |
| 2760     | Manifold business forms                | NA          | NA                         |
| 2770     | Greeting cards                         | NA          | NA                         |
| 2782     | Blankbooks and looseleaf binders       | 253         | 4                          |
| 2789     | Bookbinding and related work           | 270         | 6                          |
| 2791     | Typesetting                            | 130         | 10                         |
| 2796     | Platemaking services                   | 83          | 3                          |
| 2812     | Alkalies and chlorine                  | NA          | NA                         |
| 2813     | Industrial gases                       | NA          | NA                         |
| 2816     | Inorganic pigments                     | NA          | NA                         |
| 2819     | Industrial inorganic chemicals, n.e.c. | 179         | 8                          |
| 2821     | Plastics materials and resins          | 230         | 9                          |
| 2822     | Synthetic rubber                       | NA          | NA                         |
| 2823     | Cellulosic manmade fibers              | NA          | NA                         |
| 2824     | Organic fibers, noncellulosic          | NA          | NA                         |
| 2833     | Medicinals and botanicals              | 143         | 10                         |
| 2834     | Pharmaceutical preparations            | 732         | 8                          |
| 2835     | Diagnostic substances                  | NA          | NA                         |
| 2836     | Biological products except diagnostic  | 72          | 3                          |
| 2841     | Soap and other detergents              | 189         | 12                         |

05/31/00 13:35 FAX 2026934643

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014/033

## Musculoskeletal Disorders involving days away from work, 1996

| SIC Code | Industry                              | Total Cases | Median Days Away From Work |
|----------|---------------------------------------|-------------|----------------------------|
| 2842     | Polishes and sanitation goods         | 127         | 2                          |
| 2843     | Surface active agents                 | NA          | NA                         |
| 2844     | Toilet preparations                   | 338         | 6                          |
| 2850     | Paints and allied products            | NA          | NA                         |
| 2865     | Cyclic crudes and intermediates       | 80          | 15                         |
| 2889     | Industrial organic chemicals, n.e.c.  | 233         | 4                          |
| 2873     | Nitrogenous fertilizers               | NA          | NA                         |
| 2874     | Phosphoric fertilizers                | NA          | NA                         |
| 2875     | Fertilizers, mixing only              | NA          | NA                         |
| 2879     | Agricultural chemicals, n.e.c.        | 52          | 5                          |
| 2891     | Adhesives and sealants                | NA          | NA                         |
| 2892     | Explosives                            | NA          | NA                         |
| 2893     | Printing ink                          | 139         | 17                         |
| 2895     | Carbon black                          | NA          | NA                         |
| 2899     | Chemical preparations, n.e.c.         | 212         | 8                          |
| 2910     | Petroleum refining                    | NA          | NA                         |
| 2951     | Asphalt paving mixtures and blocks    | 138         | 5                          |
| 2952     | Asphalt felts and coatings            | 85          | 5                          |
| 2992     | Lubricating oils and greases          | NA          | NA                         |
| 2999     | Petroleum and coal products, n.e.c.   | NA          | NA                         |
| 3010     | Tires and inner tubes                 | NA          | NA                         |
| 3020     | Rubber and plastics footwear          | NA          | NA                         |
| 3052     | Rubber and plastics hose and belting  | 391         | 12                         |
| 3053     | Gaskets, packing, and sealing devices | 661         | 3                          |
| 3061     | Mechanical rubber goods               | 964         | 6                          |
| 3069     | Fabricated rubber products, n.e.c.    | 771         | 4                          |
| 3081     | Unsupported plastics film and sheet   | 474         | 4                          |
| 3082     | Unsupported plastics profile shapes   | 212         | 10                         |
| 3083     | Laminated plastics plate and sheet    | 275         | 9                          |
| 3084     | Plastics pipe                         | 217         | 5                          |
| 3085     | Plastics bottles                      | 136         | 5                          |
| 3086     | Plastics foam products                | 779         | 6                          |
| 3087     | Custom compound purchased resins      | 194         | 7                          |
| 3088     | Plastics plumbing fixtures            | 327         | 4                          |
| 3089     | Plastics products, n.e.c.             | 5,650       | 6                          |
| 3110     | Leather tanning and finishing         | NA          | NA                         |
| 3130     | Footwear cut stock                    | NA          | NA                         |
| 3142     | House slippers                        | NA          | NA                         |
| 3143     | Men's footwear, except athletic       | 159         | 8                          |
| 3144     | Women's footwear, except athletic     | 114         | 10                         |
| 3149     | Footwear, except rubber, n.e.c.       | 71          | 6                          |
| 3150     | Leather gloves and mittens            | NA          | NA                         |
| 3160     | Luggage                               | NA          | NA                         |
| 3171     | Women's handbags and purses           | NA          | NA                         |
| 3172     | Personal leather goods, n.e.c.        | 77          | 5                          |
| 3190     | Leather goods, n.e.c.                 | NA          | NA                         |
| 3210     | Flat glass                            | NA          | NA                         |

05/31/00 13:35 FAX 2026934643

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0015/033

## Musculoskeletal Disorders involving days away from work, 1996

| SIC Code | Industry                               | Total Cases | Median Days Away From Work |
|----------|----------------------------------------|-------------|----------------------------|
| 3221     | Glass containers                       | 280         | 13                         |
| 3229     | Pressed and blown glass, n.e.c.        | 539         | 16                         |
| 3230     | Products of purchased glass            | NA          | NA                         |
| 3240     | Cement, hydraulic                      | NA          | NA                         |
| 3251     | Brick and structural clay tile         | NA          | NA                         |
| 3253     | Ceramic wall and floor tile            | 63          | 13                         |
| 3255     | Clay refractories                      | NA          | NA                         |
| 3259     | Structural clay products, n.e.c.       | NA          | NA                         |
| 3261     | Vitreous plumbing fixtures             | 155         | 9                          |
| 3262     | Vitreous china table and kitchenware   | NA          | NA                         |
| 3264     | Porcelain electrical supplies          | NA          | NA                         |
| 3269     | Pottery products, n.e.c.               | 200         | 16                         |
| 3271     | Concrete block and brick               | 262         | 5                          |
| 3272     | Concrete products, n.e.c.              | 944         | 6                          |
| 3273     | Ready-mixed concrete                   | 1,149       | 6                          |
| 3274     | Lime                                   | NA          | NA                         |
| 3275     | Gypsum products                        | 12          | 2                          |
| 3280     | Cut stone and stone products           | NA          | NA                         |
| 3291     | Abrasive products                      | 79          | 8                          |
| 3292     | Asbestos products                      | NA          | NA                         |
| 3295     | Minerals, ground or treated            | NA          | NA                         |
| 3296     | Mineral wool                           | 245         | 8                          |
| 3297     | Nonclay refractories                   | 235         | 8                          |
| 3299     | Nonmetallic mineral products, n.e.c.   | NA          | NA                         |
| 3312     | Blast furnaces and steel mills         | 1,373       | 13                         |
| 3313     | Electrometallurgical products          | NA          | NA                         |
| 3315     | Steel wire and related products        | 218         | 11                         |
| 3316     | Cold finishing of steel shapes         | 379         | 7                          |
| 3317     | Steel pipe and tubes                   | 476         | 12                         |
| 3321     | Gray and ductile iron foundries        | 1,436       | 7                          |
| 3322     | Malleable iron foundries               | 57          | 13                         |
| 3324     | Steel investment foundries             | 163         | 4                          |
| 3325     | Steel foundries, n.e.c.                | 511         | 14                         |
| 3331     | Primary copper                         | 17          | 28                         |
| 3334     | Primary aluminum                       | 144         | 20                         |
| 3339     | Primary nonferrous metals, n.e.c.      | NA          | NA                         |
| 3340     | Secondary nonferrous metals            | NA          | NA                         |
| 3351     | Copper rolling and drawing             | 295         | 20                         |
| 3353     | Aluminum sheet, plate, and foil        | 68          | 25                         |
| 3354     | Aluminum extruded products             | 358         | 7                          |
| 3355     | Aluminum rolling and drawing, n.e.c.   | NA          | NA                         |
| 3356     | Nonferrous rolling and drawing, n.e.c. | 103         | 5                          |
| 3357     | Nonferrous wiredrawing and insulating  | 1,008       | 12                         |
| 3363     | Aluminum die-castings                  | 618         | 5                          |
| 3364     | Nonferrous die casting except aluminum | NA          | NA                         |
| 3365     | Aluminum foundries                     | 522         | 3                          |
| 3366     | Copper foundries                       | NA          | NA                         |

05/31/00 13:36 FAX 2026934843

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016/033

## Musculoskeletal Disorders involving days away from work, 1996

| SIC Code | Industry                                | Total Cases | Median Days Away From Work |
|----------|-----------------------------------------|-------------|----------------------------|
| 3369     | Nonferrous foundries, n.e.c.            | NA          | NA                         |
| 3396     | Metal heat treating                     | 135         | 9                          |
| 3399     | Primary metal products, n.e.c.          | 107         | 4                          |
| 3411     | Metal cans                              | 222         | 9                          |
| 3412     | Metal barrels, drums, and pails         | NA          | NA                         |
| 3421     | Cutlery                                 | 129         | 7                          |
| 3423     | Hand and edge tools, n.e.c.             | 287         | 3                          |
| 3425     | Saw blades and handsaws                 | 105         | 10                         |
| 3429     | Hardware, n.e.c.                        | 685         | 14                         |
| 3431     | Metal sanitary ware                     | 257         | 4                          |
| 3432     | Plumbing fixture fittings and trim      | 186         | 8                          |
| 3433     | Heating equipment, except electric      | 306         | 5                          |
| 3441     | Fabricated structural metal             | 1,159       | 9                          |
| 3442     | Metal doors, sash, and trim             | 983         | 6                          |
| 3443     | Fabricated plate work (boiler shops)    | 1,012       | 6                          |
| 3444     | Sheet metalwork                         | 1,391       | 6                          |
| 3446     | Architectural metal work                | 384         | 13                         |
| 3448     | Prefabricated metal buildings           | 281         | 4                          |
| 3449     | Miscellaneous metal work                | 148         | 3                          |
| 3451     | Screw machine products                  | 740         | 10                         |
| 3452     | Bolts, nuts, rivets, and washers        | 508         | 4                          |
| 3462     | Iron and steel forgings                 | 582         | 13                         |
| 3463     | Nonferrous forgings                     | NA          | NA                         |
| 3465     | Automotive stampings                    | 2,292       | 11                         |
| 3466     | Crowns and closures                     | NA          | NA                         |
| 3469     | Metal stampings, n.e.c.                 | 1,028       | 6                          |
| 3471     | Plating and polishing                   | 619         | 4                          |
| 3479     | Metal coating and allied services       | 481         | 8                          |
| 3482     | Small arms ammunition                   | NA          | NA                         |
| 3483     | Ammunition, exc. for small arms, n.e.c. | 97          | 20                         |
| 3484     | Small arms                              | 124         | 4                          |
| 3489     | Ordnance and accessories, n.e.c.        | NA          | NA                         |
| 3491     | Industrial valves                       | 157         | 5                          |
| 3492     | Fluid power valves and hose fittings    | 422         | 6                          |
| 3493     | Steel springs, except wire              | 167         | 8                          |
| 3494     | Valves and pipe fittings, n.e.c.        | NA          | NA                         |
| 3495     | Wire springs                            | NA          | NA                         |
| 3496     | Misc. fabricated wire products          | 828         | 10                         |
| 3497     | Metal foil and leaf                     | NA          | NA                         |
| 3498     | Fabricated pipe and fittings            | 390         | 8                          |
| 3499     | Fabricated metal products, n.e.c.       | 638         | 5                          |
| 3511     | Turbines and turbine generator sets     | 124         | 16                         |
| 3519     | Internal combustion engines, n.e.c.     | 730         | 14                         |
| 3523     | Farm machinery and equipment            | 805         | 9                          |
| 3524     | Lawn and garden equipment               | 296         | 7                          |
| 3531     | Construction machinery                  | 1,143       | 5                          |
| 3532     | Mining machinery                        | 148         | 4                          |

## Musculoskeletal Disorders involving days away from work, 1996

| SIC<br>Code | Industry                               | Total<br>Cases | Median Days<br>Away From<br>Work |
|-------------|----------------------------------------|----------------|----------------------------------|
| 3533        | Oil and gas field machinery            | 388            | 15                               |
| 3534        | Elevators and moving stairways         | NA             | NA                               |
| 3535        | Conveyors and conveying equipment      | 412            | 4                                |
| 3536        | Hoists, cranes, and monorails          | 80             | 3                                |
| 3537        | Industrial trucks and tractors         | 275            | 12                               |
| 3541        | Machine tools, metal cutting types     | 314            | 10                               |
| 3542        | Machine tools, metal forming types     | NA             | NA                               |
| 3543        | Industrial patterns                    | NA             | NA                               |
| 3544        | Special dies, tools, jigs and fixtures | 1,028          | 8                                |
| 3545        | Machine tool accessories               | 491            | 9                                |
| 3546        | Power-driven handtools                 | 234            | 2                                |
| 3547        | Rolling mill machinery                 | 45             | 3                                |
| 3548        | Welding apparatus                      | 385            | 11                               |
| 3549        | Metalworking machinery, n.e.c.         | 125            | 5                                |
| 3552        | Textile machinery                      | 62             | 5                                |
| 3553        | Woodworking machinery                  | 83             | 4                                |
| 3554        | Paper industries machinery             | 300            | 5                                |
| 3555        | Printing trades machinery              | NA             | NA                               |
| 3558        | Food products machinery                | 265            | 9                                |
| 3559        | Special industry machinery, n.e.c.     | 523            | 7                                |
| 3561        | Pumps and pumping equipment            | 277            | 7                                |
| 3562        | Ball and roller bearings               | 243            | 8                                |
| 3563        | Air and gas compressors                | 211            | 9                                |
| 3564        | Blowers and fans                       | 398            | 5                                |
| 3565        | Packaging machinery                    | 232            | 5                                |
| 3568        | Speed changers, drives, and gears      | 182            | 5                                |
| 3567        | Industrial furnaces and ovens          | 140            | 15                               |
| 3568        | Power transmission equipment, n.e.c.   | 397            | 7                                |
| 3569        | General industrial machinery, n.e.c.   | 359            | 9                                |
| 3571        | Electronic computers                   | 477            | 6                                |
| 3572        | Computer storage devices               | 109            | 5                                |
| 3575        | Computer terminals                     | NA             | NA                               |
| 3577        | Computer peripheral equipment, n.e.c.  | 231            | 5                                |
| 3578        | Calculating and accounting equipment   | NA             | NA                               |
| 3579        | Office machines, n.e.c.                | 210            | 8                                |
| 3581        | Automatic vending machines             | 109            | 10                               |
| 3582        | Commercial laundry equipment           | 50             | 12                               |
| 3585        | Refrigeration and heating equipment    | 1,561          | 8                                |
| 3586        | Measuring and dispensing pumps         | 43             | 8                                |
| 3589        | Service industry machinery, n.e.c.     | 372            | 8                                |
| 3592        | Carburetors, pistons, rings, valves    | NA             | NA                               |
| 3593        | Fluid power cylinders and actuators    | 205            | 3                                |
| 3594        | Fluid power pumps and motors           | 185            | 10                               |
| 3596        | Scales and balances, exc. laboratory   | 45             | 5                                |
| 3599        | Industrial machinery, n.e.c.           | 1,962          | 5                                |
| 3612        | Transformers, except electronic        | 383            | 8                                |
| 3613        | Switchgear and switchboard apparatus   | 204            | 9                                |

## Musculoskeletal Disorders involving days away from work, 1996

| SIC Code | Industry                                  | Total Cases | Median Days Away From Work |
|----------|-------------------------------------------|-------------|----------------------------|
| 3621     | Motors and generators                     | 829         | 11                         |
| 3624     | Carbon and graphite products              | NA          | NA                         |
| 3625     | Relays and industrial controls            | 510         | 5                          |
| 3629     | Electrical industrial apparatus, n.e.c.   | NA          | NA                         |
| 3631     | Household cooking equipment               | NA          | NA                         |
| 3632     | Household refrigerators and freezers      | 276         | 8                          |
| 3633     | Household laundry equipment               | 204         | 8                          |
| 3634     | Electric housewares and fans              | 185         | 8                          |
| 3635     | Household vacuum cleaners                 | NA          | NA                         |
| 3639     | Household appliances, n.e.c.              | 247         | 10                         |
| 3641     | Electric lamps                            | 123         | 10                         |
| 3643     | Current-carrying wiring devices           | 481         | 9                          |
| 3644     | Noncurrent-carrying wiring devices        | 197         | 4                          |
| 3645     | Residential lighting fixtures             | 219         | 7                          |
| 3646     | Commercial lighting fixtures              | 240         | 9                          |
| 3647     | Vehicular lighting equipment              | 325         | 6                          |
| 3648     | Lighting equipment, n.e.c.                | NA          | NA                         |
| 3651     | Household audio and video equipment       | 384         | 12                         |
| 3652     | Prerecorded records and tapes             | 70          | 2                          |
| 3661     | Telephone and telegraph apparatus         | 448         | 8                          |
| 3663     | Radio and TV communications equipment     | 491         | 7                          |
| 3669     | Communications equipment, n.e.c.          | 112         | 3                          |
| 3671     | Electron tubes                            | 333         | 6                          |
| 3672     | Printed circuit boards                    | 700         | 4                          |
| 3674     | Semiconductors and related devices        | 601         | 7                          |
| 3675     | Electronic capacitors                     | 78          | 2                          |
| 3676     | Electronic resistors                      | 56          | 1                          |
| 3677     | Electronic coils and transformers         | 133         | 43                         |
| 3678     | Electronic connectors                     | 102         | 5                          |
| 3679     | Electronic components, n.e.c.             | 811         | 5                          |
| 3691     | Storage batteries                         | 251         | 8                          |
| 3692     | Primary batteries, dry and wet            | 38          | 9                          |
| 3694     | Engine electrical equipment               | 767         | 4                          |
| 3695     | Magnetic and optical recording media      | 86          | 8                          |
| 3699     | Electrical equipment and supplies, n.e.c. | 276         | 16                         |
| 3711     | Motor vehicles and car bodies             | 7,644       | 12                         |
| 3713     | Truck and bus bodies                      | 668         | 5                          |
| 3714     | Motor vehicle parts and accessories       | 8,247       | 9                          |
| 3715     | Truck trailers                            | 454         | 3                          |
| 3716     | Motor homes                               | 246         | 3                          |
| 3721     | Aircraft                                  | 1,733       | 9                          |
| 3724     | Aircraft engines and engine parts         | 458         | 13                         |
| 3728     | Aircraft parts and equipment, n.e.c.      | 736         | 7                          |
| 3731     | Ship building and repairing               | 1,943       | 14                         |
| 3732     | Boat building and repairing               | 765         | 5                          |
| 3740     | Railroad equipment                        | NA          | NA                         |
| 3750     | Motorcycles, bicycles, and parts          | NA          | NA                         |

## Musculoskeletal Disorders involving days away from work, 1996

| SIC Code | Industry                                  | Total Cases | Median Days Away From Work |
|----------|-------------------------------------------|-------------|----------------------------|
| 3761     | Guided missiles and space vehicles        | 139         | 13                         |
| 3764     | Space propulsion units and parts          | NA          | NA                         |
| 3769     | Space vehicle equipment, n.e.c.           | NA          | NA                         |
| 3792     | Travel trailers and campers               | 259         | 3                          |
| 3795     | Tanks and tank components                 | 36          | 25                         |
| 3799     | Transportation equipment, n.e.c.          | 357         | 6                          |
| 3810     | Search and navigation equipment           | NA          | NA                         |
| 3821     | Laboratory apparatus and furniture        | 74          | 5                          |
| 3822     | Environmental controls                    | 333         | 9                          |
| 3823     | Process control instruments               | 348         | 5                          |
| 3824     | Fluid meters and counting devices         | 65          | 7                          |
| 3825     | Instruments to measure electricity        | 314         | 4                          |
| 3826     | Analytical instruments                    | 126         | 6                          |
| 3827     | Optical instruments and lenses            | 63          | 4                          |
| 3829     | Measuring and controlling devices, n.e.c. | 213         | 5                          |
| 3841     | Surgical and medical instruments          | 451         | 7                          |
| 3842     | Surgical appliances and supplies          | 566         | 10                         |
| 3843     | Dental equipment and supplies             | 42          | 8                          |
| 3844     | X-ray apparatus and tubes                 | 48          | 13                         |
| 3845     | Electromedical equipment                  | 125         | 5                          |
| 3850     | Ophthalmic goods                          | NA          | NA                         |
| 3860     | Photographic equipment and supplies       | NA          | NA                         |
| 3870     | Watches, clocks, watchcases and parts     | NA          | NA                         |
| 3911     | Jewelry, precious metal                   | 154         | 5                          |
| 3914     | Silverware and plated ware                | NA          | NA                         |
| 3915     | Jewelers' materials and lapidary work     | NA          | NA                         |
| 3930     | Musical instruments                       | NA          | NA                         |
| 3944     | Games, toys, and children's vehicles      | NA          | NA                         |
| 3949     | Sporting and athletic goods, n.e.c.       | 672         | 7                          |
| 3951     | Pens and mechanical pencils               | 51          | 6                          |
| 3952     | Lead pencils and art goods                | 45          | 15                         |
| 3953     | Marking devices                           | NA          | NA                         |
| 3955     | Carbon paper and inked ribbons            | 41          | 16                         |
| 3961     | Costume jewelry                           | 74          | 15                         |
| 3965     | Fasteners, buttons, needles, and pins     | 50          | 5                          |
| 3991     | Brooms and brushes                        | 125         | 6                          |
| 3993     | Signs and advertising specialties         | 667         | 5                          |
| 3995     | Burial caskets                            | 72          | 6                          |
| 3996     | Hard surface floor coverings, n.e.c.      | 81          | 10                         |
| 3999     | Manufacturing Industries, n.e.c.          | 537         | 5                          |
| 4000     | Railroads                                 | 932         | 25                         |
| 4110     | Local and suburban transportation         | 3,624       | 5                          |
| 4120     | Taxicabs                                  | 107         | 5                          |
| 4130     | Intercity and rural bus transportation    | 268         | 6                          |
| 4140     | Bus charter service                       | 142         | 11                         |
| 4150     | School buses                              | 472         | 24                         |
| 4170     | Bus terminal and service facilities       | NA          | NA                         |

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## Musculoskeletal Disorders involving days away from work, 1996

| SIC Code | Industry                                  | Total Cases | Median Days Away From Work |
|----------|-------------------------------------------|-------------|----------------------------|
| 4210     | Trucking and courier services, except air | 21,976      | 8                          |
| 4220     | Public warehousing and storage            | 1,748       | 4                          |
| 4230     | Trucking terminal facilities              | NA          | NA                         |
| 4510     | Air transportation, scheduled             | 32,954      | 9                          |
| 4520     | Air transportation, nonscheduled          | 144         | 5                          |
| 4680     | Airports, flying fields, and services     | 1,052       | 4                          |
| 4600     | Pipelines, except natural gas             | NA          | NA                         |
| 4720     | Passenger transportation arrangement      | 70          | 12                         |
| 4730     | Freight transportation arrangement        | 845         | 7                          |
| 4740     | Rental of railroad cars                   | NA          | NA                         |
| 4780     | Miscellaneous transportation services     | 343         | 9                          |
| 4810     | Telephone communication                   | 4,369       | 9                          |
| 4820     | Telegraph and other communications        | NA          | NA                         |
| 4830     | Radio and television broadcasting         | 233         | 4                          |
| 4840     | Cable and other pay TV services           | 1,074       | 5                          |
| 4890     | Communication services, n.e.c.            | NA          | NA                         |
| 4910     | Electric services                         | 1,686       | 8                          |
| 4920     | Gas production and distribution           | 850         | 5                          |
| 4930     | Combination utility services              | 587         | 9                          |
| 4940     | Water supply                              | 236         | 7                          |
| 4950     | Sanitary services                         | 2,342       | 4                          |
| 4960     | Steam and air-conditioning supply         | NA          | NA                         |
| 5010     | Motor vehicles, parts, and supplies       | 3,728       | 5                          |
| 5020     | Furniture and hom furnishings             | 1,151       | 5                          |
| 5030     | Lumber and construction materials         | 3,918       | 4                          |
| 5040     | Professional and commercial equipment     | 3,714       | 5                          |
| 5050     | Metals and minerals, except petroleum     | 1,351       | 7                          |
| 5060     | Electrical goods                          | 1,864       | 8                          |
| 5070     | Hardware, plumbing and heating equipment  | 2,697       | 6                          |
| 5080     | Machinery, equipment, and supplies        | 5,371       | 7                          |
| 5090     | Miscellaneous durable goods               | 2,788       | 13                         |
| 5110     | Paper and paper products                  | 1,181       | 5                          |
| 5120     | Drugs, proprietaries, and sundries        | 823         | 5                          |
| 5130     | Apparel, piece goods, and notions         | 748         | 9                          |
| 5140     | Groceries and related products            | 12,664      | 6                          |
| 5150     | Farm-product raw materials                | 328         | 4                          |
| 5160     | Chemicals and allied products             | 681         | 24                         |
| 5170     | Petroleum and petroleum products          | 1,051       | 4                          |
| 5180     | Beer, wine, and distilled beverages       | 3,361       | 5                          |
| 5190     | Misc. nondurable goods                    | 3,603       | 7                          |
| 5210     | Lumber and other building materials       | 6,433       | 4                          |
| 5230     | Paint, glass, and wallpaper stores        | 462         | 6                          |
| 5250     | Hardware stores                           | 603         | 6                          |
| 5260     | Retail nurseries and garden stores        | 684         | 5                          |
| 5270     | Mobile home dealers                       | NA          | NA                         |
| 5310     | Department stores                         | 19,298      | 5                          |
| 5330     | Variety stores                            | 1,690       | 11                         |



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## Musculoskeletal Disorders involving days away from work, 1996

| SIC<br>Code | Industry                               | Total<br>Cases | Median Days<br>Away From<br>Work |
|-------------|----------------------------------------|----------------|----------------------------------|
| 5390        | Misc. general merchandise stores       | 1,407          | 6                                |
| 5410        | Grocery stores                         | 24,213         | 7                                |
| 5420        | Meat and fish markets                  | 211            | 3                                |
| 5430        | Fruit and vegetable markets            | 68             | 20                               |
| 5440        | Candy, nut, and confectionery stores   | NA             | NA                               |
| 5450        | Dairy products stores                  | NA             | NA                               |
| 5460        | Retail bakeries                        | 549            | 21                               |
| 5490        | Miscellaneous food stores              | 132            | 7                                |
| 5510        | New and used car dealers               | 4,654          | 7                                |
| 5520        | Used car dealers                       | NA             | NA                               |
| 5530        | Auto and home supply stores            | 2,562          | 8                                |
| 5540        | Gasoline service stations              | 2,438          | 6                                |
| 5550        | Boat dealers                           | 252            | 6                                |
| 5560        | Recreational vehicle dealers           | 342            | 10                               |
| 5570        | Motorcycle dealers                     | NA             | NA                               |
| 5590        | Automotive dealers, n.e.c.             | NA             | NA                               |
| 5610        | Men's and boys' clothing stores        | 270            | 3                                |
| 5620        | Women's clothing stores                | 387            | 5                                |
| 5630        | Women's accessory and specialty stores | NA             | NA                               |
| 5640        | Children's and infants' wear stores    | NA             | NA                               |
| 5650        | Family clothing stores                 | 1,197          | 6                                |
| 5660        | Shoe stores                            | 405            | 3                                |
| 5690        | Misc. apparel and accessory stores     | 33             | 5                                |
| 5710        | Furniture and home furnishings stores  | 4,271          | 8                                |
| 5720        | Household appliance stores             | 603            | 5                                |
| 5730        | Radio, television, and computer stores | 1,143          | 5                                |
| 5800        | Eating and drinking places             | NA             | NA                               |
| 5910        | Drug stores and proprietary stores     | 1,710          | 10                               |
| 5920        | Liquor stores                          | 204            | 4                                |
| 5930        | Used merchandise stores                | 404            | 18                               |
| 5940        | Miscellaneous shopping goods stores    | 2,709          | 5                                |
| 5960        | Nonstore retailers                     | 2,903          | 12                               |
| 5980        | Fuel dealers                           | 751            | 5                                |
| 5990        | Retail stores, n.e.c.                  | 1,363          | 4                                |
| 6010        | Central reserve depository             | 132            | 5                                |
| 6020        | Commercial banks                       | 1,816          | 5                                |
| 6030        | Savings institutions                   | 127            | 5                                |
| 6060        | Credit unions                          | 283            | 6                                |
| 6080        | Foreign bank and branches and agencies | NA             | NA                               |
| 6090        | Functions closely related to banking   | 129            | 6                                |
| 6110        | Federal and Federally-sponsored credit | NA             | NA                               |
| 6140        | Personal credit institutions           | NA             | NA                               |
| 6150        | Business credit institutions           | 117            | 8                                |
| 6160        | Mortgage bankers and brokers           | 194            | 21                               |
| 6210        | Security brokers and dealers           | 173            | 5                                |
| 6230        | Security and commodity exchanges       | 48             | 10                               |
| 6280        | Security and commodity services        | 56             | 8                                |

## Musculoskeletal Disorders involving days away from work, 1996

| SIC Code | Industry                                | Total Cases | Median Days Away From Work |
|----------|-----------------------------------------|-------------|----------------------------|
| 6310     | Life insurance                          | 433         | 13                         |
| 6320     | Medical service and health insurance    | 1,027       | 7                          |
| 6330     | Fire, marine, and casualty insurance    | 1,023       | 5                          |
| 6350     | Surety insurance                        | NA          | NA                         |
| 6360     | Title insurance                         | NA          | NA                         |
| 6370     | Pension, health, and welfare funds      | NA          | NA                         |
| 6400     | Insurance agents, brokers, and service  | 472         | 5                          |
| 6510     | Real estate operators and lessors       | 3,252       | 5                          |
| 6530     | Real estate agents and managers         | 1,831       | 6                          |
| 6540     | Title abstract offices                  | NA          | NA                         |
| 6550     | Subdividers and developers              | 742         | 5                          |
| 6710     | Holding offices                         | NA          | NA                         |
| 6720     | Investment offices                      | 27          | 17                         |
| 6733     | Trusts                                  | 64          | 12                         |
| 6790     | Miscellaneous investing                 | NA          | NA                         |
| 7010     | Hotels and motels                       | 11,211      | 5                          |
| 7030     | Camps and recreational vehicle parks    | NA          | NA                         |
| 7040     | Membership-basis organization hotels    | NA          | NA                         |
| 7210     | Laundry, cleaning, and garment services | 2,480       | 7                          |
| 7220     | Photographic studios, portrait          | 242         | 2                          |
| 7230     | Beauty shops                            | 374         | 11                         |
| 7240     | Barber shops                            | NA          | NA                         |
| 7250     | Funeral service and crematories         | 299         | 7                          |
| 7290     | Miscellaneous personal services         | 53          | 22                         |
| 7310     | Advertising                             | NA          | NA                         |
| 7320     | Credit reporting and collection         | 141         | 48                         |
| 7330     | Mailing, reproduction, stenographic     | 916         | 5                          |
| 7340     | Services to buildings                   | 5,625       | 7                          |
| 7350     | Misc. equipment rental and leasing      | 1,351       | 10                         |
| 7360     | Personnel supply services               | 4,757       | 6                          |
| 7370     | Computer and data processing services   | 921         | 7                          |
| 7380     | Miscellaneous business services         | 2,755       | 6                          |
| 7510     | Automotive rentals, no drivers          | 429         | 4                          |
| 7520     | Automobile parking                      | 129         | 3                          |
| 7530     | Automotive repair shops                 | 2,502       | 10                         |
| 7540     | Automotive services, except repair      | NA          | NA                         |
| 7620     | Electrical repair shops                 | NA          | NA                         |
| 7630     | Watch, clock, and jewelry repair        | NA          | NA                         |
| 7640     | Reupholstery and furniture repair       | NA          | NA                         |
| 7690     | Miscellaneous repair shops              | 1,611       | 4                          |
| 7800     | Motion Pictures                         | NA          | NA                         |
| 7910     | Dance studios, schools, and halls       | NA          | NA                         |
| 7920     | Producers, orchestras, entertainers     | 385         | 10                         |
| 7930     | Bowling centers                         | 152         | 5                          |
| 7940     | Commercial sports                       | 632         | 10                         |
| 7990     | Misc. amusement, recreation services    | 4,622       | 5                          |
| 8010     | Offices and clinics of medical doctors  | 2,286       | 6                          |

## Musculoskeletal Disorders involving days away from work, 1996

| SIC Code | Industry                                 | Total Cases | Median Days Away From Work |
|----------|------------------------------------------|-------------|----------------------------|
| 8020     | Offices and clinics of dentists          | NA          | NA                         |
| 8030     | Offices of osteopathic physicians        | NA          | NA                         |
| 8040     | Offices of other health practitioners    | 731         | 5                          |
| 8050     | Nursing and personal care facilities     | 43,945      | 5                          |
| 8060     | Hospitals                                | 44,813      | 5                          |
| 8070     | Medical and dental laboratories          | 406         | 3                          |
| 8080     | Home health care services                | 9,223       | 6                          |
| 8090     | Health and allied services, n.e.c.       | 1,512       | 15                         |
| 8100     | Legal services                           | 1,264       | 13                         |
| 8210     | Elementary and secondary schools         | 855         | 5                          |
| 8220     | Colleges and universities                | 1,929       | 6                          |
| 8230     | Libraries                                | NA          | NA                         |
| 8240     | Vocational schools                       | NA          | NA                         |
| 8290     | Schools and educational services, n.e.c. | NA          | NA                         |
| 8320     | Individual and family services           | 3,497       | 7                          |
| 8330     | Job training and related services        | 1,262       | 5                          |
| 8350     | Child day care services                  | 1,762       | 2                          |
| 8360     | Residential care                         | 6,624       | 4                          |
| 8390     | Social services, n.e.c.                  | 611         | 5                          |
| 8410     | Museums and art galleries                | 240         | 6                          |
| 8420     | Botanical and zoological gardens         | NA          | NA                         |
| 8510     | Business associations                    | 191         | 35                         |
| 8520     | Professional organizations               | NA          | NA                         |
| 8530     | Labor organizations                      | NA          | NA                         |
| 8540     | Civic and social associations            | 827         | 6                          |
| 8560     | Religious organizations                  | 406         | 6                          |
| 8590     | Membership organizations, n.e.c.         | 255         | 63                         |
| 8710     | Engineering and architectural services   | 1,068       | 8                          |
| 8720     | Accounting, auditing, and bookkeeping    | 1,550       | 1                          |
| 8730     | Research and testing services            | 1,330       | 3                          |
| 8740     | Management and public relations          | 1,705       | 11                         |
| 8900     | Services, n.e.c.                         | NA          | NA                         |

NA = Not Available. The BLS survey did not provide enough data to meet BLS quality control standards.

Source: Bureau of Labor Statistics

## Musculoskeletal Disorders involving days away from work, 1996

| Occupational Code | Occupational Title                                      | Total Cases | Median Days Away From Work |
|-------------------|---------------------------------------------------------|-------------|----------------------------|
| 007               | Financial managers                                      | 223         | 5                          |
| 008               | Personnel and labor relations                           | NA          | NA                         |
| 009               | Purchasing managers                                     | 140         | 2                          |
| 013               | Managers, marketing, advertising, public relations      | 454         | 11                         |
| 014               | Administrators, education                               | 123         | 4                          |
| 015               | Managers, medicine and health                           | 251         | 4                          |
| 017               | Managers, food and lodging                              | 889         | 5                          |
| 018               | Managers, properties, real estate                       | 793         | 1                          |
| 019               | Funeral directors                                       | 157         | 60                         |
| 021               | Managers, service organizations, nec                    | 189         | 14                         |
| 022               | Managers and administrators, nec                        | 4,048       | 5                          |
| 023               | Accountants and auditors                                | 372         | 7                          |
| 024               | Underwriters                                            | NA          | NA                         |
| 025               | Other financial officers                                | 204         | 6                          |
| 026               | Management analysts                                     | NA          | NA                         |
| 027               | Personnel, training, labor relations                    | 211         | 3                          |
| 028               | Purchasing agents, buyers, farm products                | 99          | 3                          |
| 029               | Buyers, wholesale, retail, except farm products         | 960         | 6                          |
| 033               | Purchasing agents and buyers, nec                       | 279         | 4                          |
| 034               | Business and promotion agents                           | NA          | NA                         |
| 035               | Construction inspectors                                 | 49          | 15                         |
| 036               | Inspectors and compliance officers, except construction | 36          | 6                          |
| 037               | Management related, nec                                 | 755         | 8                          |
| 043               | Architects                                              | NA          | NA                         |
| 044               | Engineers, aerospace                                    | NA          | NA                         |
| 045               | Engineers, metallurgical, materials                     | NA          | NA                         |
| 046               | Engineers, mining                                       | NA          | NA                         |
| 047               | Engineers, petroleum                                    | NA          | NA                         |
| 048               | Engineers, chemical                                     | NA          | NA                         |
| 053               | Engineers, civil                                        | 51          | 2                          |
| 055               | Engineers, electrical, electronic                       | 186         | 5                          |
| 056               | Engineers, industrial                                   | 103         | 5                          |
| 057               | Engineers, mechanical                                   | 139         | 4                          |
| 058               | Engineers, marine, naval                                | NA          | NA                         |
| 059               | Engineers, nec                                          | 207         | 16                         |
| 063               | Surveyors, mapping scientists                           | 162         | 64                         |
| 064               | Computer systems analysts                               | 339         | 5                          |
| 065               | Operations and systems researchers, analysts            | 171         | 5                          |
| 068               | Mathematical scientists, nec                            | 46          | 3                          |
| 069               | Physicists and astronomers                              | NA          | NA                         |
| 073               | Chemists, except biochemists                            | 45          | 1                          |
| 074               | Atmospheric and space scientists                        | NA          | NA                         |
| 075               | Geologists and geodesists                               | NA          | NA                         |
| 076               | Physical scientists, nec                                | NA          | NA                         |
| 077               | Agricultural and food scientists                        | NA          | NA                         |
| 078               | Biological and life scientists                          | 16          | 5                          |
| 079               | Forestry and conservation scientists                    | 16          | 75                         |

## Musculoskeletal Disorders involving days away from work, 1996

| Occupational Code | Occupational Title                              | Total Cases | Median Days Away From Work |
|-------------------|-------------------------------------------------|-------------|----------------------------|
| 083               | Medical scientists                              | NA          | NA                         |
| 084               | Physicians                                      | 40          | 4                          |
| 085               | Veterinarians                                   | NA          | NA                         |
| 089               | Health diagnosing practitioners, nec            | NA          | NA                         |
| 095               | Registered nurses                               | 13,595      | 4                          |
| 096               | Pharmacists                                     | 139         | 20                         |
| 097               | Dietitians                                      | NA          | NA                         |
| 098               | Respiratory therapists                          | 544         | 6                          |
| 099               | Occupational therapists                         | 68          | 3                          |
| 103               | Physical therapists                             | 766         | 5                          |
| 104               | Speech therapists                               | NA          | NA                         |
| 105               | Therapists, nec                                 | 105         | 2                          |
| 106               | Physician's assistants                          | 83          | 4                          |
| 134               | Health specialties teachers                     | NA          | NA                         |
| 137               | Art, drama, and music teachers                  | NA          | NA                         |
| 138               | Teachers, postsecondary, physical education     | 20          | 5                          |
| 148               | Trade and industrial teachers                   | NA          | NA                         |
| 153               | Teachers, postsecondary, nec                    | NA          | NA                         |
| 154               | Postsecondary teachers, subject not specified   | NA          | NA                         |
| 155               | Teachers, prekindergarten, kindergarten         | 400         | 2                          |
| 156               | Teachers, elementary school                     | 69          | 9                          |
| 157               | Teachers, secondary school                      | 19          | 11                         |
| 158               | Teachers, special education                     | 42          | 7                          |
| 159               | Teachers, except postsecondary, nec             | 1,517       | 3                          |
| 163               | Counselors, educational, vocational             | 396         | 3                          |
| 164               | Librarians                                      | 50          | 2                          |
| 165               | Archivists and curators                         | 19          | 5                          |
| 166               | Economists                                      | 49          | 2                          |
| 167               | Psychologists                                   | 52          | 5                          |
| 169               | Social scientists, nec                          | NA          | NA                         |
| 174               | Social workers                                  | 756         | 2                          |
| 175               | Recreation workers                              | 482         | 3                          |
| 176               | Clergy                                          | 19          | 30                         |
| 177               | Religious workers, nec                          | NA          | NA                         |
| 178               | Lawyers                                         | 101         | 5                          |
| 184               | Technical writers                               | 71          | 19                         |
| 185               | Designers                                       | 615         | 5                          |
| 186               | Musicians and composers                         | 20          | 4                          |
| 187               | Actors and directors                            | 92          | 23                         |
| 188               | Painters, sculptors, craft-artists, printmakers | 57          | 13                         |
| 189               | Photographers                                   | 275         | 2                          |
| 193               | Dancers                                         | 57          | 3                          |
| 194               | Artists, performers                             | 335         | 1                          |
| 195               | Editors and reporters                           | 39          | 7                          |
| 197               | Public relations specialists                    | 112         | 5                          |
| 199               | Athletes                                        | 429         | 12                         |
| 203               | Clinical laboratory technologists               | 1,349       | 3                          |

## Musculoskeletal Disorders involving days away from work, 1996

| Occupational Code | Occupational Title                              | Total Cases | Median Days Away From Work |
|-------------------|-------------------------------------------------|-------------|----------------------------|
| 204               | Dental hygienists                               | 330         | 22                         |
| 205               | Health record technologists                     | 405         | 9                          |
| 206               | Radiologic technicians                          | 1,732       | 3                          |
| 207               | Licensed practical nurses                       | 6,614       | 5                          |
| 208               | Health technologists, nec                       | 5,049       | 5                          |
| 213               | Electrical, electronic technicians              | 1,143       | 5                          |
| 214               | Industrial engineering technicians              | 67          | 22                         |
| 215               | Mechanical engineering technicians              | 92          | 2                          |
| 216               | Engineering technicians, nec                    | 405         | 10                         |
| 217               | Drafting                                        | 136         | 2                          |
| 218               | Surveying and mapping technicians               | 103         | 4                          |
| 223               | Biological technicians                          | 185         | 5                          |
| 224               | Chemical technicians                            | 134         | 7                          |
| 225               | Science technicians, nec                        | 475         | 2                          |
| 226               | Airplane pilots and navigators                  | 241         | 6                          |
| 228               | Broadcast equipment operators                   | 91          | 3                          |
| 229               | Computer programmers                            | 194         | 4                          |
| 233               | Tool programmers, numerical control             | NA          | NA                         |
| 234               | Legal assistants                                | 58          | 2                          |
| 235               | Technicians, nec                                | 3,495       | 9                          |
| 243               | Supervisors and proprietors                     | 8,520       | 7                          |
| 253               | Insurance                                       | 289         | 2                          |
| 254               | Real estate                                     | 202         | 3                          |
| 255               | Securities and financial services               | NA          | NA                         |
| 256               | Advertising and related                         | 102         | 16                         |
| 257               | Other business services                         | 297         | 5                          |
| 258               | Engineers                                       | 34          | 10                         |
| 259               | Mining, manufacturing, wholesale                | 1,586       | 8                          |
| 263               | Motor vehicles and boats                        | 237         | 10                         |
| 264               | Apparel                                         | 883         | 9                          |
| 265               | Shoes                                           | 141         | 2                          |
| 266               | Furniture and home furnishings                  | 382         | 4                          |
| 267               | Appliances                                      | 552         | 4                          |
| 268               | Hardware and building supplies                  | 1,815       | 6                          |
| 269               | Parts                                           | 799         | 4                          |
| 274               | Other commodities                               | 8,616       | 7                          |
| 275               | Sales counter clerks                            | 759         | 6                          |
| 276               | Cashiers                                        | 12,601      | 6                          |
| 277               | Street and door-to-door sales                   | 52          | 11                         |
| 278               | News vendors                                    | NA          | NA                         |
| 283               | Demonstrators, promoters, models                | 70          | 26                         |
| 285               | Sales support, nec                              | 86          | 12                         |
| 303               | Supervisors, general office                     | 215         | 7                          |
| 304               | Supervisors, computer operators                 | 38          | 7                          |
| 305               | Supervisors, financial records processing       | 139         | 13                         |
| 306               | Chief communications operators                  | NA          | NA                         |
| 307               | Supervisors, clerks, distribution and adjusting | 400         | 5                          |

## Musculoskeletal Disorders involving days away from work, 1996

| Occupational Code | Occupational Title                                        | Total Cases | Median Days Away From Work |
|-------------------|-----------------------------------------------------------|-------------|----------------------------|
| 389               | Administrative support, nec                               | 1,834       | 6                          |
| 413               | Supervisors, firefighting and fire prevention occupations | NA          | NA                         |
| 415               | Supervisors, guards                                       | 35          | 2                          |
| 416               | Fire inspection fire prevention                           | NA          | NA                         |
| 417               | Firefighting                                              | NA          | NA                         |
| 426               | Guards and police, except public                          | 2,093       | 3                          |
| 427               | Protective service, nec                                   | 43          | 5                          |
| 433               | Supervisors, food preparation, service                    | 975         | 6                          |
| 434               | Bartenders                                                | 793         | 2                          |
| 435               | Waiters and waitresses                                    | 2,809       | 9                          |
| 436               | Cooks                                                     | 5,499       | 5                          |
| 438               | Food counter, fountain workers                            | 582         | 5                          |
| 439               | Kitchen workers                                           | 2,063       | 6                          |
| 443               | Waiters', waitresses' assistants                          | 1,188       | 3                          |
| 444               | Miscellaneous food preparation                            | 6,815       | 11                         |
| 445               | Dental assistants                                         | 148         | 1                          |
| 446               | Health aides, except nursing                              | 5,683       | 4                          |
| 447               | Nursing aides, orderlies                                  | 58,422      | 5                          |
| 448               | Supervisors, cleaning, building service workers           | 993         | 5                          |
| 449               | Maids and housemen                                        | 9,755       | 6                          |
| 453               | Janitors and cleaners                                     | 15,278      | 6                          |
| 454               | Elevator operators                                        | NA          | NA                         |
| 455               | Pest control occupations                                  | 187         | 1                          |
| 456               | Supervisors, personal service                             | 124         | 5                          |
| 457               | Barbers                                                   | 80          | 40                         |
| 458               | Hairdressers and cosmetologists                           | 337         | 14                         |
| 459               | Attendants, amusement, recreation                         | 698         | 3                          |
| 461               | Guides                                                    | 285         | 7                          |
| 462               | Ushers                                                    | 16          | 6                          |
| 463               | Attendants, public transportation                         | 3,050       | 9                          |
| 464               | Baggage porters and bellhops                              | 680         | 8                          |
| 465               | Welfare service aides                                     | 425         | 5                          |
| 466               | Family child care providers                               | 70          | 2                          |
| 467               | Early childhood teachers' assistants                      | 383         | 5                          |
| 468               | Child care workers, nec                                   | 898         | 5                          |
| 469               | Personal service, nec                                     | 1,103       | 5                          |
| 475               | Managers, farms, except horticultural                     | 56          | 14                         |
| 476               | Managers, horticultural                                   | NA          | NA                         |
| 477               | Supervisors, farm workers                                 | 114         | 10                         |
| 479               | Farm workers                                              | 2,457       | 7                          |
| 483               | Marine life cultivation workers                           | NA          | NA                         |
| 484               | Nursery workers                                           | 598         | 5                          |
| 485               | Supervisors, related agricultural                         | 709         | 10                         |
| 486               | Groundskeepers and gardeners, except farm                 | 4,981       | 5                          |
| 487               | Animal caretakers, except farm                            | 335         | 18                         |
| 488               | Graders and sorters, farm products                        | 379         | 6                          |
| 489               | Inspectors, agricultural products                         | NA          | NA                         |

05/31/00 13:38 FAX 2028034643

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## Musculoskeletal Disorders involving days away from work, 1998

| Occupational Code | Occupational Title                                        | Total Cases | Median Days Away From Work |
|-------------------|-----------------------------------------------------------|-------------|----------------------------|
| 389               | Administrative support, nec                               | 1,834       | 6                          |
| 413               | Supervisors, firefighting and fire prevention occupations | NA          | NA                         |
| 415               | Supervisors, guards                                       | 35          | 2                          |
| 416               | Fire inspection fire prevention                           | NA          | NA                         |
| 417               | Firefighting                                              | NA          | NA                         |
| 426               | Guards and police, except public                          | 2,093       | 3                          |
| 427               | Protective service, nec                                   | 43          | 5                          |
| 433               | Supervisors, food preparation, service                    | 975         | 6                          |
| 434               | Bartenders                                                | 793         | 2                          |
| 435               | Waiters and waitresses                                    | 2,809       | 9                          |
| 436               | Cooks                                                     | 5,499       | 5                          |
| 438               | Food counter, fountain workers                            | 582         | 5                          |
| 439               | Kitchen workers                                           | 2,063       | 6                          |
| 443               | Waiters', waitresses' assistants                          | 1,188       | 3                          |
| 444               | Miscellaneous food preparation                            | 6,815       | 11                         |
| 445               | Dental assistants                                         | 148         | 1                          |
| 446               | Health aides, except nursing                              | 5,683       | 4                          |
| 447               | Nursing aides, orderlies                                  | 58,422      | 5                          |
| 448               | Supervisors, cleaning, building service workers           | 993         | 5                          |
| 449               | Maids and housemen                                        | 9,755       | 6                          |
| 453               | Janitors and cleaners                                     | 15,278      | 6                          |
| 454               | Elevator operators                                        | NA          | NA                         |
| 456               | Pest control occupations                                  | 187         | 1                          |
| 456               | Supervisors, personal service                             | 124         | 5                          |
| 457               | Barbers                                                   | 80          | 40                         |
| 458               | Hairdressers and cosmetologists                           | 337         | 14                         |
| 459               | Attendants, amusement, recreation                         | 898         | 3                          |
| 461               | Guides                                                    | 285         | 7                          |
| 462               | Ushers                                                    | 15          | 5                          |
| 463               | Attendants, public transportation                         | 3,050       | 9                          |
| 464               | Baggage porters and bellhops                              | 680         | 8                          |
| 465               | Welfare service aides                                     | 425         | 5                          |
| 468               | Family child care providers                               | 70          | 2                          |
| 467               | Early childhood teachers' assistants                      | 383         | 5                          |
| 468               | Child care workers, nec                                   | 898         | 5                          |
| 469               | Personal service, nec                                     | 1,103       | 5                          |
| 475               | Managers, farms, except horticultural                     | 56          | 14                         |
| 476               | Managers, horticultural                                   | NA          | NA                         |
| 477               | Supervisors, farm workers                                 | 114         | 10                         |
| 479               | Farm workers                                              | 2,467       | 7                          |
| 483               | Marine life cultivation workers                           | NA          | NA                         |
| 484               | Nursery workers                                           | 589         | 5                          |
| 485               | Supervisors, related agricultural                         | 709         | 10                         |
| 486               | Groundskeepers and gardeners, except farm                 | 4,981       | 5                          |
| 487               | Animal caretakers, except farm                            | 335         | 18                         |
| 488               | Graders and sorters, farm products                        | 379         | 6                          |
| 489               | Inspectors, agricultural products                         | NA          | NA                         |



## Musculoskeletal Disorders involving days away from work, 1996

| Occupational Code | Occupational Title                                       | Total Cases | Median Days Away From Work |
|-------------------|----------------------------------------------------------|-------------|----------------------------|
| 494               | Supervisors, forestry, logging                           | NA          | NA                         |
| 495               | Forestry workers, except logging                         | NA          | NA                         |
| 496               | Timber cutting, logging                                  | 283         | 10                         |
| 498               | Fishers                                                  | NA          | NA                         |
| 503               | Supervisors, mechanics, repairers                        | 858         | 8                          |
| 505               | Mechanics, automobile                                    | 5,042       | 8                          |
| 506               | Apprentices, automobile mechanic                         | 18          | 12                         |
| 507               | Mechanics, bus, truck, stationary engine                 | 3,618       | 5                          |
| 508               | Mechanics, aircraft engine                               | 835         | 8                          |
| 509               | Repairers, small engine                                  | 91          | 4                          |
| 514               | Repairers, automobile body                               | 1,064       | 14                         |
| 515               | Mechanics, aircraft, except engine                       | 345         | 5                          |
| 516               | Mechanics, heavy equipment                               | 1,434       | 14                         |
| 517               | Mechanics, farm equipment                                | 256         | 8                          |
| 518               | Repairers, industrial machinery                          | 3,408       | 8                          |
| 519               | Machinery maintenance                                    | 795         | 4                          |
| 523               | Repairers, electronic, communication equipment           | 1,600       | 8                          |
| 525               | Repairers, data processing equipment                     | 72          | 7                          |
| 526               | Repairers, household appliances, power tools             | 739         | 18                         |
| 527               | Telephone line installers, repairers                     | 451         | 7                          |
| 529               | Telephone installers, repairers                          | 1,953       | 9                          |
| 533               | Repairers, miscellaneous electrical, electronic          | 460         | 7                          |
| 534               | Mechanics, heating, air conditioning                     | 1,621       | 5                          |
| 535               | Repairers, camera, watch, musical instruments            | 116         | 56                         |
| 536               | Locksmiths and safe repairers                            | 18          | 5                          |
| 538               | Repairers, office machines                               | 226         | 3                          |
| 539               | Repairers, mechanical controls, valves                   | 145         | 17                         |
| 543               | Elevator installers, repairers                           | 108         | 15                         |
| 544               | Millwrights                                              | 1,006       | 15                         |
| 547               | Specified mechanics, repairers, nec                      | 2,283       | 10                         |
| 549               | Mechanics, repairers, not specified                      | 5,107       | 9                          |
| 553               | Supervisors, brickmasons, stonemasons, tile setters      | NA          | NA                         |
| 554               | Supervisors, carpenters                                  | 291         | 1                          |
| 555               | Supervisors, electricians, power transmission installers | 61          | 10                         |
| 556               | Supervisors, painters, paperhangers, plasterers          | NA          | NA                         |
| 557               | Supervisors, plumbers, pipefitters                       | 62          | 4                          |
| 558               | Supervisors, nec                                         | 2,174       | 10                         |
| 563               | Brickmasons and stonemasons                              | 1,540       | 10                         |
| 564               | Apprentices, brickmason, stonemason                      | 52          | 17                         |
| 565               | Tile setters, hard and soft                              | 235         | 15                         |
| 566               | Carpet installers                                        | 924         | 12                         |
| 567               | Carpenters                                               | 8,872       | 7                          |
| 569               | Apprentices, carpenter                                   | 218         | 3                          |
| 573               | Drywall installers                                       | 1,317       | 6                          |
| 575               | Electricians                                             | 4,162       | 8                          |
| 576               | Apprentices, electrician                                 | 918         | 17                         |
| 577               | Electrical power installers, repairers                   | 1,102       | 9                          |

## Musculoskeletal Disorders Involving days away from work, 1996

| Occupational Code | Occupational Title                              | Total Cases | Median Days Away From Work |
|-------------------|-------------------------------------------------|-------------|----------------------------|
| 579               | Painters                                        | 2,410       | 5                          |
| 583               | Paperhangers                                    | NA          | NA                         |
| 584               | Plasterers                                      | 220         | 7                          |
| 585               | Plumbers and pipefitters                        | 4,742       | 11                         |
| 587               | Apprentices, plumber, pipefitter                | 324         | 5                          |
| 586               | Concrete and terrazzo finishers                 | 543         | 10                         |
| 589               | Glaziers                                        | 478         | 10                         |
| 593               | Insulation workers                              | 567         | 12                         |
| 594               | Operators, paving, surfacing, tamping equipment | 95          | 14                         |
| 595               | Roofers                                         | 1,389       | 7                          |
| 596               | Sheetmetal duct installers                      | 897         | 10                         |
| 597               | Structural metal workers                        | 992         | 7                          |
| 598               | Drillers, earth                                 | 76          | 15                         |
| 599               | Construction trades, nec                        | 1,132       | 7                          |
| 613               | Supervisors, extractive workers                 | 141         | 22                         |
| 614               | Drillers, oil well                              | 196         | 6                          |
| 615               | Explosives workers                              | 67          | 7                          |
| 616               | Operators, mining machines                      | 121         | 30                         |
| 617               | Mining occupations, nec                         | 461         | 20                         |
| 628               | Supervisors, production workers                 | 3,507       | 6                          |
| 634               | Tool and die makers                             | 734         | 17                         |
| 635               | Apprentices, tool, die makers                   | 50          | 3                          |
| 636               | Assemblers, precision, metal                    | 531         | 4                          |
| 637               | Machinists                                      | 3,193       | 10                         |
| 639               | Apprentices, machinists                         | NA          | NA                         |
| 643               | Boilermakers                                    | 196         | 7                          |
| 644               | Precision grinders, tool sharpeners             | 43          | 20                         |
| 645               | Patternmakers, model makers, metal              | NA          | NA                         |
| 646               | Lay-out workers                                 | 316         | 4                          |
| 647               | Precious stones and metals workers              | 36          | 26                         |
| 649               | Engravers, metal                                | 46          | 10                         |
| 653               | Sheet metal workers                             | 844         | 6                          |
| 654               | Apprentices, sheet metal workers                | 121         | 13                         |
| 655               | Miscellaneous precision metal workers           | 16          | 10                         |
| 656               | Patternmakers, model makers, wood               | NA          | NA                         |
| 657               | Cabinet makers, bench carpenters                | 461         | 9                          |
| 658               | Furniture and wood finishers                    | 206         | 3                          |
| 659               | Miscellaneous precision woodworkers             | NA          | NA                         |
| 666               | Dressmakers                                     | 48          | 30                         |
| 667               | Tailors                                         | 211         | 3                          |
| 668               | Upholsterers                                    | 512         | 7                          |
| 669               | Shoe repairers                                  | 19          | 8                          |
| 674               | Miscellaneous precision apparel, fabric workers | NA          | NA                         |
| 675               | Hand molders, shapers, except jewelers          | 191         | 5                          |
| 676               | Patternmakers, lay-out workers, cutters         | NA          | NA                         |
| 677               | Optical goods workers                           | 89          | 6                          |
| 678               | Dental, medical appliance technicians           | 87          | 1                          |

## Musculoskeletal Disorders involving days away from work, 1996

| Occupational Code | Occupational Title                                       | Total Cases | Median Days Away From Work |
|-------------------|----------------------------------------------------------|-------------|----------------------------|
| 678               | Bookbinders                                              | 104         | 7                          |
| 683               | Assemblers, electrical, electronic                       | 3,388       | 7                          |
| 684               | Miscellaneous precision workers, nec                     | 531         | 10                         |
| 686               | Butchers and meat cutters                                | 3,120       | 8                          |
| 687               | Bakers                                                   | 682         | 10                         |
| 688               | Food batchmakers                                         | 318         | 14                         |
| 689               | Inspectors, testers, graders                             | 925         | 7                          |
| 693               | Adjusters and calibrators                                | 18          | 1                          |
| 694               | Operators, water, sewage treatment plants                | 156         | 4                          |
| 695               | Operators, power plants                                  | 88          | 24                         |
| 696               | Stationary engineers                                     | 653         | 8                          |
| 699               | Operators, miscellaneous plant and systems               | 135         | 3                          |
| 703               | t-up, lathes and turning machines                        | 248         | 13                         |
| 704               | Lathes and turning machines                              | 437         | 11                         |
| 705               | Milling and planing machines                             | 141         | 9                          |
| 706               | Punching and stamping machines                           | 2,703       | 6                          |
| 707               | Rolling machines                                         | 430         | 5                          |
| 708               | Drilling and boring machines                             | 216         | 10                         |
| 709               | Grinding and polishing machines                          | 2,242       | 7                          |
| 713               | Forging machines                                         | 286         | 2                          |
| 714               | Numerical control machines                               | 301         | 6                          |
| 715               | Miscellaneous metal, plastic, stone, glass working machi | 405         | 5                          |
| 717               | Fabricating machines, nec                                | 536         | 10                         |
| 719               | Molding and casting machines                             | 1,758       | 7                          |
| 723               | Metal plating machines                                   | 403         | 4                          |
| 724               | Heat treating machines                                   | 214         | 5                          |
| 725               | Miscellaneous metal, plastic processing machines         | 200         | 8                          |
| 726               | Wood lathe, routing, planing machines                    | 94          | 10                         |
| 727               | Sawing machines                                          | 1,470       | 5                          |
| 728               | Shaping, joining machines                                | 115         | 9                          |
| 729               | Nailing, tacking machines                                | 99          | 13                         |
| 733               | Miscellaneous woodworking machines                       | 856         | 4                          |
| 734               | Printing press operators                                 | 1,908       | 9                          |
| 735               | Phot engravers and lithographers                         | 72          | 13                         |
| 736               | Typesetters and compositors                              | 87          | 5                          |
| 737               | Miscellaneous printing machines                          | 928         | 5                          |
| 738               | Winding, twisting machines                               | 351         | 9                          |
| 739               | Knitting, looping, weaving machines                      | 217         | 3                          |
| 743               | Textile cutting machines                                 | 45          | 3                          |
| 744               | Textile sewing machines                                  | 3,871       | 9                          |
| 745               | Shoe machines                                            | 193         | 14                         |
| 747               | Pressing machines                                        | 362         | 21                         |
| 748               | Laundry, dry cleaning machines                           | 2,207       | 5                          |
| 749               | Miscellaneous textile machines                           | 746         | 9                          |
| 753               | Cementing, gluing machines                               | 294         | 10                         |
| 754               | Packaging, filling machines                              | 5,145       | 8                          |
| 755               | Extruding and forming machines                           | 1,053       | 6                          |

## Musculoskeletal Disorders involving days away from work, 1996

| Occupational Code | Occupational Title                               | Total Cases | Median Days Away From Work |
|-------------------|--------------------------------------------------|-------------|----------------------------|
| 756               | Mixing and blending machines                     | 1,586       | 5                          |
| 757               | Separating, filtering, clarifying machines       | 726         | 8                          |
| 758               | Compressing, compacting machines                 | 639         | 11                         |
| 759               | Painting and paint spraying machines             | 1,901       | 5                          |
| 763               | Roasting, baking machines                        | 61          | 5                          |
| 764               | Washing, cleaning, pickling machines             | 260         | 6                          |
| 765               | Folding machines                                 | 249         | 6                          |
| 766               | Operators, furnaces, kiln, oven, except food     | 1,171       | 7                          |
| 768               | Crushing and grinding machines                   | 798         | 9                          |
| 769               | Slicing and cutting machines                     | 1,973       | 5                          |
| 774               | Photographic processing machines                 | 325         | 5                          |
| 777               | Miscellaneous machine operators, nec             | 22,826      | 7                          |
| 779               | Machine operators, not specified                 | 7,940       | 6                          |
| 783               | Welders and cutters                              | 7,997       | 6                          |
| 784               | Solders and brazers                              | 136         | 11                         |
| 785               | Assemblers                                       | 20,579      | 9                          |
| 786               | Hand cutting and trimming                        | 254         | 10                         |
| 787               | Hand molding, casting, forming                   | 332         | 14                         |
| 789               | Hand painting, coating, decorating               | 404         | 3                          |
| 793               | Hand engraving, printing                         | 98          | 8                          |
| 795               | Miscellaneous hand working                       | 1,049       | 20                         |
| 796               | Production inspectors                            | 3,404       | 8                          |
| 797               | Production testers                               | 381         | 25                         |
| 798               | Production samplers and weighers                 | 106         | 10                         |
| 799               | Graders, sorters, except farm                    | 1,864       | 8                          |
| 803               | Supervisors, motor vehicle operators             | 318         | 5                          |
| 804               | Truck drivers                                    | 48,334      | 8                          |
| 806               | Driver-sales workers                             | 6,614       | 7                          |
| 808               | Bus drivers                                      | 1,656       | 14                         |
| 809               | Taxicab drivers and chauffeurs                   | 669         | 5                          |
| 813               | Parking lot attendants                           | 285         | 7                          |
| 814               | Motor transportation, nec                        | 54          | 8                          |
| 823               | Railroad conductors and yardmasters              | 238         | 23                         |
| 824               | Locomotive operators                             | 83          | 31                         |
| 825               | Railroad brake, signal, switch operators         | 177         | 40                         |
| 826               | Rail vehicle operators, nec                      | NA          | NA                         |
| 828               | Ship captains, mates, except fishing             | 97          | 14                         |
| 829               | Sailors and deckhands                            | 276         | 8                          |
| 833               | Marine engineers                                 | NA          | NA                         |
| 834               | Bridge, lock, and lighthouse tenders             | NA          | NA                         |
| 843               | Supervisors, material moving equipment operators | 226         | 5                          |
| 844               | Operating engineers                              | 964         | 14                         |
| 845               | Longshore equipment operators                    | 61          | 18                         |
| 848               | Hoist and winch operators                        | 215         | 30                         |
| 849               | Crane and tower operators                        | 287         | 7                          |
| 853               | Excavating and loading machine operators         | 459         | 6                          |
| 855               | Grader, dozer, scraper operators                 | 143         | 13                         |

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## Musculoskeletal Disorders involving days away from work, 1996

| Occupational Code | Occupational Title                            | Total Cases | Median Days Away From Work |
|-------------------|-----------------------------------------------|-------------|----------------------------|
| 856               | Industrial truck operators                    | 3,581       | 7                          |
| 859               | Miscellaneous moving equipment operators      | 1,687       | 5                          |
| 864               | Supervisors, handlers, cleaners, and laborers | 484         | 4                          |
| 865               | Helpers, mechanics and repairers              | 801         | 5                          |
| 866               | Helpers, construction trades                  | 2,466       | 9                          |
| 867               | Helpers, surveyors                            | NA          | NA                         |
| 868               | Helpers, extractive                           | 111         | 22                         |
| 869               | Construction laborers                         | 12,369      | 7                          |
| 874               | Helpers, production                           | 2,544       | 7                          |
| 875               | Garbage collectors                            | 355         | 5                          |
| 876               | Stevedores                                    | 311         | 42                         |
| 877               | Stock handlers and baggers                    | 13,448      | 5                          |
| 878               | Machine feeders and offbearers                | 2,420       | 10                         |
| 883               | Freight, stock, material handlers, nec        | 26,395      | 7                          |
| 885               | Garages, service stations                     | 1,510       | 9                          |
| 887               | Vehicle washers and cleaners                  | 1,457       | 10                         |
| 888               | Hand packers and packagers                    | 3,824       | 10                         |
| 889               | Laborers, nonconstruction                     | 38,873      | 6                          |
| 999               | Non classifiable                              | 3,288       | 9                          |
| TOTAL             |                                               | 647,355     | 7                          |

NA = Not Available. The BLS survey did not provide enough data to meet BLS quality control standards.

Source: Bureau of Labor Statistics