

American Federation of Labor and Congress of Industrial Organizations



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March 31, 2009

Mr. Kevin Neyland
Acting Administrator
Office of Information and Regulatory Affairs

Dear Mr. Neyland:

Enclosed please find the comments of the AFL-CIO submitted in response to the Federal Register notice on Federal Regulatory Review, 74 Fed. Reg. 8819 (February, 26, 2009).

Sincerely,

Margaret Seminario
Director, Safety and Health

**COMMENTS OF THE AMERICAN FEDERATION OF LABOR
AND CONGRESS OF INDUSTRIAL ORGANIZATIONS (AFL-CIO)
IN RESPONSE TO THE
REQUEST FOR COMMENTS ON
FEDERAL REGULATORY REVIEW**

March 31, 2009

The American Federation of Labor and Congress of Industrial Organizations (AFL-CIO), a federation of 56 affiliated national and international unions representing more than 11 million working men and women across the United States, appreciates this opportunity to submit comments in response to the Federal Register notice on Federal Regulatory Review, 74 Fed. Reg. 8819 (February 26, 2009).

The AFL-CIO and its affiliated unions have a long history – and not a particularly happy one – with centralized regulatory review as it pertains to workplace regulation. In our experience, centralized regulatory review has too often been an impediment to the smooth and prompt adoption of regulations designed to protect workers and their workplace rights. It has meant the imposition of additional hoops and hurdles for agencies seeking to adopt regulations to protect workers. It has resulted in the weakening of workplace safety regulations, never the strengthening of them. And this delay in the regulatory process has, quite literally, cost workers' lives and resulted in unnecessary injuries and disease that could have been prevented through quicker regulatory action.

Since at least the early 1980s, centralized regulatory review has been pushed by opponents of regulation as a way to stall and weaken regulation. This approach was promoted by President Ronald Reagan, who issued Executive Order 12291 which adopted a decidedly anti-regulatory tone and established a system for centralized regulatory review. The effects on workplace safety regulation by the Occupational Safety and Health Administration were immediate and severe. Much-needed rules on hazard communication, toxic chemicals and asbestos were delayed, and rules on ethylene oxide and formaldehyde were weakened by a White House hostile to workplace safety regulation.

In 1993, President Clinton issued a new executive order on regulatory review (E.O. 12866) that made some improvements in terms of clarifying the relationship between the Office of Information and Regulatory Affairs (OIRA) and the agencies, and putting in place timelines for OIRA review so that regulations would no longer disappear into OIRA for months or years. But E.O. 12866, in our view, still gave OIRA too much sway over executive branch agencies in the regulatory process. Agencies still needed to obtain OIRA's approval before proceeding with significant regulations, and agencies were still required to conduct additional analyses to satisfy the executive order's dictates. Centralized review by OIRA continued to have the effect of delaying and sometimes weakening agency regulations.

The George W. Bush administration reverted to the anti-regulatory ideology embraced by President Reagan. The Bush Administration expanded OIRA's role and influence even farther, amending E.O. 12866 to reach guidance documents as well as regulations, and adopting the practice of reviewing even regulations that were not deemed significant. The Bush Administration also issued new guidelines on data quality and peer review, which added more hurdles for agencies and more opportunities for industry opponents of regulation to try to delay and weaken rules. These measures moved regulatory review in a decidedly more anti-regulatory direction.

The vast majority of the analytical and procedural requirements imposed on agencies in the regulatory review process, such as regulatory flexibility analysis and peer review, have been instituted at the urging of those who have opposed strong government regulation. These requirements have not only delayed regulations, they have provided opponents of regulation additional opportunities to attempt to challenge and weaken rules outside the agency rulemaking process, through small business panel reviews under SBREFA, objections under the Data Quality Act, and interventions with OMB. Nothing in these processes has served to assist the agencies in meeting their statutory obligations to issue regulations. These measures have only made agencies' jobs more difficult and thwarted government efforts to protect workers and the public.

President Obama has stated that he "strongly believe[s] that regulations are critical to protecting public health, safety, our share resources, and our economic opportunities and security." 74 Fed. Reg. 5977 (Feb. 3, 2009). We welcome the President's commitment to protective regulation, which stands in stark contrast to his immediate predecessor. We support President Obama's decision to repeal E.O. 13422 so that the process and requirements outlined in E.O. 12866 no longer apply to agency guidance documents. We also welcome the President's interest in reviewing E.O. 12866 to see how the executive order, and the regulatory review process, can be improved. We offer the following comments and recommendations to assist the administration in its consideration of these important issues.

1. The Executive Order Should Be Revised to Realign the Relationship Between OIRA and the Agencies to Respect the Agencies' Primary Role in Rulemaking Decisions

A perennial problem, through Republican and Democratic administrations alike, is OIRA's tendency to aggrandize its role in relation to the executive branch agencies to whom Congress has entrusted rulemaking responsibility. The Obama Administration should take this opportunity to amend the executive order and realign the relationship between OIRA and the agencies to reflect and respect the agencies' primary role in regulatory decisions within their jurisdiction.

The agencies should be given primacy because, first and foremost, it is the agencies to whom Congress has delegated the authority to determine what regulations may be needed to implement various laws. For example, Congress delegated to the Secretary of Labor (not OIRA) the authority to adopt regulations under the Fair Labor

Standards Act to define hazardous industries in which children under the age of 18 should be prohibited from working.¹ Similarly, Congress gave the Secretary of Labor (not OIRA) authority to issue regulations on the scope of statutory exemptions from the overtime provisions of the Fair Labor Standards Act. 29 U.S.C. § 213(a). Congress directed the Secretary of Labor (not OIRA) to adopt standards and regulations to protect workers from hazards in mines and other workplaces. 29 U.S.C. § 655; 30 U.S.C. § 811. Congress gave the Secretary of Labor (not OIRA) authority to “prescribe such regulations as are necessary to carry out” the provisions of the Family and Medical Leave Act. 29 U.S.C. § 2654. And Congress gave the Secretary of Labor (not OIRA) authority to “prescribe such regulations as he finds necessary or appropriate to carry out” the provisions of the Employee Retirement Income Security Act (ERISA). 29 U.S.C. § 1135.

The regulations adopted by the Secretary of Labor under these statutes are often very complex and highly technical. In crafting these rules, the Secretary depends on the expertise and experience of agency staff who are on the front lines of implementing and enforcing these laws. OIRA, in stark contrast, has no experience or technical expertise to determine whether a particular occupation is hazardous to minors, whether regulations are needed to protect workers’ retirement security, how the Family and Medical Leave Act should be implemented, or what sort of standard is needed to protect workers from toxic substances on the job.

Because it is the agencies, not OIRA, to whom Congress has delegated rulemaking authority, we disagree strongly with the notion that OIRA’s job should be “to offer a dispassionate and analytical “second opinion” on agency actions.” 74 Fed. Reg. 8819. Any “second opinion” on agency rulemaking should come from Congress, or from the courts in a lawsuit challenging a regulation, where the measure of a rule’s validity will be whether it conforms to the statutory parameters set by Congress. OIRA should not be in the business of second-guessing agency action. It has neither the expertise nor the authority to do so.

2. The Executive Order Should Not Impose Criteria or Analytical Mandates on Agencies that Go Beyond What Congress Has Required

The Federal Register notice asks for comments on the role of a number of subjects (distributional considerations, fairness, and concern for the interest of future generations, the role of the behavioral sciences in formulating regulatory policy, and the role of cost-benefit analysis) in agencies’ regulatory decisions.

Whether any or all of these factors are appropriate considerations in agency rulemaking depends first on the statutory framework under which agencies are conducting rulemaking, and second on the agencies’ own views on the appropriateness and relevance of these factors. OIRA has no business imposing its own set of criteria on

¹ 29 U.S.C. § 203(l) “Oppressive child labor” means any employee between the ages of sixteen and eighteen years . . . employed by an employer in any occupation which the Secretary of Labor shall find and by order declare to be particularly hazardous for the employment of children between such ages or detrimental to their health or well-being.”

top of an agency's statutory directives and authority. Moreover, as we explain below, for certain statutes, such as the Occupational Safety and Health Act, these considerations would be both inappropriate and contrary to Congress' direction and intent.

In adopting the OSH Act, Congress stated as its purpose to "assure so far as possible every working man and woman in the Nation safe and healthful working conditions." 29 U.S.C. § 651(b). Congress directed the Secretary of Labor to adopt occupational safety and health standards requiring measures that are "reasonably necessary and appropriate to provide safe or healthful employment and places of employment." 29 U.S.C. § 652(8). For standards designed to protect workers from toxic substances, Congress directed that the Secretary set the standard "which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity even if such employee has regular exposure to the hazard dealt with by such standard for the period of his working life." 29 USC § 655(b)(5).

The statutory terms "reasonably necessary and appropriate" and "to the extent feasible," as interpreted by OSHA and the courts, have led OSHA to conduct several types of analysis in deciding whether and how stringently to regulate a workplace hazard. First, OSHA determines whether the hazard presents a "significant risk" to workers. Risks that do not reach the "significant" threshold are not regulated.

Second, OSHA conducts economic and technological feasibility analyses to determine whether the regulations OSHA is proposing are achievable. Typically these feasibility analyses and constraints result in OSHA setting a standard that falls short of fully protecting workers from the risk posed by a workplace hazard.² In other words, if anything OSHA underregulates as opposed to overregulates hazards.

Because for health standards the OSH Act establishes a regulatory ceiling based on technological and economic feasibility, cost-benefit analysis is not permitted. As the Supreme Court explained:

Congress itself defined the basic relationship between costs and benefits, by placing the benefit of worker health above all other considerations save those making attainment of his benefit unachievable. Any standard based on a balancing of costs and benefits by the Secretary that strikes a different balance than that struck by Congress would be

² For example, because OSHA limits the stringency of its standards based on economic and technological feasibility, OSHA's 0.1 fiber/cc asbestos standard still leaves 3.4 excess deaths from cancer and 2.5 excess deaths from asbestosis for every 1,000 individuals exposed over a working lifetime, according to OSHA's risk assessment. 51 Fed. Reg. 22644 (June 20, 1986). For OSHA's 2006 hexavalent chromium standard, the residual risk resulting from the 5ug/m3 standard is estimated by OSHA to be 10-45 excess cancer deaths per 1,000 workers exposed. 71 Fed. Reg. 10224 (Feb. 28, 2006). For the 1987 benzene standard, the residual risk is estimated to be 10 excess cancer deaths for every 1,000 workers. 52 Fed. Reg. 34490 (Sept. 11, 1987).

inconsistent with [Congress'] command . . . Thus, cost-benefit analysis is not required by the statute because feasibility analysis is.

American Textile Mfrs. Inst. v. Donovan, 452 U.S. 490, 509 (1981).

With respect to safety (as compared to health) standards, the agency interprets the Act “to require it, once it has identified a ‘significant’ safety risk, to enact a safety standard that provides ‘a high degree of worker protection,’” and “deviate only modestly from the stringency required by Section 6(b)(5) for health standards.” *International Union, United Auto Workers v. OSHA*, 37 F.3d 665 (D.C. Cir. 1994) (upholding OSHA standard on lockout/tagout). OSHA’s view is that “in setting safety standards, OSHA must act consistently with the Act’s overriding purpose, which is to provide a high degree of employee protection.” Occupational Safety and Health Administration, Supplemental Statement of Reasons, 58 Fed. Reg. 16612 (March 30, 1993).

OSHA has explained that in issuing safety standards, it must find that:

(1) the standard will substantially reduce a significant risk of material harm;

(2) compliance is technologically feasible in the sense that the protective measures being required already exist, can be brought into existence with available technology, or can be created with technology that can reasonably be developed;

(3) compliance is economically feasible in the sense that industry can absorb or pass on the costs without major dislocation or threat of instability;

(4) the standard employs the most cost-effective protective measures capable of reducing or eliminating significant risk;

(5) any OSHA standard that differs from an existing national consensus standard must effectuate the Act’s objectives better than the national consensus standard; and

(6) Standards must be supported by the evidence in the rulemaking record and be consistent with prior agency practice or supported by some justification for departing from that practice.

See Supplemental Statement of Reasons, 58 Fed. Reg. 16612 (March 30, 1993) (copy attached). See also *International Union, UAW v. OSHA*, 37 F.3d 665 at 668 (accepting OSHA’s interpretation of its statutory authority).

Thus, cost-benefit analysis has no place in OSHA standard setting. This is not to say that costs are not considered by the agency in setting standards – standards must be

economically feasible, and the agency works to ensure that its rules are cost effective. But it would be wholly inappropriate for an Executive Order to mandate that OSHA perform and use an analysis in regulatory decisionmaking that Congress did not establish or authorize.

Even if the use of cost-benefit analysis was legally permissible in setting occupational safety and health standards, it is a deeply flawed method that is inappropriate for determining the type and level of protection that should be provided under safety and health rules. Cost benefit analysis requires that a dollar value be assigned to the costs and benefits of rules, which is very difficult to do. Information on cost of controls is often known only to entities that are subject of the regulation, and is not provided to regulatory agencies. Benefits of rules are difficult to determine with any certainty. While reductions in exposures will reduce illness and injury, determining the degree of risk reduction associated with a particular option is difficult, particularly where there is no information on the exposure-response relationship, as in the case with most safety hazards. For example, in OSHA's current cranes and derrick rulemaking, there is no way to accurately quantify the difference in risk reduction and benefits associated with requirements for third party certification of crane operators as compared to self certification by employers. Moreover even if the benefits could be identified with any confidence and certainty, conducting a cost-benefit analysis requires that the value of the identified benefits be quantified by putting a dollar value on a human life, a practice that is morally objectionable and highly controversial.

Rather than relying on unsound and inappropriate tools like cost-benefit analysis, agencies should conduct analyses that are appropriate for meeting their statutory responsibilities, which in the case of OSHA means to protect workers against significant risk to the extent that is technologically and economically feasible.

In sum, whether it is cost-benefit analysis, distributional considerations, or the role of the behavioral sciences, it is our view that it is inappropriate for an Executive Order, or OIRA, to impose analytical requirements or require consideration of factors that differ from or go beyond what Congress has directed of the agencies in the organic statute, or that differ from the agencies' own views of the relevant and appropriate considerations.

3. OIRA Should Not Dictate Agency Choice of Regulatory Tools

The Federal Register notice requests comments on the "best tools for achieving public goals through the regulatory process." 74 Fed. Reg. 8819. The January 30, 2009 Presidential Memo for Agency Heads of Executive Departments and Agencies on Regulatory Review suggests that these tools may include warnings, disclosure requirements, public education and economic incentives. 74 Fed. Reg. 5977 (Feb. 3, 2009). It is the AFL-CIO's view that it is inappropriate for OIRA to dictate to the agencies the regulatory approaches that should be considered or employed in developing regulations, because that is the agencies' province under the statutory authority delegated to them by Congress.

Take, for example, the Occupational Safety and Health Administration. As previously discussed, the OSH Act directs the Secretary of Labor to promulgate workplace safety and health standards to protect workers from harm. OSHA's standards have all been focused on requirements and practices to reduce worker exposure to hazards in ways that can be objectively assessed and measured. Health standards on toxic chemicals set permissible exposure limits that must be achieved through engineering or work practice controls. If such measures are not sufficient, respirators and other personal protective devices must be utilized. For safety standards, it has been OSHA's practice to rely on existing national consensus standards or industry codes of practice to form the basis of the regulatory obligations for addressing safety hazards.

Some have suggested that the provision of information may be a suitable alternative to regulatory measures that require specific levels or types of controls. We strongly disagree. While the provision of information can and should be a part of comprehensive regulations and regulatory approaches, it is an insufficient means to ensure that workers are protected from serious hazards or provided their other workplace rights.

Proposals to rely on information are based on the theory that workers have the knowledge and power to act on information, to either seek changes in their workplace or to leave employment if their concerns are not addressed. This is simply not the case. Most workers are unorganized and have no protected means to raise safety and health concerns or other workplace issues. This is particularly the case for many immigrant and undocumented workers. If these workers raise safety and health concerns, they are likely to be fired or be the subject of other retaliatory actions by their employer. Moreover, at a time when the real rate of unemployment and underemployment is more than 13 percent, most workers are in no position to leave their jobs to seek other employment if they are concerned about job hazards or other workplace issues.

Moreover, with respect to workplace safety and health issues, proposals to rely on information inappropriately shift the responsibility for worker protection from employers to workers. Such an approach is contrary to the Occupational Safety and Health Act, which places the obligation for protecting workers squarely on the employer. 29 U.S.C. § 654(a).

Proposals to rely on information in lieu of specific control requirements also assume that the information that is provided will be accurate, complete, and in a form that is understood by workers. This is typically not the case.

For example, since 1983, OSHA's Hazard Communication standard has required manufacturers of chemicals to provide information and warnings on hazardous chemicals through a system of labels and material safety data sheets (MSDSs). But the accuracy and completeness of these MSDSs is grossly deficient, as documented in numerous studies. For example, a 2006 study by the Chemical Safety Board on the accuracy of MSDSs for substances that are capable of producing combustible dusts found that *none*

of 140 MSDSs evaluated were complete and that 41 percent failed to mention that the material was combustible. *See* Combustible Dust Hazard Study, Chemical Safety and Hazard Investigation Board, 2006. A follow-up evaluation of these data sheets conducted in 2009 by the Bureau of National Affairs found that none of the sheets had been revised to reflect combustible dust hazards. Bureau of National Affairs, Daily Labor Report, "Studies Analyze MSDS Flaws, Challenge Proposal for Globally Harmonized System" (Jan. 14, 2009). The February 2008 dust explosion at the Imperial Sugar refinery in Georgia that killed 14 workers clearly demonstrates that strict OSHA combustible dust regulations, and not information, is the appropriate and necessary regulatory approach to controlling combustible dust hazards.

4. OIRA Should Stop Its Routine Review of Individual Regulations

In our experience, centralized review of individual regulations by OIRA has not served to improve the regulatory process or individual regulations, and in fact has had the opposite effect. Centralized review, coupled with an ever-growing array of analytical and procedural requirements, has only served to delay, thwart and weaken needed protections. OIRA has neither the resources nor the expertise to engage in this sort of regulatory review.

In order to improve the efficiency and effectiveness of the regulatory process, the AFL-CIO believes that centralized review of individual regulations by OMB should be abandoned, or at a minimum significantly curtailed. To the extent centralized review continues, it should be limited to regulations that are truly significant (e.g. those that have economic impacts of greater than \$250 million annually) and those involving cross cutting issues that involve numerous agencies, where OIRA can play a helpful coordinating role.

5. OIRA Should Help Agencies Meet Their Regulatory Agendas

OIRA could play a useful role in urging agencies to develop realistic timetables and workplans for their regulatory priorities, and helping agencies meet these timetables. Agencies are already required to develop a regulatory agenda with estimated timeframes for the next step in the regulatory process, but these have proven to be more fiction than reality. Estimated dates for the next step in the regulatory process routinely slip, and there is little or no accountability in the system. OIRA can and should play a helpful role in identifying and addressing barriers that are preventing agencies from meeting their regulatory timeframes.

In coordination with the regulatory agencies, OIRA should develop benchmark time frames for the different stages of the regulatory process for significant and non-significant rules that would result in the completion of rules in a reasonable timeframe. On this point, it should be noted that Congress has typically used a timeframe of 18-24 months when it has mandated that OSHA or MSHA issue a rule, and the agencies have met those mandates. Agencies should be required to include these estimated timeframes as part of their regulatory plans (at least for significant rules), and provide updates and

explanations when timeframes are not met. OIRA should provide oversight on progress and prompt agencies if benchmarks are not being met.

Information about agencies' regulatory priorities and timeframes should be readily available to the public so that there is transparency and accountability in the system. The Bush Administration ceased publication in the Federal Register of the complete Unified Regulatory Agenda, which was a useful government-wide compilation of current and future regulatory activity. We urge the administration to restore publication of the Unified Regulatory Agenda in the Federal Register so that it is again available to the public in a convenient and useable format.

6. OIRA Should Play a Coordinating Role When Multiple Agencies Are Involved in Similar Regulation

As previously stated, OIRA should not be in the business of conducting individualized review of agency regulations. Rather, OIRA should focus on situations where there are multiple agencies engaged in regulation in the same area, to make sure this regulation is being conducted in a coordinated fashion, that information and resources are pooled, and that the government is taking advantage of all of the possible efficiencies.

OIRA's failure to play this role in the past has resulted in wasted resources and regulatory delay. For example, in the 1980s, both OSHA and EPA were involved in regulating ethylene oxide, a colorless gas used to sterilize medical equipment. EPA contracted for a major study by Johns Hopkins University on the effects of exposure to EtO, yet inexplicably, EPA would not share the study with OSHA. OSHA's access to a major epidemiological study on the subject of one of its regulations was needlessly delayed.

A present example of an area where greater coordination is needed among agencies is the area of nanotechnologies. The use of these small particles is expanding in an extensive range of applications – from cosmetics and medicines to industrial products. Due to the small size and fiber-like nature of some of these nano particles, there is great concern about the potential adverse health effects of these particles to workers and the public. Animal studies have demonstrated the ability of these particles to pass through cell barriers, and to cause health effects similar to those caused by exposure to asbestos fibers. Due to the rapidly-growing use of these particles and potential for exposure and serious disease, it is important that these nanomaterials be properly monitored and controlled as a precautionary matter, as is being done in a number of countries including the United Kingdom. OSHA, NIOSH, EPA and FDA all have a role to play in the evaluation and oversight of these materials. Helping to coordinate a consistent precautionary approach to these materials across the government is the kind of coordinating role that OIRA could play in concert with scientific and regulatory agencies.

7. OIRA should assess the impact of the large number of analytical and procedural requirements that have been imposed on regulatory agencies and make recommendations for improvements.

As we have explained, over the past several decades, a vast array of requirements have been imposed on regulatory agencies through executive orders, directives and statutes. These include analyses of costs and benefits of rules, analyses and reviews of small business impacts, and assessment of paperwork burdens to name a few. Each of these requirements has been imposed individually without regard for the impact on the effective functioning of the regulatory process as a whole.

OIRA, in coordination with the agencies, should conduct an assessment of the time and resources that are needed to conduct rulemaking. The assessment should look at the costs and time associated with each step of the rulemaking process (including steps associated with OIRA review), based on a representative sample of past rules. The assessment should also look at the agency's projected estimates for pending rules.

From this assessment, OIRA should identify which aspects of the process cost the most and are causing the greatest delay. OIRA should develop proposals for how the regulatory process can be streamlined, including recommendations on changes that can be accomplished through executive action as well as changes that should be made to existing statutory requirements (e.g. Regulatory Flexibility Act, Small Business Regulatory Fairness Enforcement Act (SBREFA) and the Paperwork Reduction Act).

8. OIRA should help ensure that adequate resources are provided for the development of agency regulations

At the same time that new layers of additional requirements have been imposed on regulatory agencies by executive orders, statutes and OMB directives, there has been no commensurate increase in agency budgets and staff to meet these requirements. If regulatory agencies are going to continue to be tasked with these analytical and procedural requirements in developing and issuing rules, they must be provided the necessary resources to do so. Otherwise resources are diverted from other important rulemakings to satisfy these extra mandates.

For example, the regulatory budget for OSHA is tiny: \$17.2 million for standard setting in FY 2009, representing about 3 percent of the agency's budget. Since 2001, the real dollar funding for OSHA standard setting has decreased by 10 percent, and the agency staff for this activity has been cut by 15 percent. Yet OSHA must continue to meet an ever-growing number of external mandates to do rulemaking with a shrinking budget.

OIRA should conduct an assessment of the resources that are realistically needed to meet the regulatory requirements imposed upon agencies, an accounting of the resources that are currently being provided to the individual agencies, and what additional amounts are needed for the individual agencies to meet their regulatory

obligations under their governing statutes. This information should be disseminated to the Congress and the public. OIRA should work with agencies and OMB's budget office to develop reasonable budget proposals to fund these regulatory programs in order to comply with regulatory requirements and to meet their statutory obligations to protect workers and the public.

9. Rescind the Information Quality Bulletin for Peer Review

OIRA should immediately rescind the "Final Information Quality Bulletin for Peer Review," which imposes unnecessary requirements for peer review on agency scientific documents and guidance. Agencies should be allowed and encouraged to utilize existing processes for public participation to seek input from interested parties and scientific experts, but should not be required to add costly extra steps and procedures to their processes for developing rules or agency guidance documents.

10. The Regulatory Review Process Should Be Completely Transparent

One of the positive reforms adopted by the Clinton Administration was to establish greater transparency on communications between executive branch agencies and OIRA. The Clinton Administration mandated that formal communications be placed in the record, and allowed the public access to information on changes to rules that were dictated by OMB.

While welcome, these reforms did not go far enough. For many rules, OMB engages in an informal pre-review process long before a draft proposal or final rule is submitted for formal review. This process is not transparent, and in fact has been used to keep OMB's influence on agency rules out of public view. Also, there is delay in making public information about contact between OIRA and agencies, and between OIRA and other interested parties.

OMB's off-the-record involvement in agency rules must end. All of the communications between OIRA and the agencies and other interested parties – whether as part of a formal review under the Executive Order or whether done informally – should be made part of the OIRA public record and agency rulemaking record in real time (e.g., with 10 days of the communication).

11. The Need to Address the Growing Problem of Delay in Workplace Safety and Health Regulation

Nearly 40 years after passage of this nation's landmark workplace safety law, workers remain at risk of death, injury and disease from workplace hazards that the Occupational Safety and Health Administration (OSHA) has not yet regulated. These hazards include silica, cranes, beryllium, metalworking fluids, infectious diseases, glycol ethers, confined space entry in construction, hearing conservation for construction workers, and more. The delay in the promulgation of standards on these and other

pressing workplace hazards is a major problem, and one to which E.O. 12866 and other regulatory mandates have contributed.

The recommendations we have made in these comments for realigning the relationship between OIRA and regulatory agencies and for modifying OIRA's role will help alleviate the chronic problem of delay in OSHA rulemaking. Because the need for workplace safety and health protections is so acute, and because the problem of delay in adopting workplace safety and health regulations is so persistent, we provide additional background information below about the evolution and impacts of this delay.

It is no exaggeration to say that the regulatory process at OSHA has come to a virtual standstill. In the past eight years, OSHA has issued a total of only three significant safety and health standards. The average length of time for developing and issuing a significant OSHA rule has steadily increased, such that a major new rule now takes more than 10 years.

This inaction and delay in OSHA rulemaking is partly due to the hostility of past administrations and increased political opposition to regulation from employers and some in Congress. But much of the delay is due to the ever-growing number of requirements for issuing regulations that have been placed on OSHA and other regulatory agencies. These include:

- requirements for the development of draft and final regulatory impact analyses, including estimates of costs and benefits of rules and consideration of regulatory alternatives;
- regulatory flexibility analyses to consider impacts on small businesses;
- for OSHA and EPA, a special review of draft rules by a panel under the Small Business Regulatory Enforcement Fairness Act (SBREFA);
- requirements for peer review of risk assessments and economic analyses;
- review of draft proposed and final rules by OIRA; and
- analysis and review of the paperwork burden of rules.

The impact of these requirements can be seen both in the increased time it takes for OSHA (and other agencies) to develop and issue standards, and the expansion of the preambles and analyses that accompany OSHA rules.

In the early 1970's, it took between six months and two years for OSHA to develop and issue major rules such as those on asbestos and vinyl chloride, even though these rules were controversial and contentious. The preambles for the standards were only five to ten pages long.

By the mid- to late-1970's, the rulemaking process took somewhat longer, but still it took OSHA just three years to promulgate its lead standard, four years to promulgate standards on cotton dust and arsenic – all major regulatory initiatives. During this time, OSHA also developed and issued numerous other standards, including benzene,

acrylonitrile, DBCP, cancer policy, access to exposure and medical records, hearing conservation, fire protection, and guarding of roof perimeters.

In the 1980's, as a result of the anti-regulatory philosophy of the Reagan Administration and the imposition of Executive Order 12291, the time required to develop and issue standards became even longer. The Reagan Administration essentially ceased OSHA rulemaking activity except in response to Congressional mandates or court orders. For example, it took six years and a lawsuit for OSHA to issue its formaldehyde standard. It took five years and a Congressional mandate before OSHA issued its blood borne pathogens standard to protect health care workers from HIV, hepatitis, and other blood borne diseases.

Other standards initiated during the Reagan Administration took much longer. Standards on 1,3 butadiene, methylene chloride and respiratory protection each took 12 years from start to finish and were not completed until the Clinton Administration.

Even standards developed through negotiated rulemaking took years. OSHA's standard on methylenedianiline (MDA), issued in 1992, took a total of nine years, with five years between the formation of the negotiated rulemaking committee and issuance of a final rule.

OSHA standard-setting fared no better under the Clinton Administration and E.O. 12866. OSHA's standard on respiratory protection, initiated in 1982, was not issued in final form until 1998, despite being a priority for action by the Clinton Administration. Similarly, OSHA's standard on steel erection was not issued in final form until January 2001, seven years after the negotiated rulemaking process was initiated and more than 15 years from the time OSHA first started working on the rule.

Under the George W. Bush Administration, the OSHA regulatory process was virtually shut down. After supporting and signing legislation to repeal OSHA's ergonomics standard, the Bush Administration withdrew dozens of OSHA rules from the regulatory agenda, including rules on tuberculosis and glycol ethers that had been under development for years and were ready for final action. And little or no action was taken on the rules that remained on the agenda. A simple rule clarifying that employers have the duty to pay for workers' personal protective equipment languished in regulatory limbo for years and was not issued until 2007, in response to court action and Congressional pressure. A final standard on the carcinogen hexavalent chromium was only issued in 2006 as a result of a court order, more than 13 years after a petition for an emergency standard was filed.

Even standards designated by OSHA as priorities were delayed. A standard on silica, which has been on OSHA's regulatory agenda since 1997, was reviewed in draft form by a SBREFA panel in 2004, but has been awaiting peer review ever since. A negotiated rulemaking committee produced a consensus draft proposed standard on cranes and derricks in July 2004. But the proposed rule was not issued in the Federal Register until October 2008, and is still the subject of a public rulemaking process.

Without question, some of the delay of the past eight years is attributable to the Bush Administration's anti-regulatory ideology. But a significant part of the delay is due to analytical and procedural requirements imposed by executive order and various statutes that are excessive, redundant and unnecessary.

For example, even though the cranes and derricks rule was developed through a formal negotiated rulemaking process that considered the impacts on small businesses, OSHA still was required to convene a small business review panel under SBREFA. And, OSHA's rule to reduce occupational exposure to silica has been delayed for years awaiting a peer review on the risk assessment and feasibility analysis under OIRA's peer review mandate. OMB, Final Informational Quality Bulletin for Peer Review (Dec. 16, 2004). The peer review requirement is unnecessary since the OSHA rulemaking process itself already allows for extensive public input and involvement, including a public hearing where all parties have the opportunity to testify and question all agency experts and public witnesses. OSHA staff estimate that the peer review requirement on silica, once initiated, will add at least six months to the rulemaking process and cost several hundred thousand dollars.

The requirements of E.O. 12866 are delaying not only major OSHA rules, but virtually every rule under development by OSHA. The executive order and its requirements only apply to significant rules that have an economic impact in excess of \$100 million annually, raise novel legal or policy issues, or have other defined impacts. But the practice in recent years has been for OMB to review virtually all rules.

Indeed, the historical reports on regulatory review found on [Reginfo.gov](http://www.reginfo.gov) (<http://www.reginfo.gov/public/do/eoHistoricReport>) show that while there were few economically significant rules, a vast number of OSHA rules were designated as "other significant" and subjected to the regulatory review requirements. This "other significant" designation was applied to rules such as the Section 610 review on OSHA's existing standard on ethylene oxide (RIN: 1218-AB60), a final rule on assigned protection factors for respirators (RIN: 1218-AA05), proposed and final rules on updating OSHA standards Based on national consensus standards (RIN: 1218-AC08), and a prerule on tree care operations (RIN: 1218-AC40). In all of these cases OIRA took 75 – 90 days to review these actions, adding months of needless delay to the rulemaking process.

These delays in the regulatory process have direct and harmful impacts on workers' health and safety. Every month or year of delay results in unnecessary exposure by workers to harmful substances, and results in deaths and illnesses that could have been prevented.

For example, according to OSHA's risk assessment on hexavalent chromium, every year of delay in the adoption of the new 5.0 ug/m³ standard resulted in 40 to 145 lung cancer deaths. The 13 years that it took OSHA to develop and issue that rule allowed exposures that caused or will cause 520 to 1885 unnecessary deaths. Similarly, OSHA's preliminary risk assessment on silica estimates that reducing the permissible

exposure limit to 50 ug/m³ will prevent 41 silicosis deaths and 19 lung cancer deaths annually. Every year of delay in setting a silica rule results in 60 unnecessary deaths.

OSHA has estimated that its proposed rule on cranes and derricks will prevent 53 deaths and 155 injuries per year. 73 Fed. Reg. 59884 (Oct. 9, 2008). But because of delays, there was no rule in place to prevent the deaths of workers in New York, Miami, and Las Vegas who were killed in a series of construction crane collapses in 2008.

Delays in the rulemaking process have real, tangible, negative impacts on worker safety and health. Adoption of the recommendations presented in these comments will help alleviate the chronic problem of delay and help streamline the OSHA rulemaking process, to the benefit of workers.

CONCLUSION

The AFL-CIO appreciates the opportunity to submit these comments. We urge the Obama Administration to take this opportunity to substantially revise the existing system of centralized regulatory review, to realign the relationship between OIRA and regulatory agencies, and to streamline the rulemaking process. These reforms will help the Obama Administration meet its goal of improving protections for the American people.

Westlaw.

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RULES and REGULATIONS
DEPARTMENT OF LABOR
Occupational Safety and Health Administration
29 CFR Part 1910
Control of Hazardous Energy Sources (Lockout/Tagout)
Tuesday, March 30, 1993

*16612 AGENCY: Occupational Safety and Health Administration (OSHA), Labor.

ACTION: Final rule; supplemental statement of reasons.

SUMMARY: On September 1, 1989, OSHA promulgated a final standard entitled "Control of Hazardous Energy Sources (Lockout/Tagout)," to protect workers from releases of hazardous energy during servicing or maintenance of machines and equipment. The U.S. Court of Appeals for the District of Columbia Circuit, in *UAW v. OSHA*, 938 F.2d 1310, remanded the lockout/tagout standard to OSHA for further consideration on three issues: first, the criteria used by OSHA in setting safety standards under section 3(8) of the Occupational Safety and Health Act of 1970 (the OSH Act); second, justification for the final rule's preference for lockout over tagout; and third, OSHA's determination that the final rule should apply to all general industry workplaces in which hazardous servicing and maintenance operations take place. OSHA has determined that there are clear and definitive criteria which guide and limit the Agency's discretion in establishing safety standards under the OSH Act. In applying these criteria to the lockout/tagout standard, OSHA has determined that the standard complies with the statutory criteria. In addition, on the second remand issue, involving the standard's preference for locks over tags, OSHA has determined that such a preference is warranted by the fact that lock-based safety programs are less susceptible to human error and thus can be expected to save more lives and prevent more injuries than tag-based *16613 programs. On the third remand issue, OSHA reaffirms and further explains its reasons for applying the standard throughout general industry. Finally, the Agency discusses two approaches to regulatory decision-making, formal cost-benefit analysis and risk-risk analysis, which the court suggested in its opinion as possible alternatives for OSHA to consider in setting safety standards.

DATES: The final rule became effective January 2, 1990.

FOR FURTHER INFORMATION CONTACT: Mr. James F. Foster, OSHA, U.S. Department of Labor, Office of Information and Consumer Affairs, [REDACTED], [REDACTED]

(unless equipment is unlockable) but permits employers with lockable equipment to use tagout programs if they can demonstrate that such programs provide a level of safety equivalent to lockout. According to the court, "(NAM) adduces data suggesting that the incremental safety gains from universal lockout were modest (averting 42 injuries, of which fully 26 would not even involve a lost day of work) and the incremental cost not immaterial (\$2.3 million in the first year and \$400,000 annually thereafter)." 938 F.2d at 1323-24. The court required OSHA to address NAM's argument on remand.

The final remand issue involves OSHA's decision to apply the standard in all general industry workplaces in which hazardous servicing and maintenance operations take place. NAM contended that OSHA should have made industry-by-industry risk findings and only applied the standard to those industries for which it made specific findings of significant risk. The court's remand order requires OSHA "to explain its decision to impose lockout/tagout even where the risk appears to be diminutive or zero." 938 F.2d at 1325.

In response to the court's decision, OSHA has carefully reexamined the criteria it uses to set safety standards and has reevaluated the lockout/tagout standard in light of those criteria. OSHA interprets the Act as requiring safety standards to meet the following criteria. A safety standard must substantially reduce a significant risk of material harm; the standard must be technologically feasible in the sense that the protective measures being required already exist, can be brought into existence with available technology, or can be created with technology that can reasonably be developed; the standard must be economically feasible in the sense that industry can absorb or pass on the costs without major dislocation or threat of instability; the standard must achieve its regulatory goals in the most cost-effective manner; the standard must be at least as protective as existing national consensus standards; and the standard must be supported by the evidence in the rulemaking record and be consistent with prior agency action. These criteria shape and limit the agency's safety rulemaking discretion. OSHA believes this interpretation of the Act responds to the court's constitutional concern and establishes that the Act does not delegate excessive discretionary authority to OSHA.

OSHA applied this interpretation in developing the lockout/tagout standard. Later in this section, the agency explains how the standard conforms to each criterion. OSHA has also reevaluated its rulemaking decisions on the two other issues remanded by the court and reaffirms those decisions. As discussed in section II, the standard's preference for locks over tags is warranted by the fact that lock-based safety programs are less susceptible to human error and thus can be expected to save more lives and avoid more injuries than tag-based programs. Section III explains OSHA's reasons for applying the standard in all general industry workplaces in which hazardous servicing operations take place even though available injury data showed a wide range of accident rates for different industrial sectors.

OSHA has also evaluated two approaches to regulatory decision-making, formal cost-benefit analysis and risk-risk analysis, that are discussed in the opinion as possible interpretations of section 3(8). As described in section IV, OSHA already performs an extensive analysis, which includes estimations of compliance costs and of deaths and injuries prevented, when promulgating a standard. Moreover, the application of the statutory criteria set forth in section I assures that the agency's discretion is confined and that the standard produces substantial safety benefits at a reasonable cost. Given this reality, the *16614 agency believes that formal cost-benefit analysis is not needed to meet the court's constitutional concerns. With respect to risk-risk analysis, OSHA has determined that study of risk-risk theory's empirical basis is needed before the theory can be evaluated for application in the OSHA rulemaking context.

I. The Overbroad Delegation Issue

Section 3(8) of the OSH Act requires that standards be "reasonably necessary or appropriate" to safe or healthful employment:

The term "occupational safety and health standard" means a standard which requires conditions, or the adoption or use of one or more practices, means, methods, operations, or processes, reasonably necessary or appropriate to provide safe or healthful employment and places of employment.

In *UAW v. OSHA*, the court noted that the Supreme Court's Benzene decision had interpreted the "reasonably necessary or appropriate" language of section 3(8) to require that OSHA find, before issuing any standard, that a significant risk of harm existed and that the standard would materially reduce that risk. *IUD v. API*, 448 U.S. 607, 646 (1980).

Standards that regulate toxic materials or harmful physical agents ("health" standards) must also meet criteria in section 6(b)(5) of the Act. That section requires, "to the extent feasible * * * that no employee will suffer material impairment of health or functional capacity even if such employee has regular exposure to the hazard dealt with by such standard for the period of his working life." OSHA has interpreted section 6(b)(5) to mean that health standards must eliminate all significant risk to the extent it is feasible to do so. The Supreme Court upheld that interpretation of section 6(b)(5) in the Cotton Dust case. *ATMI v. Donovan*, 452 U.S. 490 (1981).

OSHA interprets section 6(b)(5) to apply only to health standards and not safety standards, such as the lockout/tagout standard. See *UAW v. OSHA*, 938 F.2d at 1316. Without the constraint of section 6(b)(5), the court believed that the OSH Act did not limit OSHA's safety rulemaking authority sufficiently to comply with the constitutional requirement that delegations of legislative authority not be overbroad. The court also concluded that OSHA's interpretation that safety standards must be technologically and economically feasible did not adequately narrow

the agency's discretion because, as it understood OSHA's position, OSHA viewed feasibility of safety standards "only as a ceiling, and not, as for toxics, as a floor." Id. at 1317. Thus, the court thought that OSHA's interpretation of section 3(8) permitted the agency, "once significant risk is found, to require precautions that take the industry to the verge of economic ruin * * * or to do nothing at all." Id. The court viewed OSHA as claiming "untrammelled power to dictate the vitality and even survival of whatever segments of American business it might choose," id. at 1318, as leaving "opportunities for dangerous favoritism," id., and as permitting imposition of compliance burdens "even where the risk appears to be diminutive or zero." Id. at 1325.

Having found OSHA's interpretation unreasonable, the court examined whether any limiting interpretation of the Act would narrow the agency's discretion sufficiently to satisfy the nondelegation doctrine. The court concluded that cost-benefit analysis would be an acceptable limiting interpretation of section 3(8) without specifying any particular form of that methodology. The court also concluded that "there may be other interpretations that conform to nondelegation principles." Id. at 1321. Since at least one possible interpretation would satisfy the Constitution, the court remanded for OSHA to either adopt that interpretation or to adopt another interpretation that constrained its safety rulemaking discretion sufficiently.

In response to the court's opinion, OSHA has carefully examined the statutory criteria that apply to safety standards. The agency has paid particular attention to the court's concern that OSHA's interpretation of the statute must not permit the agency free rein to push industries to the "verge of financial ruin" or to do "nothing at all" in the face of a significant risk to worker safety. OSHA certainly did not intend to claim such unfettered authority in the lockout/tagout rulemaking. The preamble to the rule, however, did not contain an explanation of the statutory criteria that apply to safety standards. In light of the court's opinion, OSHA is now setting forth its interpretation of the statutory standards that govern safety rules.

The agency construes the OSH Act as establishing a number of clear principles that limit and guide OSHA's exercise of authority in standards proceedings. OSHA believes that its construction responds to the court's constitutional concerns and establishes that the Act does not vest excessive discretion in the agency. In issuing a standard, OSHA must find that:

- (1) The standard will substantially reduce a significant risk of material harm;
- (2) Compliance is technologically feasible in the sense that the protective measures being required already exist, can be brought into existence with available technology, or can be created with technology that can reasonably be developed;
- (3) Compliance is economically feasible in the sense that industry can absorb or

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pass on the costs without major dislocation or threat of instability;

(4) The standard employs the most cost-effective protective measures capable of reducing or eliminating significant risk.

In addition:

(5) Under section 6(b)(8) of the OSH Act, any OSHA standard that differs from an existing national consensus standard must effectuate the Act's objectives better than the national consensus standard.

Finally,

(6) Standards must be supported by the evidence in the rulemaking record and be consistent with prior agency practice or supported by some justification for departing from that practice.

These constraints apply to both safety and health rulemaking. The two types of rules differ, however, in that section 6(b)(5) mandates that health rules be as protective as possible: Once significant risk is found, the standard must eliminate that risk to the extent it is technologically and economically feasible to do so. Because section 6(b)(5) does not govern safety rules, OSHA retains more discretion to shape safety standards than health standards. That does not mean, however, that OSHA's discretion to issue safety standards is unconfined. OSHA's discretion is confined at the ceiling because safety standards cannot require of employers more than is feasible. The court thought there was an overbreadth problem because it understood OSHA to claim unbridled discretion below the ceiling to regulate with any degree of stringency it pleased and even to do "nothing at all" in the face of a significant risk to employee safety.

OSHA does not interpret the OSH Act to give it such a wide range of discretion. In setting safety standards, OSHA must act consistently with the Act's overriding purpose, which is to provide a high degree of employee protection. This purpose is evident from a number of statutory provisions. Section 2(b) of the OSH Act expresses the congressional "purpose and policy * * * to assure so far as possible every working man and woman in the Nation safe * * * working conditions * * *." Section 6(a), which applied during the first two years after the Act became effective, required that when OSHA adopted existing federal and consensus standards the agency must "promulgate the standard which assures the greatest protection of the safety or health of the affected employees" in the event of any conflict. Section 6(b)(8) provides that when promulgating permanent safety or health standards that differ from existing national consensus standards, OSHA must explain "why the rule as adopted will better effectuate the purposes of this Act than the national consensus standard." Since the key purpose of the Act is worker protection, a standard that differs from a national consensus standard will only better effectuate the Act's purposes if it is more protective. In addition, the OSH Act's "general duty" clause, section 5(a)(1), requires each employer to "fur-

nish to each of his employees employment and a place of employment which are free from recognized hazards that are causing death or serious physical harm to his employees." These and other statutory provisions make clear that the Act's purpose is to achieve a high degree of worker protection, and OSHA develops standards with that purpose in mind. The agency does not believe that the Act gives it the discretion to do "nothing at all" if it finds a significant risk to worker safety in a rulemaking proceeding.

The notice-and-comment rulemaking process established by the Act assures that the agency is made aware of relevant evidence, of regulatory alternatives, and of the likely consequences of various courses of action. After issuing a notice of proposed rulemaking, OSHA holds hearings and affords all interested persons an opportunity to submit written evidence. OSHA invariably receives comments that cover the entire spectrum of interests affected by the standard and finds those comments very useful in developing the final standard. The agency evaluates all comments that are submitted and explains the basis for accepting or rejecting all major suggestions for modifications to the proposed standard. The agency must support all of its findings with evidence in the rulemaking record. The need to explain and support its rulemaking decisions in the face of contrary evidence and argument assures that OSHA's rulemaking decisions conform to the statute's protective purpose while avoiding regulatory extremes.

Another constraint on OSHA's rulemaking discretion is that significant departures from prior practice must be justified. OSHA's history of safety rulemaking offers no basis for believing that the agency is inclined to regulatory extremes. OSHA has promulgated numerous safety standards, the vast majority of which were not even challenged and none of which could seriously be described as relying on discretion to impose bankruptcy-threatening costs for minimal benefit or of otherwise threatening the vitality or existence of any industrial sector. The policies that have evolved during OSHA's 21-year history of rulemaking activity limit OSHA's discretion in future rulemakings.

It is certainly true that any individual OSHA standard may impose significant costs on industry. Congress decided, however, that affordable costs of providing safe and healthful workplaces are necessary costs of doing business. As the Supreme Court has pointed out:

Congress understood that the Act would create substantial costs for employers, yet intended to impose such costs when necessary to create a safe and healthful working environment. Congress viewed the costs of health and safety as a cost of doing business. * * * Indeed, Congress thought that the financial costs of health and safety problems in the workplace were as large as or larger than the financial costs of eliminating these problems.

ATMI v. Donovan, 452 U.S. at 519-522 (emphasis in original).

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The legislative history of the Act also demonstrates that Congress knew that some employers would pass compliance costs through to their customers but thought that price increases were justified by the need to achieve safe and healthful workplaces. "We know the costs would be put into consumer goods but that is the price we should pay for the 80 million workers in America." S. Rep. No. 91-1282, 91st Cong., 2d Sess. (1970); H.R. Rep. No. 91-1291, 91st Cong., 2d Sess. (1970), reprinted in Senate Committee on Labor and Public Welfare, Legislative History of the Occupational Safety and Health Act of 1970, (Committee Print 1971) ("Leg. Hist.") at 444 (Senator Yarborough). "Of course, it will cost a little more per item to produce a washing machine. Those of us who use washing machines will pay for the increased cost, but it is worth it, to stop the terrible death and injury rate in this country." *Id.* at 324; see also 510-511, 517. Congress also believed that the nation as a whole would receive tangible benefits from the avoidance of workplace injuries and illnesses:

(T)he vitality of the Nation's economy will be enhanced by the greater productivity realized through saved lives and useful years of labor.

When one man is injured or disabled by an industrial accident or disease, it is he and his family who suffer the most immediate and personal loss. However, that tragic loss also affects each of us. As a result of occupational accidents and disease, over \$1.5 billion in wages is lost each year (1970 dollars), and the annual loss to the gross national product is estimated to be over \$8 billion. Vast resources that could be available for productive use are siphoned off to pay workmen's compensation and medical expenses. * * *

Only through a comprehensive approach can we hope to effect a significant reduction in these job death and casualty figures.

Id. at 518-19 (Senator Cranston).

OSHA recognized, however, that the costs an OSHA standard imposes must not exceed the limits of economic feasibility. The *UAW v. OSHA* court, lacking a discussion of the agency's interpretation of "economic feasibility" in the lockout/tagout preamble, inferred that the agency equates those limits with "the verge of economic ruin." 938 F.2d at 1317. However, OSHA does not take such a draconian view of economic feasibility under the OSH Act. The Supreme Court has approved OSHA's view that a standard that permits an industry to "maintain long-term profitability and competitiveness" is economically feasible. *ATMI v. Donovan*, 452 U.S. at 530 n. 55. Similarly, the D.C. Circuit has stated that "a standard is economically feasible if the cost of compliance does not threaten the 'competitive structure or posture' of the industry." *National Cottonseed Prods. Ass'n v. Brock*, 825 F.2d 482, 487 (D.C. Cir. 1987), cert. denied, 485 U.S. 1020 (1988), quoting *IUD v. Hodgson*, 499 F.2d 467, 478 (D.C. Cir. 1974). In specific rulemakings, OSHA has placed the line of economic feasibility considerably below industry-wide economic distress or bankruptcy. See for example, 43 FR 27360 (June 23, 1978) (proposed 200

MUg/m³ PEL for cotton dust did not raise serious possibility of industry-wide bankruptcy, but impact on weaving sector would be severe, possibly requiring reconstruction of 90 percent of all weave rooms. OSHA concluded that the 200 MUg/m³ level was not feasible for weaving and that 750 MUg/m³ was all that could reasonably be required). See also 54 FR 29245-46 (July 11, 1989) and *AISI v. OSHA*, 939 F.2d 975, 1003 (D.C. Cir. 1991) (OSHA raised engineering control level for lead in small nonferrous foundries to avoid the possibility of bankruptcy for about half of small foundries even though the industry as a whole could have survived the loss of small firms.)

A standard that is economically feasible may well have a disparate impact on different firms within an industry. A company with older, less efficient, and less safe machines and equipment will face heavier compliance *16616 costs than a competitor that is more efficient or that uses the latest technology. Indeed, for such a company, the cost of retrofitting existing machines in order to comply with OSHA standards may exceed the cost of replacing those machines. However, it is fully consistent with congressional intent for standards to force employers with inefficient and unsafe workplaces to either modernize their operations, becoming safe and efficient competitors, or go out of business. The D.C. Circuit has stated:

It would appear to be consistent with the purposes of the Act to envisage the economic demise of an employer who has lagged behind the rest of the industry in protecting the health and safety of employees and is consequently financially unable to comply with new standards as quickly as other employers.

IUD v. Hodgson, 499 F.2d 467, 478 (D.C. Cir. 1974). Moreover, Congress recognized that a standard that applies uniformly to all employers in an industry will have the beneficial effect of eliminating any competitive advantage that one employer might gain by cutting corners on safety and health. Leg. Hist. at 144, 854, 1188, 1201. Consistent with Congress' intent, OSHA views an economically feasible standard as one that might push industry laggards, but not safety-conscious employers or the industry as a whole, to the "verge of economic ruin."

To summarize, an OSHA safety standard must: (1) materially reduce a significant risk to workers; (2) be both technologically and (3) economically feasible to implement; (4) be cost-effective; (5) effectuate the OSH Act's goals at least as well as any national consensus standard that applies to the same hazard; (6) adequately respond to any contrary evidence and argument in the rulemaking record; and (7) be consistent with past rulemaking policies except to the extent that OSHA justifies a departure from those policies. OSHA believes that these constraints assure that OSHA safety standards are highly protective to workers without imposing an undue burden on employers. The requirement that standards reduce a significant risk at a cost and in a manner that is feasible and cost-effective assures that, even without a formal cost-benefit analysis, OSHA standards "produce a benefit the costs of which are not unreasonable." *NGFA v. OSHA*, 866 F.2d 717, 733 (5th

Cir. 1989).

OSHA believes that this interpretation effectuates the Act's purposes and resolves the constitutional concerns that animated the court's remand. In short, OSHA is affirming that its discretion in safety rulemakings is limited, and that the Act establishes clear criteria to guide the agency's exercise of its authority.

The lockout/tagout standard illustrates how the statutory constraints operate in practice. To assess the risk presented by hazardous energy, OSHA examined accident data collected by a number of groups, including the Bureau of Labor Statistics, the National Institute for Occupational Safety and Health, and OSHA itself. See 54 FR at 36648-52. OSHA's contractor, the Eastern Research Group (ERG), estimated that inadequate lockout/tagout procedures led to 2% of all workplace injuries and 7.1% of fatalities. From ERG's data, OSHA estimated that in 1984 workers suffered 144 fatal injuries, 33,432 lost workday injuries, and 37,561 non-lost workday injuries due to inadequate lockout/tagout programs. Moreover, ERG had found that lockout/tagout injuries tended to be significantly more severe than other workplace injuries, resulting in 24 lost workdays as compared to 16 lost workdays for the average lost-time occupational injury. Based on this evidence, OSHA determined "that the failure to control hazardous energy results in a significant risk to employees." 54 FR at 36684.

OSHA also analyzed the injury reports to determine the underlying causes of lockout/tagout accidents and to develop measures to prevent similar occurrences. Accident data and other evidence showed that employees are injured or killed by uncontrolled energy during servicing/maintenance of industrial equipment (regardless of industrial sector, establishment size, or equipment type) due to five factors: Failure to stop the machine or equipment, failure to disconnect the machine or equipment from the power source before performing service or maintenance, failure to dissipate residual energy, inadvertent reactivation of equipment, or failure to clear all necessary areas before reactivation. The evidence also showed that the hazard could be substantially reduced if employers were required to take four steps:

- (1) Evaluate equipment and servicing practices and develop safe procedures;
- (2) Use locks or tags to limit worker ability to by-pass or overlook safety procedures;
- (3) Train workers in implementation of the safety program; and
- (4) Enforce the safety rules through monitoring and discipline.

29 CFR 1910.147(c)(4); (c)(7)(i)-(ii); (c)(6)(i); (c)(7)(iii); (c)(4)(ii).

OSHA estimated that compliance with the four-part safety program would prevent

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85% of lockout/tagout related accidents. Thus, the standard was estimated to prevent approximately 122 fatalities, 28,416 lost workday injuries, and 31,926 non-lost workday injuries annually. OSHA judged this to be a substantial reduction of risk.

OSHA concluded that the standard is technologically feasible because its requirements--locks, tags, procedures, training, periodic inspections, and implementation--are devices and practices already in existence; OSHA found that 90 percent of large firms, 65 percent of medium-sized firms, 45 percent of small firms, and 20 percent of very small firms in high-impact industries already use lockout/tagout procedures. Ex. 71, "Regulatory Impact Analysis" (RIA), pp. IV-3, 4.

To assess economic feasibility, the standard's estimated costs were compared to the gross and net income of affected establishments. Taking into account all costs, including purchase of materials such as locks and tags, modification of equipment and work practices, implementation, planning, administration, training, and periodic inspections, the costs attributable to the standard would total \$214.3 million in the first year and \$135.4 million in subsequent years. OSHA broke down these total figures into the costs that would be incurred by establishments of different sizes in both high- and low-impact industries. RIA, pp. VI-46, 47. For example, OSHA found that first-year compliance costs for high-impact firms would range from \$120 for very small firms to \$28,172 for large ones. OSHA concluded that when measured against operating costs and net income, these costs are negligible. On average, costs would not exceed 0.05% of operating costs or 2.2% of net income for the first year, or 0.03% of operating costs or 0.6-1.5% of net income annually. Based on these figures, OSHA concluded that the standard would not have a significant impact on the financial structure or stability of any size manufacturing firm. RIA, p. VII-5. The agency further noted that the firms currently in compliance were able to compete successfully with those that were not, indicating that the net economic costs of lockout/tagout procedures would not be significant.

OSHA assured that the standard would be cost-effective in a number of ways. Having found that lockout would generally be safer than tagout, OSHA required that any new, overhauled, or modified equipment be equipped with lockout-capable energy isolating devices, which are readily available at no extra cost compared to un-lockable devices. This provision improves worker protection, at no cost to employers, by providing an increasing *16617 capability for employers to use lockout rather than tagout procedures. The standard is also cost-effective in excluding from coverage cord-and-plug connected equipment for which adequate protection against inadvertent energization can be obtained by unplugging the equipment and maintaining the plug under the exclusive control of the servicing worker. In addition, the standard is written in performance-oriented language that spells out general obligations but leaves employers free to achieve the regulatory goal at the lowest cost for each workplace. In particular, the standard permits employers to choose locks, tags, or a combination of both based on cost considerations, as

long as the choice achieves the requisite level of safety.

OSHA found that the standard would not have a disproportionate impact on small business. Indeed, small businesses would tend to experience less rather than more proportional impact because the standard exempts the cord-and-plug connected equipment that OSHA's contractor found is likely to be used in smaller establishments to perform the same types of tasks as manufacturing-type equipment in the largest establishments. Ex. 3-15, p. 3-134; RIA, p. VI-16. Moreover, OSHA's finding that the standard would have a negligible financial impact on all affected firms assures that the standard will not eliminate or threaten the vitality of any business segment.

The rulemaking process assured that OSHA was made aware of regulatory problems and alternatives, enabling the agency to shape the rule to accommodate competing interests. For example, numerous commenters objected to the proposed standard's placement of locks and tags on an equal plane, saying that tags, but not locks, "could be carelessly bypassed without major effort." 54 FR at 36654. Based on the rulemaking record, OSHA determined that "the use of lockout devices will provide employees with a more secure and more effective means of assuring that equipment will not be reenergized while they are working on it." 54 FR at 36655. However, some employers reported that they had used tags successfully, with one company presenting evidence that it had suffered only one lost-time accident that was marginally related to the use of tags in over 488 million man-hours of work. This company suggested that the key to safety lay not in the use of a specific device but in "good procedures and careful training combined with assurance of accountability." 54 FR at 36654. In light of the entire record, OSHA decided that the final standard should prefer the use of lockout when equipment is lockable but permit the use of tagout where the employer can "demonstrate that the tagout program will provide a level of safety equivalent to that obtained by using a lockout program." 29 CFR 1910.147(c)(3)(i). Thus, the rulemaking process led to a standard that assures employee protection while giving employers flexibility in choosing how to provide that protection.

OSHA's evaluation of the rulemaking record resulted in other decisions that gave industry flexibility to meet the standard's protective goals. These decisions include:

- (1) Not requiring immediate replacement of equipment that is incapable of being locked with lockable equipment;
- (2) An exemption for minor servicing activities that are routine, repetitive and integral to the production operation (29 CFR 1910.147(a)(2)(ii) (Note));
- (3) An exception to the requirement that an employer document the required energy control procedure when certain conditions exist (29 CFR 1910.147(c)(4)(i) (Note)); and

(4) Alternative requirements to the "one person, one lock" principle for complex group operations (29 CFR 1910.147(f)(3)(i)).

The rulemaking process produced a standard whose cost per life saved is clearly reasonable. Dividing the standard's total annual cost of \$214 million for the first year and \$135 million for subsequent years by the 122 fatalities the standard will avoid annually yields a cost per life saved of between one and two million dollars. This calculation, it should be noted, overstates the standard's cost per life saved, for it does not reflect savings due to accidents avoided or attribute any of the standard's costs to the non-fatal accidents avoided. Moreover, the standard clearly does not impose excessive burdens on employers. The only equipment employers must purchase consists of inexpensive devices such as locks, chains, and tags. The main costs will be for developing lockout/tagout procedures, changing work practices to conform to those procedures, training employees to assure that the procedures are properly implemented, and conducting periodic inspections to assure continued effectiveness of the program. Such administrative and training costs are the type of costs businesses typically incur for a variety of reasons and will obviously not be overly burdensome. Indeed, the fact that many employers voluntarily implemented effective lockout/tagout programs even before the standard was issued demonstrates that compliance will not be unreasonably burdensome.

The costs of lockout/tagout are consistent with other OSHA safety standards. OSHA's excavation standard, for example, eliminates 74 deaths and over 800 lost workday injuries annually at a cost of about \$306 million, making the cost per life saved about \$4.1 million. 54 FR 45954 (Oct. 31, 1989). OSHA's Grain Handling Facilities standard eliminates 18 deaths and 394 injuries annually at a total net cost of \$5.9 to \$33.4 million, for a cost-per-life-saved between \$0.33 and \$1.9 million. 52 FR 49622 (Dec. 31, 1991). The Process Safety Management standard is estimated to prevent 132 fatalities and 767 injuries/illnesses annually in years 1-5 and 264 fatalities and 1534 injuries/illnesses in years 6-10. 57 FR 6402 (Feb. 24, 1992). The compliance costs to achieve these benefits would be \$888.7 million in years 1-5 and \$405.8 million in years 6-10. *Id.* at 6401. Thus, the cost per life saved would be \$6.7 million in years 1-5, would decline to \$1.5 million in years 6-10, and would average \$3.3 million over the ten-year period.

Finally, the lockout/tagout standard is consistent with section 6(b)(8), which requires that OSHA standards, when they differ substantially from an existing national consensus standard, better effectuate the Act's purpose. The proposed lockout/tagout standard was based on a national consensus standard, ANSI Z244.1-1982, "American National Standard for Personnel Protection--Lockout/Tagout of Energy Sources--Minimum Safety Requirements." All of the protective provisions in the final standard are an outgrowth of the proposal and the ANSI standard. The main difference between the two is that the ANSI standard, like the standard OSHA proposed, permitted an unrestricted use of lockout or tagout. As described earlier, OSHA changed to a lockout preference in the final standard because the rule-

making record showed that it was more protective. Since the key purpose of the Act is worker protection, this change clearly effectuated the Act's objective. In addition, OSHA concluded that issuance of the lockout/tagout standard better effectuates the Act than sole reliance on 13 national consensus and established federal standards pertaining to equipment maintenance that OSHA summarily adopted in 1971 but whose scope was limited and whose efficacy was impaired by inconsistencies between different equipment and industries and by inadequate protective requirements.

*16618 II. The Lockout Preference Issue

The proposed standard afforded employers the option of either locking or tagging energy sources to prevent machines or equipment from being energized while employees perform servicing or maintenance. However, the rulemaking record showed that locks were generally more effective than tags at preventing inadvertent reenergization. When a maintenance worker applies a lock properly, reenergization of the equipment is absolutely precluded until the lock is removed. A tag only provides a warning and does not physically prevent another worker from ignoring the warning and energizing the equipment prematurely. Moreover, tags can become detached or damaged by either environmental conditions or by movement of materials, equipment, and personnel through the workplace. A number of parties to the rulemaking proceeding pointed to these inherent limitations of tags in their comments. Some commenters proposed that the final standard require employers to use lockout exclusively.

OSHA rejected the suggestion that the standard mandate universal lockout for two reasons. First, some energy control devices currently in use are incapable of being locked out, and OSHA found insufficient evidence to show that it would be feasible to immediately replace such devices with lockable ones. Therefore, at a minimum the standard had to permit employers with unlockable equipment to use tagout. Second, some employers provided evidence that they had successfully implemented highly protective tagout programs. OSHA decided that employers with demonstrably successful tagout programs should be permitted to continue to use those programs.

To minimize safety hazards from the inherent limitations of tags while still permitting tagout where it is necessary or adequate, OSHA changed the final standard in three ways. First, the standard requires employers who use tagout to train employees in the limitations of tags and in specific precautions that must be taken to minimize the possibility that human error will render the tags ineffective. Tagout training must include the following:

(A) Tags are essentially warning devices affixed to energy isolating devices, and do not provide the physical restraint on those devices that is provided by a lock.

(B) When a tag is attached to an energy isolating means, it is not to be removed

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without authorization of the authorized person responsible for it, and it is never to be bypassed, ignored, or otherwise defeated.

(C) Tags must be legible and understandable by all authorized employees, and all other employees whose work operations are or may be in the area, in order to be effective.

(D) Tags and their means of attachment must be made of materials which will withstand the environmental conditions encountered in the workplace.

(E) Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.

(F) Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.

29 CFR 1910.147(c) (7) (ii).

Second, the final standard requires employers with lockable equipment to use lockout unless the employer is able to show that the use of tagout will provide a level of safety equal to that of a lockout program. 29 CFR 1910.147(c) (3). This provision was specifically designed to permit those employers who had already developed and implemented effective tagout procedures to continue to use those procedures. Although all employers were afforded this option, OSHA recognized that few employers were likely to choose it. For employers with lockable equipment who had not already developed successful tagout programs, the cost of a lockout program will be lower than tagout; equipment costs are roughly equal and tagout involves additional costs for the tagout-limitation training that must be offered and for other steps employers must take to assure that tagout is as effective as lockout. The lower cost and generally greater effectiveness of lockout would give employers strong incentives to choose that option.

The third change requires that newly installed machines or equipment, and machines or equipment that are replaced or undergo major repair, must be equipped with lockable energy isolating devices. 29 CFR 1910.147(c) (2) (iii). By requiring that lockable equipment replace unlockable equipment in the ordinary course of industrial modernization, this provision will result in a future increase in the use of lockout instead of tagout. The provision imposes no cost on employers because lockable energy isolating devices are readily available and are no more expensive than unlockable ones. RIA, p. VI-20.

NAM argued to the court that OSHA failed to justify the provision that requires employers to use lockout unless they can demonstrate that their use of tagout provides a level of safety equal to lockout. NAM contended that the change from the unrestricted lockout-tagout option in the proposed rule to the lockout preference in the final rule provided little additional protection while imposing significant additional cost. NAM suggested to the court that the change would avert

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only 42 injuries annually, of which 26 would not even involve a lost day of work, at a cost of \$2.3 million in the first year and \$400,000 annually thereafter. 938 F.2d at 1323-24. In its remand order, the court instructed OSHA to reevaluate the lockout preference provision in light of the figures offered by NAM.

OSHA has reevaluated the lockout preference provision as well as the other changes that OSHA made to the final standard in light of its finding that lockout is more protective than tagout. The agency reaffirms its finding that lockout is a superior means of protection. Moreover, OSHA concludes that none of the changes impose costs that are not reasonably related to safety gains. Two of the provisions--the lockout preference provision challenged by NAM and the requirement for eventual installation of lockable energy isolating devices--produce safety gains at no cost to employers. The third provision--the requirement for specific tagout training--assures that employees involved in a tagout program understand the limitations of tags. This information is vital if tagout programs are to achieve an acceptable level of effectiveness.

Under the lockout preference provision, which applies only to employers with lockable equipment, employers can freely use lockout. They can use tagout only if they can demonstrate an equal level of safety to lockout. For employers who use lockout, the final standard imposes no additional duties, and therefore no additional costs, over the proposed standard. Employers who choose tagout under the final standard will incur additional costs over the proposed standard: they must expand employee training to assure that employees are aware of the limitations of tagout and must take other steps to assure an equal level of effectiveness. But no employer with lockable equipment is required to incur these additional costs because all such employers may use the less costly lockout option. Hence, whatever additional costs are incurred by employers who choose tagout are not costs imposed by the standard but are costs incurred through their own choice. Moreover, by affording employers the option of using tagout, the standard expands employer choice and avoids imposing on those employers who have already developed successful tagout programs the costs of converting to *16619 lockout. Thus, the lockout preference provision permits all employers to minimize their costs while assuring that workers are adequately protected.

Although the lockout preference provision imposes no cost on employers, it will produce safety benefits to employees by increasing the use of inherently more protective lockout procedures. The provision gives employers a financial incentive to use lockout by imposing additional safety measures, and associated higher costs, on employers with lockable equipment who choose to use tagout. Moreover, the lockout preference provision encourages use of lockout by putting employers on notice that lockout is generally the more effective means of protection. Allowing an unrestricted lockout/tagout option, as the proposed standard did, would imply that OSHA considered both means of protection to be equally effective and would induce some employers to choose the less protective tagout option.

The provision requiring installation of lockable energy isolating devices also produces safety gains for employees at no cost to employers. The provision does not require employers to retrofit existing equipment but only to install lockable devices when they either install new equipment or when equipment undergoes major repair or replacement. Lockable energy isolating devices are readily available at no extra cost. RIA, p. VI-20. Thus, the provision assures an increase, over time, in the percentage of equipment that is lockable while avoiding costs on employers for converting to lockable equipment. In turn, it assures a gradual increase in the use of lockout, with a corresponding increase in worker protection due to the safety advantages of lockout.

Unlike the lockout preference and lockable-device provisions, the provision on tagout-limitation training imposes costs on employers. In its Regulatory Impact Analysis, OSHA attempted to quantify the impact of tagout-limitation training based on the assumption that 15 minutes would need to be added to general energy control training to train each worker involved with tagout procedures on the specific points listed in the standard. This training increment would amount to \$7.2 million in the first year of the standard and would sharply decline thereafter, since the standard requires retraining only when there is a change in job assignments, equipment, or procedures, or when the employer has reason to believe that employee knowledge of energy control procedures is inadequate. RIA, pp. VI-43, VI-45. It is clear, however, that the actual cost of tagout-limitation training will be less. Fifteen additional minutes will rarely be necessary, since the basic training required by the standard would necessitate training in the characteristics and proper use of tags by employers who rely on tags. The specific items of tagout-limitation training required by the final standard simply clarify this already-existing duty and assure that all employees involved in tagout programs are taught certain specific points that are vital to the safe use of tags. Even in establishments where 15 additional minutes are used, the additional time and cost represent a small percentage of total training costs even as they assure a critical step in worker understanding. OSHA believes that such training is a minimum step that employers must take to assure that tagout programs are sufficiently protective and is entirely consonant with cost.

OSHA has examined the figures NAM presented to the court purporting to show the injuries averted and additional costs of the lockout preference provision. For the following reasons, those injury and cost figures do not accurately reflect the effects of the lockout preference provision and do not in any sense offer a meaningful comparison between the proposed and final standards.

NAM obtained the figures it presented to the court by comparing the Preliminary Regulatory Impact Analysis (Preliminary RIA) for the proposed standard to the RIA for the final standard. NAM subtracted the estimated safety benefits in the final RIA from those in the preliminary RIA to conclude that the final standard would prevent 16 more lost-workday and 26 more non-lost-workday injuries than the proposed. Similarly, NAM compared the cost of the final standard to that of the pro-

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posed by subtracting the cost figures reported in the respective RIAs. NAM argued to the court that the final standard differed from the proposed in two ways, first, by adding the lockout preference provision, second, by altering language to clarify an exception to the scope of the standard that applies when minor servicing takes place during normal production operations. NAM suggested that the difference in injury and cost estimates between the final and proposed standards had to be attributed to these two changes and that OSHA had therefore not justified the lockout preference provision.

NAM's approach does not lead to an accurate comparison between the costs and benefits of the proposed and final standards. The differences in compliance costs and injuries averted between a proposed and final standard cannot be computed simply by comparing the Preliminary RIA with the final RIA. The final RIA, like the final standard itself, incorporates the information the agency gained during the rulemaking process. It is a more accurate assessment of the standard's regulatory impact and supplants the original RIA, which was necessarily based on less complete information. Indeed, the proposed standard explicitly noted that the figures that were being presented reflected a "Preliminary Regulatory Impact Analysis." 53 FR at 15516. OSHA indicated that those figures were subject to change when it invited "public comment on these estimates for incorporation into the final RIA that will accompany the final rule." OSHA believes that the final RIA contains reasonable estimates of the final standard's compliance costs and injuries averted, and OSHA relied on those figures in developing the final rule. The Preliminary RIA played no role in OSHA's ultimate rulemaking decisions.

OSHA believes that the three changes to the final standard discussed in this section will produce substantial safety benefits by minimizing the use of tagout and upgrading tagout's effectiveness where it is used. Although all employers have the option of using tagout, virtually all employers with lockable equipment will choose to use lockout rather than expend the additional money and effort needed to develop tagout programs that are equally effective. OSHA anticipates that the employers who choose the tagout option will be those who already have extensive experience in developing and implementing tagout programs that are demonstrably protective. Employers with unlockable equipment will use tagout but must assure that employees are trained in tagout's limitations. OSHA estimated that the standard would prevent 85% of hazardous energy accidents. RIA, pp. VI-55, 57. In future years, as the percentage of lockable equipment rises to 100%, industry will move to full use of lockout (or equally effective tagout) procedures. OSHA estimated that full use of lockout would prevent 95% of accidents. RIA, p. VI-50. Thus, the changes to the final standard will provide immediate safety benefits and those benefits will increase over time.

OSHA is confident that the final standard will be significantly more protective than the proposed standard. Although OSHA originally estimated that the proposed standard, with an unrestricted lockout/tagout option, would be 85% effective, the evidence in the rulemaking record demonstrated *16620 that the rule would not

reach that level of effectiveness because of the inherent limitations of tags. Therefore, in promulgating the final standard, OSHA readjusted its estimate of the proposal's effectiveness to 80%. RIA at V-5, VI-56. The estimated 5% higher effectiveness level of the final standard compared to the proposed translates into seven fewer deaths annually and a corresponding decrease in both lost-workday and non-lost-workday injuries. Having reevaluated the evidence on the relative effectiveness of lockout and tagout, OSHA reaffirms its finding that lockout is the preferred means of protection and concludes that the modifications to the final standard that reflect this finding are cost-effective ways of providing additional protection compared to the unrestricted lockout/tagout option in the proposed standard.

III. The Disaggregation Issue

The lockout/tagout standard applies in all "general industry" workplaces [FN1] in which hazards associated with the unexpected energization of machinery and equipment during servicing and maintenance occur. Lockout/tagout hazards are so pervasive and arise during such a wide variety of servicing and maintenance activities that any attempt to define the standard's scope by employer sector within general industry would result in the standard excluding some hazardous servicing and maintenance activities from coverage. To avoid having the standard be underinclusive while at the same time avoiding the imposition of compliance burdens where no hazard exists, OSHA drafted the standard to impose a compliance duty on employers only to the extent that hazardous servicing and maintenance activities in fact take place in their workplaces.

FN1 The standard does not cover construction, agriculture, and maritime employment; installations under the exclusive control of electric utilities for the purpose of power generation, transmission and distribution; exposure to electrical hazards from work on, near, or with conductors or equipment in electric utilization installations; and oil and gas well drilling and servicing. OSHA determined that these industries and workplaces possessed unique characteristics that required further study. 54 FR 36657-36659.

In the rulemaking, OSHA examined records showing that accidents attributable to the failure to control hazardous energy had occurred throughout general industry. See 54 FR at 36646-52. NAM, pointing to evidence that the injury rate varied among industries, contended that OSHA should have eliminated from coverage industry sectors whose reported incident rates were low. The court remanded for OSHA "to explain its decision to impose lockout/tagout even where the risk appears to be diminutive or zero." 938 F.2d at 1325.

OSHA has reevaluated the evidence on which NAM relied that shows variations in injury rates among industries. For the following reasons, OSHA does not believe that this evidence supports the suggestion that the standard should specifically exclude industrial sectors from coverage under the standard.

As explained earlier, OSHA determined that without the protections of the lock-out/tagout standard, workers face a significant risk of material harm every time they perform service or maintenance work on powered industrial equipment. 54 FR 36,647-48, 36652-53. OSHA also found that hazardous servicing occurs in almost all industrial sectors. Data gathered by ERG according to Standard Industrial Classification code group showed that all manufacturing industries, SICs 20 through 39, have high concentrations of equipment and servicing accidents. Seventeen low impact groups between SICs 40 and 79 have less equipment that requires servicing and lower accident rates than do the manufacturing sectors, but each does engage in some servicing and maintenance activities that require lockout/tagout protection.

Railroads (SIC 40): servicing of climate-controlled railroad cars, machine-shop operations, and material handling equipment;

Public Transit (SIC 41): servicing of vehicles, tire repair machines, hydraulic lifts and hoists;

Trucking and Warehousing (SIC 42): servicing of conveyors, freight elevators, industrial trucks, forklifts, cranes;

Water Transportation (SIC 44): servicing of engine room equipment, heating plants, cranes, hoists;

Transportation by Air (SIC 45): servicing of airplanes, helicopters, mobile passenger loading tunnels, baggage handling equipment such as conveyors, escalators, elevators;

Pipelines Except Natural Gas (SIC 46): servicing of pipelines transporting hazardous substances or substances under high pressure or temperature;

Transportation Services (SIC 47): servicing of railroad car heating, ventilation and refrigeration, grain leveling and car cleaning equipment, weighing and packing equipment;

Communications (SIC 48): servicing of installation hoisting equipment, high voltage equipment;

Electric, Gas and Sanitary Services (SIC 49): servicing of water, steam, irrigation and sewerage pipelines, hoisting apparatus, power transmission devices;

Wholesale Trade-Durable Goods (SIC 50): servicing of manufacturing operations conducted as a secondary business or as part of a vertically integrated operation, servicing of scrap metal recycling equipment, hoists, conveyors, saws, planers;

Wholesale Trade-Nondurable Goods (SIC 51): servicing of grain elevators and augers, conveyors, hoisting equipment;

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Food Stores (SIC 54): servicing of packaging machinery, conveyors, meat cutting equipment, ovens;

Personal Services (SIC 72): servicing of laundry and dry cleaning equipment;

Business Services (SIC 73): servicing of heating, ventilating and air conditioning systems, electrical systems, centrifuges;

Automotive Repair, Services, and Garages (SIC 75): servicing of hoisting equipment, hydraulic lifts, repair machinery;

Misc. Repair Services (SIC 76): servicing of welding repair equipment;

Amusement and Recreation Services (SIC 79): servicing of large rides and other amusement equipment with moving parts.

Summarized at RIA, pp. II-10, 11. Additional sectors with "negligible" concentrations of powered equipment also occasionally have workers involved in servicing or maintenance. RIA summary at pp. II-10, 11.

Low reported accident rates or equipment concentrations for some SIC sectors do not mean that servicing workers in those sectors are not exposed to a significant risk. First, SIC designations reflect only the primary work activity at a workplace, not the entire range of activities. Thus, an accident occurring in an operation in an employer's secondary area of activity may be attributed to the SIC representing the firm's major activity, skewing the data for both SICs. Or an accident may involve employees of a contractor and be reported under the contractor's SIC rather than the SIC in which the hazardous machine or equipment was located. A particular SIC may exhibit a low rate of hazardous energy accidents because relatively little servicing and maintenance takes place in that SIC even though the servicing and maintenance that does take place is just as risky as that in a SIC in which such activities are more common. Moreover, a particular SIC may show a low accident rate because many employers in that SIC are already protecting their employees against lockout/tagout hazards. The fact that responsible employers are protecting their employees would not, however, justify OSHA's failure to issue a standard that requires other employers to provide the same needed protection.

In addition to the inherent limitations of accident data organized by SIC codes, defining the scope of a standard by SIC codes would restrict the standard's ability to adapt to circumstances that cannot be precisely foreseen when the standard is promulgated. As noted above, a workplace's SIC designation is *16621 based on its primary activity, but the primary activity in many workplaces changes over time. The coverage of hazardous servicing activity that takes place in a workplace should not depend on the fortuity of the SIC code it happens to be in at any given time. Moreover, SIC codes themselves are periodically redefined at the 3 and 4 digit levels. If the standard's applicability is defined by SIC codes, such

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redefinitions will affect coverage in a manner that is unpredictable and that may well deny coverage where it is needed.

Even if SIC designations provided a sound means of defining a standard's coverage, the available accident data did not prove that any industry sectors were free of risk from hazardous energy. The data covered a relatively limited time span and were affected by some degree of mis-reporting and under-reporting. For example, the ERG report, which showed no injuries for five low impact SICs (Ex. 3-15, p. 3-9), reflected incidents from only one set of reports during a four-month period in twenty-five states. See RIA, pp. V-2, V-3; Ex. 3-15, pp. 3-5, 3-8. Given the inherently hazardous nature of servicing operations and the limitations of SIC reporting, the absence of injury reports over a four-month period in a limited geographic area did not support an inference of no or low risk.

Accordingly, OSHA expressed the standard's coverage in performance terms rather than SIC codes. The standard applies to all servicing and maintenance activities during which employees can be injured if machines or equipment become unexpectedly energized or if stored energy is released but not to servicing and maintenance that present minimal and readily controlled risk, such as work on electrical equipment that can be deenergized by simply unplugging it, and minor servicing activities that take place during normal production operations. Thus, each covered employer's burden is determined by the frequency and complexity of servicing actually undertaken.

For similar reasons, OSHA decided not to limit the standard to particular equipment. By its terms the standard applies only when the unexpected energization or release of stored energy could cause injury to employees. Machines and equipment that present no hazard are excluded from coverage. The court referred to sewing machines as a type of equipment that might present less of a hazard than larger, more powerful machinery. For sewing machines like those used at home, not of industrial size and configuration, the standard's cord-and-plug exemption would apply. Industrial sewing machines used in high impact sectors like SIC 23, Apparel Manufacture, plainly present electrical and puncture hazards. Moreover, industrial processes and equipment are constantly changing, and restricting the standard to machines and equipment that are in use at the time of promulgation would fail to recognize that newly developed equipment can be just as hazardous as equipment currently in use. OSHA believes that the best approach is the one it has taken: the standard applies to all machines and equipment for which inadvertent energization during servicing or maintenance will expose employees to injury, and only to such machines and equipment. This approach assures that workers are protected wherever lockout/tagout hazards exist but that compliance burdens are not imposed where there is no hazard.

IV. Cost Benefit Relationship

In *UAW v. OSHA*, the D. C. Circuit held that the "reasonably necessary or appro-

appropriate" language of section 3(8) could be interpreted to include a cost-benefit balancing formula or other explicit mechanism for judging whether the benefits of safety standards justify the costs. 938 F.2d at 1319. The court ruled that the statutory construction apparently relied on by OSHA in the rulemaking vested unconstitutionally broad discretion in the agency but that the overbreadth could be cured by adoption of a suitably limiting construction. The court stated that adoption of "cost-benefit analysis" would be an acceptable interpretation, but observed that there could be other permissible interpretations that would also cure the overbreadth problem.

Section I sets forth the construction of the statute that OSHA relies on in establishing safety standards. Under OSHA's interpretation, numerous decisionmaking criteria assure that the costs of safety standards are reasonably related to their benefits. Safety standards must substantially reduce a significant risk of material harm with measures that are technologically capable of being done and at costs that most affected employers can absorb or pass on. OSHA must choose the most cost-effective means for meeting the regulatory goals. OSHA's findings as to the costs and benefits of each standard must be supported by substantial evidence based on a rulemaking record. Finally, safety standards must reflect OSHA consideration of significant rulemaking comments, existing consensus standards, and policy changes. The agency believes that this construction addresses the court's concern that the agency not claim unconstitutionally broad discretion and that it not impose large costs for insignificant safety gains.

OSHA's decisionmaking process thus assures that the resulting standard produces substantial benefits at a reasonable cost. OSHA safety standards therefore meet a qualitative cost-benefit test announced by the Fifth Circuit:

The test under section 3(8) is an intermediate one between the feasibility mandate of section 6(b)(5) and a strict cost-benefit analysis that requires a more formal, specific weighing of quantified benefits against costs. * * * section 3(8) only demands that the expected costs of OSHA regulations be reasonably related to the expected benefits, leaving considerable discretion for the agency as long as it is exercised on substantial evidence and with an adequate statement of reasons.

National Grain & Feed Ass'n v. OSHA, 866 F.2d 717, 733 (5th Cir. 1989) (internal quotations omitted). See National Grain & Feed Ass'n v. OSHA, 903 F.2d 308, 311 (5th Cir. 1990) (approving OSHA's Supplemental Statement of Reasons for grain dust standard as meeting Fifth Circuit's requirement for cost-benefit justification).

The agency specifically finds that the relationship between the benefits secured by the lockout/tagout standard and the costs it imposes is reasonable. The standard will save approximately 122 lives and 28,400 lost workday injuries each year, at a cost of \$214 million in the first year and \$135 million thereafter. Focusing

only on the fatalities the standard is expected to prevent, the cost per life saved is \$1.2 million. 54 FR at 36685/2; RIA at VII-1. When compliance costs are adjusted to account for the cost savings to employers from the accidents prevented, the net cost per life saved falls to \$0.19 million. Id. Even these modest figures overstate the cost per life saved, for they do not take into account the non-fatal injuries that will be prevented. The cost per life saved compares favorably with other OSHA safety standards, and OSHA believes that the cost-benefit relationship is favorable by any reasonable measure.

As noted above, OSHA believes that its existing interpretation of section 3(8) satisfies the D.C. Circuit's concern that its rulemaking discretion not be overbroad. However, in light of the court's opinion, the agency believes it would be useful to explain in more detail the manner in which it gathers and uses economic data in promulgating *16622 safety standards as well as the limitations on its use of such data.

Economic analysis is an essential element of both feasibility and cost-effectiveness analysis and an integral part of OSHA's decisionmaking. Economic analysis begins with the initial crafting of a proposed rule. Data and information are gathered systematically on a variety of elements including the costs of possible control and abatement measures, the prevalence of existing control measures, and the impact of work injuries and safe work practices on productivity. OSHA uses this information in conjunction with information such as any new emerging control technologies to select from among the abatement techniques that appear to be the most affordable and efficacious.

When a proposal is published in the Federal Register, the economic component of OSHA's analysis is discussed in the preamble along with OSHA's risk and benefit analysis. The full Preliminary Regulatory Impact Analysis is also made available to the public. Included in such information are the underlying data sources and specific methodologies used that support the economic assessments made by the agency. Once such information is published and made available, OSHA encourages the public to comment on the analysis and to provide any additional data or information that may improve the preliminary estimates. Upon the completion of the comment period, OSHA carefully reviews all the additional economic and technical information that the public has provided and uses such information to develop its Final Regulatory Impact Analysis, which contains the economic assessment that is used in crafting the final rule.

Each final rule is strongly influenced by the comments received as to the accuracy of OSHA's preliminary estimates and any new information. In light of all the available evidence, OSHA determines the costs and benefits of the standard as a whole, assesses the overall cost-effectiveness of the standard, and evaluates its overall economic impact on the regulated community.

The agency's "cost-effectiveness" analysis assures that the standard reduces sig-

nificant risk at the least cost to employers. "Cost-effectiveness analysis" is defined in The Dictionary of Modern Economics (Pearce, 1983) as:

* * * a technique closely related to cost-benefit analysis. It differs in that it asks a different question, namely, given a particular objective which is the least-cost way of achieving it? It aids choice between options but cannot answer the question whether any of the options are worth doing. It is utilized when there are difficulties in associating monetary values with outcomes of projects but where the outcomes can be quantified along some non-monetary dimension.

The lockout/tagout standard's Regulatory Impact Analysis relied primarily on such cost-effectiveness analysis to identify and provide economic comparisons of the various trade-offs between different versions of the final rule. Such analysis provided the agency with information as to the benefits that could be obtained for a given cost. That information was then used in developing what the agency deemed the most cost-effective regulation to address the workplace hazards identified.

In its lockout/tagout decision, the court discussed a form of cost-benefit analysis (hereinafter "formal cost-benefit analysis") that would systematically monetize and weigh costs and benefits of proposed safety standards both within and outside the workplace. The analysis would attempt, among other things, to assign monetary values to saving a human life and to avoiding suffering and would account for indirect effects of the standard attributable to possible reduced wages or increased consumer prices that resulted from employer compliance costs. 938 F.2d at 1320. The court suggested this sort of formal cost-benefit analysis could assure that the agency did not engage in decision-making that is unconstitutionally unfettered.

The court did not indicate that the exact approach it described is the only approach that would pass constitutional muster. Indeed, the court stressed that it was open to OSHA on remand to identify an alternative construction that conformed to nondelegation principles. 938 F.2d at 1321. OSHA has carefully considered the issue remanded by the court. OSHA believes that when considered in their entirety, the criteria it applies to safety rulemaking assure that OSHA's decision-making process is sufficiently constrained to satisfy constitutional principles. Thus, OSHA believes that it has in fact met the court's constitutional concern even while it has not adopted the specific methodology referred to by the court.

OSHA also believes that problems associated with formal cost-benefit analysis militate against its use in safety rulemaking. The formal cost-benefit analysis discussed by the court is generally understood to require that all the costs and benefits of a particular action be identified, monetized and compared. Each stage of this analysis--selection of relevant costs and benefits, assignment of monetary values, and judgment of relative worth-- presents complex policy and factual issues, the resolution of which is not necessarily more precise or rational than resolution of the issues OSHA currently addresses and which could result in signi-

ificantly protracted agency rulemaking. Even proponents of formal cost-benefit analysis do not consider it a panacea. "There are costs to quantitative analysis * * *. One cost is bad decisions resulting from endowing the estimated numbers with too much confidence and tending to ignore unquantified aspects; this cost is the flip side of dismissing analysis as useless." Lester B. Lave, *The Strategy of Social Regulation: Decision Frameworks for Policy*, The Brookings Institution, Washington, DC (1981) pp. 133-34.

Moreover, in OSHA's judgment, its statutory mandate to achieve safe and healthful workplaces for the nation's employees limits the role monetization of benefits and analysis of extra-workplace effects can play in setting safety standards. Congress enacted the OSH Act for the purpose of "assur(ing) so far as possible every working man and woman in the Nation safe and healthful working conditions." 29 U.S.C. 2(b). "Congress understood that the Act would create substantial costs for employers, yet intended to impose such costs when necessary to create a safe and healthful working environment. Congress viewed the costs of health and safety as a cost of doing business." *American Textile Mfrs. Inst. v. Donovan*, 452 U.S. 490, 519-522 (1981). See discussion above at pp. 14-15. In sum, there are significant limitations to formal cost-benefit analysis, both in its capacity to order decision-making and in terms of its relation to achievement of the statutory purposes.

The concurring opinion in *UAW v. OSHA* refers to a related approach, termed "risk-risk" analysis, suggested recently by Professor Wildavsky, a political scientist, and others. See 938 F.2d at 1326-27. OSHA has previously determined that systematic study of risk-risk theory's empirical validity, advantages and disadvantages is needed before the theory can be evaluated for use in the OSHA rulemaking context. In its proposed standard for Air Contaminants in Construction, Maritime and Agriculture industries, for example, OSHA posed a series of questions relating to the theory's empirical basis. 57 FR 26002, 26005-29009 (June 12, 1992). The questions were framed to test whether, as risk-risk theory posits, the net health benefit of the proposed standard would be positive or negative *16623 for the workers who would be affected by the standard's impact on workplace risk and, possibly, income.

OSHA has also noted that apart from the empirical questions raised by risk-risk theory, serious questions exist about the analysis' appropriateness for OSHA given the specific statutory commands of the OSH Act, particularly the Act's focus on workplace rather than societal risks and benefits. Thus, if and when risk-risk analysis is found to have an empirical basis, the agency would have to evaluate the analysis in light of those statutory considerations.

In the meantime, OSHA is confident that the type, level and sophistication of economic analyses it currently performs assure that its standards are protective, cost-effective, and economically and technologically feasible. The Agency has identified several key advantages in its approach to assessing the costs and bene-

fits of a standard in the context of risk and feasibility determinations:

- A necessary first step in reaching an economic feasibility determination is to develop representative compliance scenarios. These help identify very costly regulatory provisions and areas of duplication or internal discrepancy.
- Cost and benefit estimates, based upon the compliance scenarios, help identify high cost and low benefit provisions that may require additional study. This often results in the development of more efficient regulatory alternatives.
- A comparison of the estimated costs with industry profit and revenue estimates (i.e., economic feasibility assessment) helps to identify sectors where high economic burdens may need to be mitigated through some form of regulatory relief, such as extended compliance dates.

There are, of course, limits to the accuracy of the cost and benefit information OSHA can develop. Such limitations include:

- Inaccurate or incomplete data--OSHA frequently is regulating in areas where data are incomplete. For health standards, exposure data are often lacking or do not provide the accuracy that the agency needs. Often, industry data do not record the specific cause of accidents or illnesses. OSHA surveys designed to collect the necessary data are limited by budget and resource constraints. In addition, surveys take time to develop and complete, and require a careful tradeoff of quantity of information requested with the likelihood and accuracy of response. Finally, the accuracy of the results are constrained by data disaggregation problems.
- Reliance on assumptions--The Supreme Court, in the Benzene decision, required OSHA to demonstrate significant risk. For health standards, such as benzene, risk estimates are commonly based upon mathematical models (e.g., dose response curves) and the benefits are quantified by estimating the number of future fatalities that would be prevented under various exposure reductions. For safety standards risk is based upon the assumption that past accident patterns are representative of future ones. OSHA estimates benefits by determining the percentage of accidents that will be prevented by compliance with the standard (e.g., locking out or tagging out energy sources).
- Quantification issues--The anticipated benefits accruing from an OSHA standard are usually understated because many benefits cannot be quantified with any degree of accuracy (e.g., potential productivity gains). In addition, since the quantified benefits are usually in assorted units of measure (e.g., number of lives saved, injuries prevented, etc.) cost-effectiveness ratios are partial or incomplete.
- Decreasing accuracy as the estimates are disaggregated--Every model and survey is subject to certain limitations. For example, subsector analysis decreases in

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accuracy as survey data are disaggregated. Thus, OSHA has more confidence in the accuracy of its estimate of the aggregate annual cost of the lockout/tagout standard than it has in the individual industry estimates. Moreover, costs for individual firms can be expected to vary depending on specific circumstances--some firms may not experience any costs while others would experience costs above the average for their industry.

This effect is also evident in the benefit estimates of a safety standard. As stated above, these estimates are based upon the assumption that past accident patterns are representative of future ones. While at the aggregate this may be true, this can lead to some perverse results if data are disaggregated. Since there are only a finite number of discrete events (e.g., accidents, fatalities, injuries), disaggregation (by industry, size of firm, location) will often reveal the existence of a hazard but no previous history of problems (e.g., zero accidents of the type under consideration). This is one of the reasons that the Department has maintained that quantitative cost-benefit analysis based on such data should not be used to exclude specific groups from protection. At the extreme, it is always possible to find individual firms or workers with no history of accidents even though others using the same or similar practices have incurred problems.

But some technical limitations and resource constraints are unavoidable in any system for gathering and evaluating broad-based cost and benefit data. Over all, the Agency is confident that the Regulatory Impact Analysis provided sufficient detail and guidance for the development of the lockout/tagout standard, resulting in a standard consistent with all constitutional requirements. To the degree that OSHA determines that added forms of economic analysis can improve the decisionmaking process and improve the quality of its regulations, the agency will continue to explore and incorporate new approaches.

Authority: This document was prepared under the direction of David C. Zeigler, Acting Assistant Secretary for Occupational Safety and Health, U. S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210. It is issued under sections 3, 4, 6 and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 652, 653, 655, 657), in response to the decision of the U. S. Court of Appeals for the District of Columbia Circuit in *UAW v. OSHA*, 938 F.2d 1310 (1991).

Signed at Washington, DC, this 23rd day of March, 1993.

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Acting Assistant Secretary of Labor.

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