UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF OKLAHOMA

NATIONAL ASSOCIATION OF HOME BUILDERS OF THE UNITED STATES, et al., Plaintiffs, -v.- R. ALEXANDER ACOSTA, Secretary of Labor, et al., Defendants.	Case No. CIV-17-00009-PRW

BRIEF OF AMICI CURIAE THE NATIONAL ASSOCIATION OF MANUFACTURERS, GREAT AMERICAN INSURANCE COMPANY, AND ASSOCIATED BUILDERS AND CONTRACTORS IN SUPPORT OF PLAINTIFFS' MOTION FOR SUMMARY JUDGMENT

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STATEMENT OF INTEREST

The National Association of Manufacturers ("the NAM"), Great American Insurance Company, and Associated Builders and Contractors ("ABC") submit this brief in support of the plaintiffs' challenge to a final rule issued in 2016 by the U.S. Occupational Safety and Health Administration ("OSHA"). *See* Improve Tracking of Workplace Injuries and Illnesses, 81 Fed. Reg. 29,624 (May 12, 2016), as revised at 81 Fed. Reg. 31,854 (May 20, 2016) (the "2016 Rule").

The NAM is the largest manufacturing association in the United States, representing small and large manufacturers in every industrial sector and in all 50 States. Manufacturing employs more than 12 million men and women, contributes $2.25 trillion to the U.S. economy annually, has the largest economic impact of any major sector, and accounts for more than three-quarters of all private-sector research and development in the nation. The NAM is the voice of the manufacturing community and the leading advocate for a policy agenda that helps manufacturers compete in the global economy and create jobs across the United States. In that capacity, the NAM routinely files amicus briefs in support of its members' interests in cases across the country.

Great American Insurance Company, through its Strategic Comp division, has provided workers' compensation insurance to more than 1,300 companies over the past 26 years and has gained a reputation in the insurance market as an expert on comprehensive workplace safety and health programs that prevent workplace accidents, improve safety cultures, and significantly reduce the costs of work-related injuries, illnesses, and deaths.

Associated Builders and Contractors ("ABC") is a national construction industry trade association representing more than 21,000 members. ABC's membership represents all specialties within the U.S. construction industry and is comprised primarily of firms that perform work in the industrial and commercial sectors. ABC is a strong advocate of workplace safety in the construction industry and is a founding member of the Construction Coalition for a Drug- and Alcohol-Free Workplace.

Amici strongly support workplace safety and policies that reduce injury and illnesses in the workplace. But OSHA's 2016 Rule, which as adopted purported to brand broad categories of post-incident drug testing and safety incentive programs as per se discriminatory, does not properly accomplish those goals. Amici have a strong interest in ensuring that employers—particularly amici's members and clients—can continue to use these critical workplace-safety programs. To that end, amici are parties to a separate lawsuit challenging the 2016 Rule's restrictions on workplace-safety programs in the Northern District of Texas, which was stayed and administratively closed to give OSHA time to implement changes to the 2016 Rule. *See Texo ABC/AGC, Inc. v. Perez*, 16-01998 (N.D. Tex.).

INTRODUCTION

When OSHA adopted the 2016 Rule, the agency improperly included an anti-discrimination provision, which it interpreted to impose unprecedented and misguided restrictions on post-incident drug testing and safety incentive programs. These workplace-safety programs have long been integral components of many employers' comprehensive approaches to promoting workplace safety and employee wellbeing. Although OSHA has retracted (for now) its most sweeping claims about the programs prohibited by the anti-discrimination provision, it has left the provision in the rule and still interprets it to allow OSHA to micromanage how certain safety programs are structured.

This Court should make clear that OSHA may not use the 2016 Rule to regulate post-incident drug testing and safety incentive programs in any manner. That is so for at least three independent reasons.

First, the anti-discrimination provision is inconsistent with Section 11(c) of the Occupational Safety and Health Act ("OSH Act"), which establishes a comprehensive and exclusive remedial scheme for retaliation claims. The statute requires an employee to initiate a claim within 30 days of the alleged retaliation by filing a complaint with the Secretary of Labor, then requires the Secretary to pursue any meritorious claim in federal court. The anti-discrimination provision, by contrast, allows the Secretary to sua sponte investigate a retaliation claim related to injury reporting within six months of the alleged retaliation, then allows the Secretary to adjudicate the claim administratively, rather than in federal court. This self-proclaimed "enhanced enforcement tool" (81 Fed. Reg. at 29,671) is in reality a drastic revision of Congress's remedial scheme.

Second, the anti-discrimination provision cannot be interpreted to regulate workplace-safety programs like post-incident drug testing and safety incentive programs. The anti-discrimination provision, like Section 11(c), prohibits only intentional discrimination. It therefore does not bar well-intentioned safety practices, even supposing the practices have a disparate impact on employees who get injured and report the injuries. In addition, OSHA consciously promulgated the 2016 Rule using its modest authority to issue recordkeeping "regulations" rather than its substantive standard-setting authority. Having made that choice, OSHA cannot interpret the rule to impose substantive obligations on employers.

Third, even if the anti-discrimination provision were valid and the rule could reach post-incident drug testing and safety incentive programs, the rule would be arbitrary and capricious because OSHA entirely failed to consider two obvious categories of costs: first, the deleterious effects on workplace safety that would be caused by banning these workplace-safety programs and, second, the costs to employers of having to modify their programs to comply with OSHA's newly minted restrictions.

For these reasons, the Court should hold that the 2016 Rule's anti-discrimination provision is invalid in its entirety or, at the very least, cannot regulate post-incident drug testing and safety incentive programs.

BACKGROUND

A. Post-Incident Drug Testing and Safety Incentive Programs Enhance Workplace Safety

Employers have long utilized post-incident drug testing and safety incentive programs to fulfill their obligations to provide a safe workplace. Post-incident drug testing, in particular, is fundamental to workplace safety—so much so that many States' workers' compensation laws *require* employers who maintain drug-free workplaces to use some form of post-incident drug testing. *See, e.g.*, Ga. Code §§ 34-9-413, 415; Ala. Code § 25-5-335(a)(5); Ohio Admin. Code § 4123-17-58(C)(5)(b). The federal government also has recognized the importance of post-incident drug testing, as the U.S. Department of Transportation requires employers to perform drug tests on drivers of commercial vehicles when, among other things, they are involved in accidents causing injury or serious damage. *See* 49 C.F.R. § 382.303(b)(2).

And the need for drug testing has only increased in recent years, as the "post-accident [drug] positivity rate has risen annually since 2011 in the general U.S. workforce and since 2010 in the federally mandated, safety-sensitive workforce." Press Release, *Workforce Drug Testing Positivity Climbs to Highest Rate Since 2004, According to New Quest Diagnostics Analysis*, QUEST DIAGNOSTICS (Apr. 11, 2019). Experts in the field thus advise that "employers committed to creating a safe, drug-free work environment should incorporate strategies that monitor drug use above and beyond pre-employment drug screening." *Id.*

Safety incentive programs are another important component of many employers' comprehensive workplace-safety programs. The programs vary, but they often provide rewards—be it a small monetary bonus or a gift card—to employees who remain injury-free or identify safety hazards. *See* Government Accountability Office, Workplace Safety and Health, Better OSHA Guidance Needed on Safety Incentive Programs 1 (April 2012) ("GAO Report"). The programs are designed to motivate employees to continuously consider their own safety and that of others, fostering a lasting culture of workplace safety.

Both common sense and recent studies suggest that safety incentive programs increase safety without deterring injury reporting. A 2012 report by the Government Accountability Office ("GAO"), for instance, reviewed six studies on the effects of safety incentive programs; three of the studies "found that the programs reduced injuries," and none found that the programs deterred reporting. *Id.* at 1, 8. In addition, a year and a half before the issuance of the 2016 Rule, Great American Insurance Company submitted to OSHA an analysis of its data, which demonstrated that employers with safety incentive programs "have significantly fewer serious accidents" and that the programs "may even enhance injury and illness reporting." Comment Letter on Proposed Rule to Improve Tracking of Workplace Injuries and Illnesses 2–3 (Dec. 7, 2015) (finding that the programs "contributed to a 39% reduction in the frequency of large claims"), https://bit.ly/2JYEqL4. A more recent analysis by the Company, also submitted to OSHA, reinforces those findings. *See* Exhibit 1, Comment Letter on Proposed Rule to Improve Tracking of Workplace Injuries and Illnesses 2–3 (Sept. 28, 2018) (employers who dropped their

programs as a result of the 2016 Rule "encountered as much as a 114% increase in the frequency of large claims").

Finally, neither of these two kinds of safety programs turns on whether an employee makes a report that he has been injured. For example, a drug test typically is administered regardless whether it's the injured employee, a co-worker, or a manager who observes an accident and reports it to the corporate safety department.

B. OSHA Purported to Ban Broad Categories of Post-Incident Drug Testing and Safety Incentive Programs

Despite the safety benefits of post-incident drug testing and safety incentive programs, OSHA announced in the preamble to the 2016 Rule that broad categories of these established programs would be barred by the rule. It is important to clarify at the outset the precise regulatory text upon which OSHA based that conclusion.

The 2016 Rule, as later amended in 2019, has two principal operative provisions. First, the rule requires employers to "establish a reasonable procedure for employees to report work-related injuries and illnesses promptly and accurately." 29 C.F.R. § 1904.35(b)(1)(i). Second, the rule provides that employers may not "discharge or in any manner discriminate against any employee for reporting a work-related injury or illness." 29 C.F.R. § 1904.35(b)(1)(iv).

Those provisions serve distinct functions. The reasonable-procedures provision governs the kinds of reporting mechanisms that employers may establish. An employer, for example, may not set up a reporting mechanism that requires "too many steps" to complete or one that does not afford the employee "a reasonable time" to report an injury.

81 Fed. Reg. at 29,670. The anti-discrimination provision, by contrast, purports to prevent an employer from retaliating against an employee *after* the employee reports an injury.

It is through the anti-discrimination provision—and that provision alone—that OSHA purported to ban broad categories of post-incident drug testing and safety incentive programs. *See* 81 Fed. Reg. at 29,671–74 (discussing these programs in a section titled "Prohibition of Discrimination Against Employees for Reporting a Work-Related Injury or Illness"). OSHA thus did not suggest that it was banning these programs under the rule's reasonable-procedures provision.

In describing the anti-discrimination provision in the 2016 Rule's preamble, OSHA purported to severely limit post-incident drug testing and safety incentive programs. The agency stated that "blanket post-injury drug testing policies" are retaliatory unless they "limit post-incident testing to situations in which employee drug use is likely to have contributed to the incident, and for which the drug test can accurately identify impairment caused by drug use." 81 Fed. Reg. at 29,673. Similarly, OSHA purported to outlaw core safety incentive programs by asserting that it is per se retaliatory to "den[y] a benefit"—including a prize or a bonus—to an employee who gets injured and reports the injury (as the employee is obligated to do). *Id.* at 29,674.

In a more recent "guidance" document, OSHA has substantially walked back the positions it took in the preamble to the 2016 Rule. OSHA now says that the 2016 Rule's anti-discrimination provision "does not prohibit workplace safety incentive programs or post-incident drug testing." U.S. Dep't of Labor, *Clarification of OSHA's Position on Workplace Safety Incentive Programs and Post-Incident Drug Testing Under 29 C.F.R.*

§ 1904.35(b)(i)(iv) (Oct. 11, 2018), https://bit.ly/2Ad7IQy. And OSHA recently has suggested that it will promulgate a regulation "memorializing OSHA's position on these issues through changes to" the anti-discrimination provision. Office of Information and Regulatory Affairs, Unified Agenda of Federal Regulatory and Deregulatory Actions, RIN: 1210-AB91 (Spring 2019), https://bit.ly/30DBDNb. That is a welcome development, but it does not go far enough—OSHA still purports to have authority under the anti-discrimination provision to finely parse the content of these safety programs. OSHA's guidance, for example, goes into great detail about kinds of "adequate precautions" such programs must incorporate "to ensure that employees feel free to report an injury or illness." *Id.*

What is more, OSHA's approach to these issues leaves employers in regulatory limbo, uncertain what shifts and swerves the agency might announce in the future. For the reasons explained below, this Court should hold that the anti-discrimination provision in the 2016 Rule is invalid, and that OSHA lacks authority under the 2016 Rule to regulate post-incident drug testing and safety incentive programs.

ARGUMENT

OSHA lacks authority under the 2016 Rule to regulate post-incident drug testing and safety incentive programs because (1) the rule's anti-discrimination provision is inconsistent with Section 11(c) of the OSH Act; (2) the rule cannot reasonably be interpreted to reach these workplace-safety programs; and (3) OSHA failed to consider the costs of restricting these programs in promulgating the 2016 Rule.

I. OSHA May Not Circumvent Section 11(c) by Creating a New Administrative Remedial Scheme for Discrimination Claims

It is blackletter law that an agency "may not exercise its authority in a manner that is inconsistent with the administrative structure that Congress enacted into law." *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 125 (2000) (quotation marks omitted). Among other things, that principle precludes an agency from adopting a "remedial scheme" that "differs from that created by Congress in fundamental ways." *New Mexico v. Dep't of Interior*, 854 F.3d 1207, 1225 (10th Cir. 2017). That is because a statute's "carefully crafted remedies scheme reveals the legislature's intent that the statute's enumerated remedies [are] to be exclusive, and consequent intent to deny agencies the power to authorize supplementary . . . relief." *Am. Bus Ass'n v. Slater*, 231 F.3d 1, 4 (D.C. Cir. 2000).

In Section 11(c) of the OSH Act, Congress created a comprehensive and exclusive remedial scheme for all retaliation claims related to the OSH Act. The statute starts by prohibiting an employer from "discharg[ing] or in any manner discriminat[ing] against any employee . . . because of the exercise by such employee . . . of any right afforded by" the Act. 29 U.S.C. § 660(c)(1). The statute then requires an employee to trigger an investigation by filing a complaint with the Secretary of Labor within 30 days after the alleged retaliation occurs. *Id.* at 660(c)(2). Once the Secretary receives and investigates a complaint, the agency has two options: If the Secretary believes the complaint has merit, he "*shall* bring an action" against the employer "in any appropriate United States district court." *Id.* § 660(c)(2) (emphasis added). The court "shall have jurisdiction . . . [to] order

all appropriate relief including rehiring or reinstatement of the employee to his former position with back pay." *Id.* Otherwise, the Secretary must close the investigation within 90 days. *Id.* at 660(c)(3).

Congress could have designed a different remedial scheme. In many of the anti-discrimination statutes implemented by the Secretary of Labor, for example, Congress gave the Secretary authority to adjudicate retaliation claims in administrative proceedings in the first instance, subject to deferential judicial review. *See, e.g.*, 15 U.S.C. § 2087(b); 49 U.S.C. § 42121(b). In enacting the OSH Act, however, Congress specifically rejected a draft bill that would have provided those same procedures. *See* H.R. Rep. No. 91-1765, at 39 (1970) (Conf. Rep.). And Congress intentionally omitted Section 11(c) from the list of statutory provisions upon which OSHA may base citations and institute administrative enforcement proceedings. *See* 29 U.S.C. § 658(a) (allowing citations for violations of "a requirement of section 654 of this title, of any standard, rule or order promulgated pursuant to section 655 of this title, or of any regulations prescribed pursuant to this chapter").

The 2016 Rule is a blatant attempt to circumvent those limitations. By crafting a regulation that applies to retaliation claims related to injury reporting, OSHA made that subset of retaliation claims subject to its citation and enforcement powers. 29 U.S.C. § 658(a). And in seizing authority that Congress denied it, OSHA made a hash of Congress's carefully calibrated remedial scheme.

First, OSHA's maneuver allows the agency to initiate investigations and issue citations for retaliation claims related to injury reporting "even if no employee has filed a section 11(c) complaint." 81 Fed. Reg. at 29,671. That unprecedented authority to

unilaterally investigate retaliation deviates not only from Section 11(c) but also from each of the more than twenty anti-discrimination statutes implemented by the Secretary of Labor, which all require an employee to initiate enforcement by filing a complaint. *See, e.g.*, 42 U.S.C. § 7622(b).[1]

Second, the rule allows the Secretary to pursue retaliation claims up to six months after the violation occurs, thereby creating a limitations period that is six times longer than the 30-day period Congress established in Section 11(c). *See* 29 U.S.C. § 658(c) (allowing OSHA to issue citations up to six months "following the occurrence of any violation").

Third, instead of having to prove retaliation to an independent Article III judge and convince that judge of the proper remedy, the 2016 Rule allows the agency to prove retaliation before administrative law judges who may craft their own remedy, which may include large civil penalties—all subject only to deferential substantial-evidence review in a court of appeals. 29 U.S.C. §§ 659(c), 660(a), 666. This newfound authority to channel retaliation claims through the administrative process—which Congress specifically *denied* the agency in 1970—aggrandizes the power of the administrative state at the expense of the judiciary, and denies employers (and employees) a full airing of their cases before an independent arbiter.

[1] *See also* 6 U.S.C. § 1142(c); 12 U.S.C. § 5567(c); 15 U.S.C. § 2087(b); 15 U.S.C. § 2622(b); 15 U.S.C. § 2651(b); 18 U.S.C. § 1514A(b); 21 U.S.C. § 399d(b); 29 U.S.C. § 218C(b); 33 U.S.C. § 1367(b); 42 U.S.C. § 300j-9(i)(2); 42 U.S.C. § 5851(b); 42 U.S.C. § 6971(b); 42 U.S.C. § 9610(b); 46 U.S.C. § 2114(b); 46 U.S.C. § 80507(b); 49 U.S.C. § 20109(d); 49 U.S.C. § 30171(b); 49 U.S.C. § 31105(b); 49 U.S.C. § 42121(b); 49 U.S.C. § 60129(b).

Given these massive advantages to OSHA of adjudicating retaliation claims using its citation and enforcement authority, there would be little reason for the agency to use Section 11(c) to redress retaliation related to injury reporting. OSHA has vaguely suggested that Section 11(c) still has some utility because it provides a "broader range of equitable relief and punitive damages." 81 Fed. Reg. at 29,671. But it is hard to see how that is so. The OSH Act gives the Occupational Safety and Health Review Commission authority to impose substantial civil penalties, 29 U.S.C. § 666, and OSHA's stated basis for promulgating the anti-discrimination provision was to give the agency "a more efficient tool to correct employer policies and practices than the remedies authorized under section 11(c)." 81 Fed. Reg. at 29,627. There is thus little doubt that the 2016 Rule's anti-discrimination provision would largely if not completely displace Section 11(c) as the mechanism for addressing alleged retaliation related to injury reporting.

OSHA principally defends its palpable evasion of Section 11(c) by relying on its obligation to "compile accurate statistics on work injuries" and its authority to require employers to "maintain accurate records of . . . work-related deaths, injuries and illnesses." 29 U.S.C. §§ 657(c)(2), 673(a). As OSHA sees it, more efficient enforcement will lead to more accurate recordkeeping and is therefore "necessary to carry out [OSHA's] responsibilities" under the OSH Act. 29 U.S.C. § 657(g)(2).

But of course, OSHA's concept of the most effective framework for addressing workplace retaliation cannot displace the framework enacted by Congress. The structure of the OSH Act—in particular, Section 11(c)—circumscribes OSHA's rulemaking authority: Congress's creation of a comprehensive remedial scheme for retaliation renders

"implausible" OSHA's "assertion of implicit power to create an alternative to the [OSH Act's] explicit and detailed remedial scheme." *New Mexico*, 854 F.3d at 1226.

OSHA also relies on a Fifth Circuit case addressing OSHA's regulatory standard for "medical-removal-protection" (MRP). *United Steelworkers, AFL–CIO-CLC v. St. Joe Res.*, 916 F.2d 294 (5th Cir. 1990). But that case further undermines OSHA's position. The MRP standard requires employers to temporarily remove from the workplace employees who are exposed to excessive amounts of toxic or hazardous substances, and to pay those employees' salaries and benefits while they are furloughed. *See, e.g.*, 29 C.F.R. § 1910.1025(k).

In *St. Joe Resources*, the Fifth Circuit held that Section 11(c)'s identification of back pay as a remedy for discrimination does not limit OSHA's authority to demand back pay as a remedy for violations of the MRP standard. But that was because the MRP requirements do not "address employment discrimination"; rather, they are "general health and safety provisions" that "redress different misconduct." *Id.* at 298. What follows from *St. Joe Resources*, then, is that when OSHA issues a rule that *does address* discrimination, the agency may *not* deviate from Section 11(c)'s remedial scheme. And that is exactly what OSHA has done here.

In short, the 2016 Rule's anti-discrimination provision "upsets" the OSH Act's "carefully crafted and intricate remedial scheme." *New Mexico*, 854 F.3d at 1226. The provision is therefore void, and OSHA's attempt to restrict post-incident drug testing and incentive safety programs collapses along with it.

II. The Anti-Discrimination Provision Does Not Reach Workplace-Safety Programs Such as Drug Testing and Safety Incentive Programs

Even if Section 11(c) did not bar the 2016 Rule's anti-discrimination provision, the provision cannot reasonably be interpreted to regulate legitimate workplace-safety programs because (1) the provision bans only intentional discrimination, and (2) it was not promulgated pursuant to OSHA's substantive standard-setting authority.

A. Post-Incident Drug Testing and Safety Incentive Programs Are Not Per Se Retaliatory

Because Section 11(c) and the 2016 Rule's anti-discrimination provision reach only intentional discrimination, the rule cannot be interpreted to prohibit broad categories of well-intentioned and legitimate workplace-safety programs.

Section 11(c) prohibits an employer from discriminating "*because of* the exercise by such employee . . . of any right afforded by" the OSH Act. 29 U.S.C. § 660(c)(1) (emphasis added). That "because of" language requires OSHA to prove something about the employer's state of mind—namely, that the employee's protected conduct was the "reason" for the employer's action. *See Gross v. FBL Fin. Servs., Inc.*, 557 U.S. 167, 176 (2009) ("'[B]ecause of' mean[s] 'by reason of: on account of.'"); *Univ. of Texas Sw. Med. Ctr. v. Nassar*, 570 U.S. 338, 350 (2013) ("the ordinary meaning of 'because of' is 'by reason of' or 'on account of'") (quotation marks omitted).

Put in terms often used in Title VII cases, Section 11(c) requires OSHA to prove disparate treatment.[2] *See Ricci v. DeStefano*, 557 U.S. 557, 577 (2009) (disparate treatment occurs "where an employer has 'treated [a] particular person less favorably than others *because of*' a protected trait") (emphasis added). Unlike a disparate-impact claim, which requires only a showing of discriminatory effects, a disparate-treatment claim turns on whether the employer acted with "discriminatory intent or motive." *Id.* To prove a violation of Section 11(c), therefore, OSHA must prove that a particular employee's protected conduct—here, reporting an injury—"actually motivated the employer's decision" to take a particular action with respect to that employee. *Raytheon Co. v. Hernandez*, 540 U.S. 44, 52 (2003).

The 2016 Rule's anti-discrimination provision—even supposing it is validly adopted—requires that same showing of discriminatory motive. Whatever the scope of OSHA's power to alter the procedures for discrimination claims using its recordkeeping authority, that authority cannot extend so far as to allow the agency to expand the OSH Act's definition of discrimination itself. Congress, after all, "does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions—it does not, one

[2] The Supreme Court has held that Congress's use of "because of" does not require proof of disparate treatment if the statute's "text refers to the consequences of actions and not just to the mindset of actors, and where that interpretation is consistent with statutory purpose." *Texas Dep't of Hous. & Cmty. Affairs v. Inclusive Cmtys. Project, Inc.*, 135 S. Ct. 2507, 2518 (2015). But at least the first of those conditions is not met here: Section 11(c) prohibits only employer actions ("discharge," "discriminate"), not any consequences of those actions.

might say, hide elephants in mouseholes." *Whitman v. Am. Trucking Ass'ns*, 531 U.S. 457, 468 (2001).

OSHA recognized as much. In the preamble to the 2016 Rule, the agency said that the rule "incorporates the existing statutory prohibition on retaliating against employees for reporting work-related injuries or illnesses." 81 Fed. Reg. at 29,625; *see also id.* at 29,627 ("the conduct prohibited by" the anti-discrimination provision "is already proscribed by section 11(c)"). And OSHA further acknowledged that good intentions are a complete defense to a retaliation claim: The agency assured employers that conducting drug testing in compliance with state workers' compensation laws would not be actionable because "the employer's motive would not be retaliatory." *Id.* at 29,673.

Yet OSHA strayed from those principles by purporting to categorically ban certain post-incident drug testing and safety incentive programs. OSHA admitted that those programs "might be well-intentioned efforts by employers to encourage their workers to use safe practices." 81 Fed. Reg. at 29,673. As noted above, moreover, employers' drug-testing and safety incentive programs typically turn on *the occurrence* of an injury, not on whether the injured employee (or anyone else) reports the injury for OSHA recordkeeping purposes—if it's a manager who observes and reports the injury, for instance, the program elements are still triggered. Under a disparate-treatment analysis, either of these facts should have conclusively *disproved* the programs' retaliatory nature. Instead, OSHA concluded that it could nevertheless ban those programs based on "concerns about the *effect*[*s*]" of those programs "on injury and illness reporting." *Id.* But that is precisely the

kind of disparate-impact analysis that Section 11(c) and the anti-discrimination provision forbid.

All of this is not to say that OSHA is powerless under Section 11(c) to punish the small minority of employers who may use post-incident drug testing and safety incentive programs to retaliate against employees who report injuries. But it is incumbent upon OSHA to prove in each case that the employer took action "because of" the reporting of the injury rather than because the employer evenhandedly applied a pre-existing and legitimate workplace-safety program. OSHA cannot take a shortcut by branding entire categories of these legitimate programs as per se retaliatory.

B. OSHA Lacks Authority to Issue "Regulations" Banning Workplace-Safety Programs

An independent reason why the 2016 Rule cannot be interpreted to restrict employers' workplace-safety programs is that OSHA expressly disclaimed reliance on its substantive standard-setting authority—the only statutory authority that could conceivably allow OSHA to regulate post-incident drug testing and safety incentive programs. Instead, OSHA relied solely on its modest authority to issue procedural "regulations."

The OSH Act authorizes OSHA to issue two kinds of rules: "occupational safety and health standards" (better known as "standards") and "regulations." 29 U.S.C. §§ 655, 657. Courts have described the difference between them as "roughly [the difference] between substance and procedure." *Steel Erectors Ass'n of Am., Inc. v. OSHA*, 636 F.3d 107, 114 (4th Cir. 2011). Standards are the means by which OSHA "impose[s] substantive legal obligations" on employers. *Id.* The Act gives OSHA fairly broad authority to

promulgate standards that are "reasonably necessary or appropriate to provide safe or healthful employment and places of employment." 29 U.S.C. § 652(8). Before doing so, however, OSHA must "must make 'a threshold finding that a place of employment is unsafe—in the sense that significant risks are present and can be eliminated or lessened by a change in practices.'" *Nat'l Mar. Safety Ass'n v. OSHA*, 649 F.3d 743, 750 (D.C. Cir. 2011) (quoting *Indus. Union Dep't, AFL–CIO v. Am. Petroleum Inst. (Benzene)*, 448 U.S. 607, 642 (1980) (plurality opinion)).

The permissible subjects of OSHA "regulations" are much more limited. The OSH Act does not define that term, but OSHA's authority to issue regulations is housed in Section 8 of the Act, which addresses "[i]nspections, investigations, and recordkeeping," 29 U.S.C. § 657, and Section 24 of the Act, which addresses "[r]eports by employers," *id.* § 673(e). Courts thus have described regulations as "purely administrative effort[s] designed to uncover violations of the Act and discover unknown dangers." *Louisiana Chem. Ass'n v. Bingham*, 657 F.2d 777, 782 (5th Cir. 1981). They "cover such matters as enforcement and inspection—matters that do not change employers' actual legal obligations so much as the enforcement of them." *Steel Erectors*, 636 F.3d at 114. Classic examples include rules requiring employers to maintain records and report information to OSHA. *See Louisiana Chemical*, 657 F.2d at 779 (records access rule); *Workplace Health & Safety Council v. Reich*, 56 F.3d 1465, 1468 (D.C. Cir. 1995) (rule requiring "immediate reporting of information" regarding certain accidents).

In promulgating the 2016 Rule, OSHA invoked only its authority to issue regulations, reasoning that "recordkeeping rules are regulations and not standards." 81

Fed. Reg. at 29,626. That choice necessarily limits the scope of the 2016 Rule, for a court "must judge the propriety of [agency] action solely by the grounds invoked by the agency." *SEC v. Chenery Corp.*, 332 U.S. 194, 196 (1947); *see also Tabor v. Joint Bd. For Enrollment of Actuaries*, 566 F.2d 705, 710 (D.C. Cir. 1977) (*Chenery* applies to rulemaking). In other words, OSHA's decision to forgo its standard-setting authority—including the threshold finding of a significant safety risk—means that the 2016 Rule cannot impose more than the kinds of "purely administrative" burdens that are the proper subjects of OSHA regulations. *See Louisiana Chemical*, 657 F.2d at 782.

OSHA, however, interpreted the 2016 Rule to go well beyond administrative burdens when it purported to ban entire categories of post-incident drug testing and safety incentive programs. Such bans would "impose substantive legal obligations" on employers and "give rise to hefty compliance costs." *Steel Erectors*, 636 F.3d at 114. They are therefore the kinds of substantive constraints that OSHA may impose on employers (if at all) only through its standard-setting authority.

It is no answer that restricting these programs may also have the effect of "improv[ing] the rate and accuracy of injury and illness reporting"—a dubious proposition in its own right. 81 Fed. Reg. at 29,672. OSHA might also wish to improve the accuracy of injury and illness reporting by, say, requiring employers to give rewards to employees who report serious illnesses or injuries or by banning certain tasks that commonly result in unreported illnesses or injuries. But it would turn the statutory scheme inside out to allow OSHA to impose these kinds of substantive obligations on employers based on the incidental effect the obligations might have on recordkeeping accuracy.

Thus, because OSHA expressly disclaimed its standard-setting authority in promulgating the 2016 Rule, the rule cannot be interpreted to restrict post-incident drug testing and safety-incentive programs.

III. If the Anti-Discrimination Provision Does Reach Workplace-Safety Programs, Then the Rule is Arbitrary and Capricious

For the reasons already discussed, the 2016 Rule's anti-discrimination provision is void in its entirety or, at the very least, cannot regulate post-incident drug testing and safety incentive programs. If, however, the 2016 Rule does allow OSHA to regulate those workplace-safety programs, then the rule is arbitrary and capricious under the Administrative Procedure Act because OSHA entirely failed to consider an important aspect of that problem: the costs to employers and employees of modifying these essential programs.

It is a bedrock principle of administrative law that "administrative agencies are required to engage in "reasoned decisionmaking." *Michigan v. EPA*, 135 S. Ct. 2699, 2706 (2015). To satisfy that duty, an agency must consider each "important aspect of the problem" confronting the agency. *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

Unless Congress specifies otherwise, the burdens and costs of an agency's action are an important aspect of the problem that the agency must consider: "Consideration of cost reflects the understanding that reasonable regulation ordinarily requires paying attention to the advantages *and* the disadvantages of agency decisions." *Michigan*, 135 S. Ct. at 2707. Put another way, an agency's action cannot be rational unless the agency

has a basis for concluding that its action will not do more harm than good. *See* Cass R. Sunstein, *Interpreting Statutes in the Regulatory State*, 103 Harv. L. Rev. 405, 493 (1989) ("A rational system of regulation looks not at the magnitude of the risk alone, but assesses the risk in comparison to the costs.").

Here, although OSHA interpreted the 2016 Rule's anti-discrimination provision to prohibit, for the first time, certain drug-testing and safety incentive programs, OSHA claimed that the provision had only "one cost component": the cost of posting a new OSHA poster in the workplace. 81 Fed. Reg. at 29,680. OSHA's cursory analysis failed to account for at least two important and obvious categories of costs.

First, OSHA inexplicably failed to consider whether and to what extent limiting these workplace-safety programs would decrease workplace safety. Several factors—common sense chief among them—should have alerted OSHA that this was an "important aspect of the problem." *State Farm*, 463 U.S. at 43. Commenters told OSHA that these programs are "extremely valuable for enhancing workplace safety and health." Mechanical Contractors Association of America, Comment Letter on Proposed Rule to Improve Tracking of Workplace Injuries and Illnesses 3 (Oct. 13, 2014), https://bit.ly/2JEY8eI.[3] The 2012 GAO Report on safety incentive programs, which OSHA cited in the 2016 Rule,

[3] *See also* National Association of Manufacturers, Comment Letter on Proposed Rule to Improve Tracking of Workplace Injuries and Illnesses 10 (Oct. 14, 2014), https://bit.ly/2WJbvhm (NAM members use "post-accident, post-incident and/or post-injury drug testing" "to create a more safe work environment"); Quanta Services, Inc., Comment Letter on Proposed Rule to Improve Tracking of Workplace Injuries and Illnesses 4 (Oct. 14, 2014), https://bit.ly/2WJc4I0 ("We believe that [safety incentive programs] . . . lead to a safer workplace and fewer employee injuries.").

reviewed three studies finding that safety incentive programs "reduced injuries." GAO Report at 8. And an analysis by Great American Insurance Company submitted to OSHA well before it issued the 2016 Rule demonstrated that employers with safety incentive programs "have significantly fewer serious accidents" than employers without such programs. Comment Letter on Proposed Rule to Improve Tracking of Workplace Injuries and Illnesses 2 (Dec. 7, 2015), https://bit.ly/2JYEqL4.

Yet, despite purporting to impose severe restrictions on post-incident drug testing and safety incentive programs, OSHA did not address the consequences those restrictions would have on workplace safety. For post-incident drug testing, all OSHA could muster was a blithe, passing assertion that its restrictions "likely" would not ban programs that "contribut[e] to workplace safety." 81 Fed. Reg. at 29,673. For safety incentive programs, OSHA did not say a single word on the issue. That defies rationality, particularly for an agency created to promote "safe and healthful working conditions." 29 U.S.C. § 651(b).

Second, OSHA did not consider the substantial costs that employers would have to incur to revise their drug-testing and safety incentive programs in order to comply with OSHA's novel restrictions. When OSHA promulgated the 2016 Rule, the agency was aware that these programs had been widely adopted by employers. The 2012 GAO Report, for example, estimated that as of 2010, "25 percent of U.S. manufacturers had safety incentive programs." GAO Report at 1. And the NAM told OSHA that many of its members have post-incident drug testing policies, which were crafted "in accordance with state workers' compensation laws, as well as the Federal guidance issued through [the Department of Labor] and various other Federal agencies and administrations." National

Association of Manufacturers, Comment Letter on Proposed Rule to Improve Tracking of Workplace Injuries and Illnesses 7, 10 (Oct. 14, 2014), https://bit.ly/2WJbvhm.

It therefore should have been obvious to OSHA that drastically altering the legal landscape for these programs would require scores of employers to spend substantial resources to modify their programs to ensure their compliance with OSHA's new regulatory regime. But OSHA said nothing—again, not one word—that even demonstrated its awareness of this category of costs. Thus, OSHA "entirely failed to consider an important aspect of the problem," and the anti-discrimination provision cannot stand. *State Farm*, 463 U.S. at 43.

CONCLUSION

For the foregoing reasons, the Court should invalidate the 2016 Rule's anti-discrimination provision and clarify that OSHA lacks regulatory authority to ban broad categories of post-incident drug testing and safety incentive programs.

May 24, 2019

Respectfully submitted,

/s/ *Eugene Scalia*

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CERTIFICATE OF SERVICE

I certify that on May 24, 2019, I caused the foregoing to be filed using the Court's CM/ECF system, which will send a notice of the filing to all counsel of record.

/s/ Eugene Scalia
Eugene Scalia

Exhibit 1

VIA ELECTRONIC SUBMISSION

September 28, 2018

Loren Sweatt
Deputy Assistant Secretary
Occupational Safety and Health Administration
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Re: Docket ID No. OSHA-2013-0023, Comments on OSHA's Notice of Proposed Rulemaking on Tracking of Workplace Injuries and Illnesses (RIN 1218-AD17)

Dear Deputy Assistant Secretary Sweatt:

Strategic Comp, a division of the Great American Insurance Group, hereby files its comments on the above-referenced Notice of Proposed Rulemaking.

Strategic Comp focuses exclusively on workers' compensation insurance. As a workers' compensation insurer, we share OSHA's primary goal – to help prevent or reduce workplace accidents resulting in injuries, illnesses, or deaths. In fact, that goal is our passion.

Strategic Comp has insured over 1,300 companies over the past 26 years and has a reputation in the insurance industry as a "turnaround specialist," meaning we have an expertise in insuring employers with poor safety records and working with them to prevent accidents, improve safety records, reduce costs, and save lives. We currently insure 780 mid-size to large employers throughout the United States (averaging more than 400 employees per insured). Our business is not for the faint of heart; we write policies for challenging classes of business – such as foundries, sawmills, and industrial fabricators – and we focus on employers in those classes that, prior to joining our program, had a higher-than-average accident frequency and severity. Using incident-based safety incentive programs tied to workplace injury and illness statistics (hereinafter generally referred to as "Incident-Based Incentive Programs"), we have had tremendous success in making these worse-than-average insureds become better-than-average by improving their workplace safety cultures and reducing their accident frequency and severity.

In 2016, OSHA issued the final rule titled "***Improve Tracking of Workplace Injuries and Illnesses***" (the "Final Rule") that, along with its preamble and subsequently issued guidance, prohibits or significantly limits an employer's ability to use Incident-Based Incentive Programs. In its recently issued NPRM, OSHA stated its desire to amend certain aspects of that Final Rule,

but it disappointingly was silent as to the portion of the Final Rule that impacts Incident-Based Incentive Programs. Because we know that Incident-Based Incentive Programs help reduce severe accidents and save lives, we think the Final Rule's restriction on them was poor public policy and a tragic mistake. We submit these comments to respectfully request that OSHA revise its NPRM to address this important issue.

I. Executive Summary

Strategic Comp's parent company, Great American Insurance Company, is a co-plaintiff in the case of *TEXO ABC/AGC, Inc., et al. v. Thomas E. Perez, et al.*, Docket No. 3:16-cv-1998 (N.D. Tex), which challenges the legality of the Final Rule and alleges, *inter alia*, that OSHA exceeded the scope of its statutory authority in enacting the Final Rule. Strategic Comp hereby incorporates by reference the arguments against the Final Rule set forth in the Complaint in that case.

These comments will not focus on the legal issues involved in that lawsuit. Instead, these comments will explain, in detail, what OSHA overlooked in failing to conduct a balanced and meaningful inquiry into this issue – specifically, the critical beneficial impact of Incident-Based Incentive Programs on workplace safety and health in the United States. Using data from our experience as an expert in this field, we demonstrate that the costs of prohibiting Incident-Based Incentive Programs are enormous, and completely unacceptable, in terms of the increase in the frequency and/or severity of workplace injuries, illnesses and deaths.

Simply stated, when our insureds use Incident-Based Incentive Programs as part of a comprehensive safety program they have fewer serious accidents. A brief summary of our data is provided below:

On pages 6-7, we compare our insureds' large claims frequency before our program to their large claims frequency in the year immediately after joining our program. The evidence suggests that Incident-Based Incentive Programs contributed to a 39% reduction in the frequency of large claims.

On pages 7-9, we highlight the experience of some insureds who dropped their Incident-Based Incentive Programs as a result of the Final Rule and who encountered as much as a 114% increase in the frequency of large claims.

On pages 9-11, we compare our insureds' results to their actuarially predicted results. Our insureds' accident costs were 37% less than actuarially predicted. More importantly, our insureds had 73% fewer "catastrophic" claims than actuarially predicted.[1] The data indicates

[1] For the purposes of these comments, we are referring to claims greater than $475,000 in value as "catastrophic," although clearly that word can apply to claims valued below that level as well.

that the Incident-Based Incentive Programs helped prevent fatalities, paralysis, amputations, and other serious permanent disabilities.

OSHA's stated concern with Incident-Based Incentive Programs is that they have the potential to discourage the reporting of workplace injuries and illnesses, which *could theoretically* lead to the under-reporting of work-related injuries and illnesses. OSHA has never offered any valid data to support this concern, but instead has relied on anecdotes and speculation. In contrast to the anecdotes and speculation relied on by OSHA, our data on pages 11-13 supports the conclusion that Incident-Based Incentive Programs do not result in under-reporting of workplace injuries and illnesses, and instead suggests that Incident-Based Incentive Programs may even enhance injury and illness reporting.

Even if OSHA's concern about Incident-Based Incentive Programs causing under-reporting had some factual basis (which it does not), we believe that, at a minimum, OSHA has an obligation to properly consider and engage the public in an open discussion on whether some theoretically improved accuracy in statistical reporting is more important than the significant reduction in the frequency and severity of injuries achieved through the use of Incident-Based Incentive Programs.[2]

II. Our Experience With Safety Incentive Programs And Why They Work

Our approach to improving an insured's safety record is based on our belief that safety is overwhelmingly a matter of organizational culture – *i.e.*, that safety is "between the ears." In our experience, serious accidents usually happen because of a combination of inadequately addressed physical hazards and unsafe behaviors. We have learned from experience that if we can quickly change a company's culture, the hazards are more likely to be adequately addressed and appropriately controlled, the unsafe behaviors are more likely to stop, and fewer serious accidents occur.

To change a culture, you need owners, managers, supervisors, and employees to all be invested in workplace safety. They must own it individually. So, how do you get everyone in an organization to own safety? How do you get the organization to a point where every person is an active participant in the safety of all? How do you get people in an organization to think proactively about safety rather than just reacting when accidents happen? And, how do you do all of this quickly with sustained momentum?

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[2] In response to our lawsuit and in subsequent guidance on this issue, OSHA has claimed that the Final Rule does not prohibit "all" incentive programs. That may be true, but it is beside the point. The Final Rule, the preamble, and OSHA's guidance clearly threaten the legality of Incident-Based Incentive Programs, and led many employers to drop them. As a result of OSHA's Final Rule, these employers' workplaces are now less safe.

We have found the answer to be Incident-Based Incentive Programs. With a properly designed Incident-Based Incentive Program, employees and supervisors become immediately invested in workplace safety. They are motivated to improve their environment and to police both themselves and others for unsafe behaviors. The result is a sudden and dramatic decrease in accident frequency and severity.

Incident-Based Incentive Programs are not a panacea; rather, they are a catalyst. In combination with a commitment to culture change, Incident-Based Incentive Programs work very well. Although there are many variations of Incident-Based Incentive Programs used by companies, we have learned over our 26 years in business that the most successful Incident-Based Incentive Programs have the following characteristics:

- The Incentive Program should be group-based rather than individual-based to establish the mutuality of interest that is critical to an effective incentive program – *i.e.*, the prize is dependent on the entire group's performance that month, and the prize, if earned, goes to a person or persons randomly drawn from the group (lottery style).

- The Incentive Program should be based on the number of "lost-time" claims (*i.e.*, claims serious enough to make employees miss work) rather than the number of total claims (which include more minor and frequent claims). Because the probability of a medical only (minor) claim is so much higher, an Incentive Program based on total claims is less likely to pay out and build momentum and thus less likely to get the necessary buy-in or commitment from employees.

- The Incentive Program should stress the importance of reporting all claims and should be rolled out in conjunction with a robust light-duty program so that injured workers understand the company wants them to return to work in any capacity approved by their doctor.

- The Incentive Program works best with cash prizes, because employee behavior is most effectively motivated by the opportunity to win a meaningful cash prize. Furthermore, cash prizes that build in value are the most effective. We do not recommend that a single employee ever win much more than $1,000.

- The Incentive Program should be rolled out as part of a broader focus on accountability – *i.e.*, an organizational focus on making sure that: employees do things the right way; managers properly train and monitor their employees; incidents are thoroughly investigated; and claims are reported on a timely basis.

- The company should enthusiastically market the Incentive Program and promote its successes. Positive reinforcement goes a long way towards building a "buzz" around safety.

The following is an example of a typical Incident-Based Incentive Program our insureds use:

ABC COMPANY
EMPLOYEE SAFETY REWARDS

Safety pays off! ABC is going to give away over $10,000 in cash prizes to our employees this year if together we can help stop the accidents that lead to lost-time claims. Here is how the program works. Every month that we go without a lost-time accident, we will draw for cash prizes. The total prizes will start at $200 and increase the longer we go without any lost-time accidents.

No. of Months Lost-Time Claim Free	1st Prize	2nd Prize	3rd Prize
1	200		
2	300	100	
3	400	150	50
4	500	200	100
5 or more	600	250	150

The program starts on October 1. That means if there are no lost-time accidents by November 1, we will draw for a prize totaling $200. If there are still no accidents by December 1, we will draw for prizes totaling $400. If there are no accidents by January 1, we will draw for prizes that total $600. If there are no accidents by February 1, we will draw for prizes that total $800. If there are no accidents by March 1, we will draw for prizes that total $1,000. Every month thereafter that we are lost-time free, we will draw for prizes that total $1,000!

But, and this is the **"BUT,"** if there is a single lost-time claim, then there is no drawing and the next day we will have to start counting all over again at day 1. After one month lost-time claim free, a $200 prize will be drawn.

An accident is "lost time" if the employee does not report to work within 24 hours of the incident or at his next regular shift, whichever is later.

Important: there is absolutely NO PENALTY for reporting a claim. We want ALL claims reported. If you get hurt, we want you to report the injury and seek immediate medical treatment. If your doctor gives you restrictions, we will do whatever we can to accommodate that restriction at work so your claim does not become lost-time.

Remember, safety is up to you. Do not let the company and your fellow employees down.

When one of our insureds implements an Incident-Based Incentive Program like the one described above, the following usually happens:

- Employees become more aware of their behaviors and the behaviors of those around them.

- Employees become more invested in workplace safety – they come up with safety suggestions on their own initiative, they take fewer shortcuts, and they police their fellow employees.

- Safety is talked about more frequently. Employees are proud when they go a month without a lost-time claim. Employee morale increases.

- Employees have significantly fewer severe accidents.

Below, we share some internal data that illustrates how well these Incident-Based Incentive Programs have worked for our insureds. This impact is real, and these programs have improved the health and welfare of our insureds' employees.

III. Supporting Data

A. Our Data Shows that Incident-Based Incentive Programs Help to Reduce the Number of Serious Accidents

We believe so strongly in the effectiveness of Incident-Based Incentive Programs that we typically will not insure an account with a problematic loss history unless we have met with the company's owner or senior management ahead of time and received a commitment that the company will immediately implement one. Given that a majority of insureds come to us with no Incident-Based Incentive Programs and then install them under our watch, we believe that a comparison of our insureds' actual performance after they joined us to their performance before they joined us, as well as to their performance as actuarially predicted by the National Council on Compensation Insurance (NCCI)[3] demonstrates that Incident-Based Incentive Programs significantly reduce the frequency and severity of accidents.

Comparison of Our Insureds' First-Year Performance to Their Prior Performance

NCCI gives every company a score, called an "Experience Modification," that measures the company's history of claims frequency and severity. An "Experience Modification" of 1.00 means that the employer has had a historically average experience within its class of business. An "Experience Modification" greater than 1.00 (or less than 1.00) means the employer has performed historically worse (or better) than a company that is in the same class of business in the same states performs on average.

From 2012 through 2016, we insured 367 new accounts that came to us with an "Experience Modification" greater than or equal to 1.10, which means that each of these account's recent performance before us was at least 10% worse than average. These 367

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[3] Insurance companies report all workers' compensation claims data to NCCI or other state-specific workers' compensation rating bureaus. That data includes each employer's payroll and corresponding claims data by class code (*i.e.*, job type) by state. Throughout these comments, when we refer to NCCI data, we are referring to NCCI data plus the data from the other non-NCCI state-specific workers' compensation rating bureaus.

accounts represent a large book of business – covering over 100,000 employees and over $3.6 billion in insured payroll countrywide. Given the size of the sample, the "before" and "after" data for these accounts, which is noted below, is statistically significant.

367 Accounts with "Experience Modification" >=1.10 Written New in 2012-2016	"Operations Payroll" (in $Millions)	Total # of "Indemnity Claims"	"Indemnity Claims"/$1 Million of "Operations Payroll"
Before[4]	$3,030	2,782	0.92
After	$3,668	2,070	0.56
Difference			**-39%**

Prior to partnering with us, these 367 accounts averaged 0.92 "Indemnity Claims" for every $1 million of "Operations Payroll" insured.[5] In the first year under our program, the frequency of "Indemnity Claims" dropped to 0.56 "Indemnity Claims" for every $1 million of "Operations Payroll" insured. In other words, there was a 39% decrease in the frequency of "Indemnity Claims." The Incident-Based Incentive Programs helped our insureds achieve an immediate and dramatic improvement in their safety cultures and a large reduction in their frequency of serious accidents.

To further illustrate this point, we share below the results of four insureds who discontinued their Incident-Based Incentive Programs in 2016 because of OSHA's Final Rule. In each of these cases, the insured's frequency of serious accidents ***dramatically increased*** immediately after stopping the Incident-Based Incentive Programs.

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[4] The "before" data is the data from two years prior to the year the insured joined us. At the time the insured joined us, we did not have complete data for the one year prior. For example, if we write an account on January 1, 2016, we will have complete data for that insured for 2014 but not 2015.

[5] An "Indemnity Claim" is a claim where the employee either loses time from work or has a permanent impairment or both. "Operations Payroll" refers to the payroll associated with employees who are production or service employees (factory workers, drivers, nurses, etc...) as opposed to administrative, clerical, and sales employees. Because the vast majority of claims are generated from an employer's "Operations Payroll," we use that data set to measure exposure and our results.

1) **Company A – auto parts manufacturer in Georgia (114% increase in frequency since Incident-Based Incentive Programs were removed)**

	Indemnity Claims	Operations Payroll (In M's)	Indemnity Claims/$M Payroll
Used Incident-Based Incentive Programs on our recommendation			
12/1/2013-12/1/2016	**5**	**$23.4**	**.21**
Removed Incident-Based Incentive Programs because of OSHA Final Rule			
12/1/2016-12/1/2017	**4**	**$8.8**	**.45**

2) **Company B – skilled nursing and rehabilitation homes in New York (97% increase in frequency since Incident-Based Incentive Programs were removed)**

	Indemnity Claims	Operations Payroll (In M's)	Indemnity Claims/$M Payroll
Used Incident-Based Incentive Programs on our recommendation			
1/1/2012-1/1/2017	**32**	**$108.5**	**.29**
Removed Incident-Based Incentive Programs because of OSHA Final Rule			
1/1/2017-1/1/2018	**13**	**$22.7**	**.57**

3) **Company C – furniture manufacturer in North Carolina (62% increase in frequency since Incident-Based Incentive Programs were removed)**

	Indemnity Claims	Operations Payroll (In M's)	Indemnity Claims/$M Payroll
Used Incident-Based Incentive Programs on our recommendation			
4/1/2012-4/1/2016	**19**	**$23.4**	**.81**
Removed Incident-Based Incentive Programs because of OSHA Final Rule			
4/1/2017-5/19/2018	**10**	**$7.6**	**1.32**

4) **Company D – sawmill in Georgia (50% increase in frequency since Incident-Based Incentive Programs were removed)**

	Indemnity Claims	Operations Payroll (In M's)	Indemnity Claims/$M Payroll
Used Incident-Based Incentive Programs on our recommendation			
3/1/2012-3/1/2013	**19**	**$58.8**	**.32**
Removed Incident-Based Incentive Programs because of OSHA Final Rule			
3/1/2017-3/1/2018	**5**	**$10.4**	**.48**

Because of OSHA's Final Rule, these four insureds removed Incident-Based Incentive Programs that were clearly working. More employees were seriously hurt as a result.[6]

Comparison of Our Insureds' Actual Performance to Actuarially Predicted Performance

In addition to comparing our insureds' performance with us to their performance prior to being insured by us, we can also compare it to actuarial predictions of how they would have performed. As mentioned above, NCCI (and the non-NCCI state-specific workers' compensation bureaus) collect claims data from every insurance company by class code and by state within each class code. They then compile the data and calculate the expected value of claims, or "Loss Costs," for every class code. The insurance industry can then predict losses for a specific employer by multiplying that employer's "Loss Costs" by the employer's "Experience Modification."

The table below shows our 2012-2016 insureds' actual performance while insured by us, and compares it to their predicted performance as calculated by multiplying their "Loss Costs" by their "Experience Modification." This data represents an even larger book of business than the book of just new business accounts previously discussed – covering over $39 billion in operations payroll – and as before, the results are highly statistically significant.

[6] To further highlight this point, we provide examples of insureds that came to us with high indemnity claim frequencies and, for various reasons, delayed the implementation of Incident-Based Incentive Programs later than we typically desire. These insureds continued their pattern of high indemnity claims frequencies up until the point that they rolled out the Incident-Based Incentive Programs, at which point the indemnity claims frequencies dramatically decreased. *See* examples in Exhibit A.

Losses Predicted By Loss Costs x Experience Modification	$1,358,577,276
Actual "Ultimate" Losses	$857,957,200
Difference	$500,620,076 (37% less)

Our insureds were predicted to generate $1.359 billion in losses over this period. Our insureds actually only had $858 million in "Ultimate" losses.[7] Stated differently, our insureds had $501 million less in losses (37% less) than predicted by the "Loss Costs" times "Experience Modification" calculation. In general, a workers' compensation insurer's actual experience for a large set of insureds runs very close to predicted losses as calculated by "Loss Costs" times "Experience Modification." The above-described differential is truly astounding and cannot be explained by randomness or luck.

Nor can the $501 million differential between actual and predicted losses be explained by under-reporting. Rather, the data we present below suggests that the improvement is overwhelmingly due to a reduction in the number of very large claims, which, given their size and severity, would not (and realistically could not) go unreported.

In addition to predicting an overall dollar amount of claims, NCCI (and the non-NCCI state bureaus) also provide actuarial data that insurance carriers can use to predict the number of very large losses that a book of business should expect to have. According to this data, a book of accounts equivalent in size, class mix, and state mix to our 2012-2016 book was predicted to have 232 claims larger than $475,000.[8] Using actuarially determined "Ultimate" projections of our claims, our book of 2012-2016 had only 62 such claims, a reduction of 170 (73%) from the actuarial prediction.

Actuarially Predicted Losses >$475,000	232
Actual "Ultimate" Losses >$475,000	62
Difference	170 (73% fewer)

[7] It can take 20+ years for an insurer to know the final number and actual cost of workers' compensation claims. However, at any point in time, actuaries can estimate the final amounts. The actuarial term for final is "Ultimate." The $858 million in actual losses described above is the actuarially determined "Ultimate" projection for where the claims will end up 20+ years from now.

[8] We use $475,000, and not $500,000, as a threshold due to technical issues related to the structure of the data we get from NCCI.

The significance of these results cannot be overstated. Claims above $475,000 are not your run-of-the-mill claims. These are the claims that involve significant workplace injuries, including death, brain damage, paralysis, amputation, or other serious permanent disability. It is no surprise to us that the Incident-Based Incentive Programs have the most noticeable impact on the largest claims. As stated earlier, serious injuries are usually the result of (1) an inadequately addressed physical hazard combined with (2) an unsafe behavior. Improving a company's safety culture through the use of Incident-Based Incentive Programs reduces the chance of both happening, which, in turn, results in a multiplicative reduction in the number of serious injuries.

Even if Incident-Based Incentive Programs prevented just one of these injuries from occurring, we would respectfully argue that their benefit outweighs any hypothetical cost of under-reporting. But, the Incident-Based Incentive Programs did not prevent just one claim. The evidence suggests they materially contributed to preventing 170 catastrophic claims. That represents an incredible number of real limbs, lives, and loved ones saved.

B. Our Data Does Not Show Any Evidence that Incident-Based Incentive Programs Cause Under-Reporting, and May Suggest the Opposite

Our data and our experience also suggest that OSHA's hypothetical concern about Incident-Based Incentive Programs causing under-reporting is misguided. Prior to discussing the data, it is important to note that, as a workers' compensation insurer, we are hyper-vigilant about under-reporting. We want all injuries reported promptly so that we can ensure that proper medical care is delivered promptly and so that injured workers understand the claims process from the outset. Unreported injuries, which typically start out as minor, can take a turn for the worse, resulting in unnecessary suffering for the injured employee and ultimately higher costs. In short, claims that are reported timely can be more properly managed. We, therefore, take evidence of under-reporting very seriously.

One way that we monitor for potential under-reporting is by looking at the ratio of indemnity claims to total claims. It is much easier for employees or employers to under-report small/minor claims than the more significant indemnity claims. When an insured is under-reporting small/minor claims, this ratio of indemnity claims to total claims increases and allows us to spot under-reporting. So, for example, if we noticed an account that reported 5 total claims, 3 of which were indemnity (a 60% indemnity/total ratio), we would strongly suspect that the insured was not reporting the smaller claims.

If Incident-Based Incentive Programs caused under-reporting, we would expect to find evidence in our data that our insureds were suppressing the smaller (*i.e.*, more easily

suppressible) claims, thereby inflating the ratio of indemnity to overall claims. Our data shows the exact opposite.

367 Accounts with Experience Modification >=1.10 Written New in 2012-2016	Total # of Claims	Total # of Indemnity Claims	Indemnity/Total
Before	12,198	2,782	0.23
After	9,620	2,070	0.22
Difference			**-6%**

For the 367 first-year accounts with "Experience Modifications" greater than or equal to 1.10 previously discussed above, the ratio of indemnity to total claims went from 0.23 before to 0.22 after – a 6% decrease. The decrease in the ratio is evidence that reporting has actually become slightly better, and certainly challenges any hypothesis that Incident-Based Incentive Programs cause claims to be under-reported.

Another indicator of under-reporting is the lag time between the accident date and the date the claim is reported. When employees or insureds are under-reporting claims, they often do not report the claim to us unless/until the claim develops into something more serious. If our insureds were systematically under-reporting, one would expect to see many claims reported late (after they became more serious and could no longer be hidden), thereby causing our reporting lag to be higher than industry average. Here again, we see the opposite.

% Claims Reported Within Two Weeks of Accident Date (Industry)	82%
% Claims Reported Within Two Weeks of Accident Date (Strategic Comp)	92%

Our 2012-2016 book generated 15,694 indemnity claims. 92% of those claims were reported to us within two weeks of the accident date. This reporting rate is significantly better than the overall industry's average lag-time, which is 82% of indemnity claims reported within

the first two weeks.[9] If the Incident-Based Incentive Programs were, in fact, suppressing injury reporting, we would not, at the same time, find that our insureds engaged in more prompt reporting than the industry average.[10]

To our knowledge, OSHA does not have any valid statistical evidence that suggests, much less demonstrates, that Incident-Based Incentive Programs cause under-reporting. The closest OSHA has ever come to a study on this issue is in a 2013 Report titled, "Analysis of OSHA's National Emphasis Program on Injury and Illness Recordkeeping."[11] The stated purpose of the National Emphasis Program on Injury and Illness Recordkeeping (or "RK NEP") was "to implement enforcement procedures at establishments in selected industries to inspect the accuracy of employer compliance with occupational injury and illness recording and reporting requirements." The RK NEP was initiated in February of 2010 and lasted two years. At the conclusion of the RK NEP, OSHA commissioned an outside group – ERG – to do a study of the data collected by OSHA for that two-year period "and present OSHA with descriptive information and findings on the accuracy of employer compliance with occupational injury and illness recording and reporting requirements." Included in the analysis were the following relevant observations:

- 1,314 employees who worked in a business that had some sort of incentive program were asked whether they believed the incentive program encouraged or discouraged the reporting of injuries. ***There were almost three times as many employees that answered they believed the Incident-Based Incentive Programs encouraged reporting than there were employees who stated they believed the Incident-Based Incentive Programs discouraged reporting – 298 versus 113***. The remaining 903 employees answered that they believed Incident-Based Incentive Programs neither encouraged nor discouraged reporting. [Table 1-7]

- ERG reported that it reviewed OSHA's notes on 303 establishments (192 of which had Incident-Based Incentive Programs and 111 of which had no Incident-

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9 *See* NCCI Research Brief, January, 2015, "The Relationship Between Accident Report Lag and Claim Cost in Workers Compensation Insurance," page 4.

10 While our data relates to workers' compensation claims reporting rather than OSHA incident reporting, we do not believe there is any material difference between the two. As a matter of practice, our loss control representatives compare an insured's OSHA reporting logs to our workers' compensation reports. While we have not conducted a formal study, we have not seen any evidence that employers report a claim to us, but then fail to report that claim to OSHA. If we were to see any evidence of that for an insured, it would be an issue of great concern to us.

11 http://www.regulations.gov/#!docketDetail;D=OSHA-2013-0023.

> Based Incentive Programs), and they found one or more cases of an unreported incident in 33% of the accounts with Incident-Based Incentive Programs versus 25% of the accounts without Incident-Based Incentive Programs. [Table 1-6] ERG notably did not draw any conclusions from this data, presumably for two reasons. First, ERG's data did not control for other variables. For example, it is probable that most of the 192 accounts with Incident-Based Incentive Programs also had post-injury drug testing programs. ERG's study, therefore, was inconclusive as to whether the effect, if any, came from the existence of the incentive program or the drug-testing program. Second, given the small sample size, the difference between the 33% and 25% was within the margin of error. ***Stated differently, there was not a statistically significant difference between the "with incentive" establishments and the "without incentive" establishments***. ERG seemed to acknowledge this in its conclusion when it stated, "Between establishments that did or did not have a special program in place, the percents are fairly close for those where not-recorded cases were found." (Page 40).[12]

Nowhere in the study does (or could) ERG conclude that Incident-Based Incentive Programs cause under-reporting. Furthermore, we are struck by the fact that all of the previous OSHA audits have concluded that the overall reporting rate amongst U.S. employers is very high.[13] In other words, OSHA has not only manufactured a hypothetical cause of a problem (Incident-Based Incentive Programs cause under-reporting) – it has also manufactured the problem (under-reporting).

IV. Testimonials

Our data and conclusions are further supported by the input provided to us by several current insured-employers who share our concerns about a rule that prohibits or significantly limits the use of Incident-Based Incentive Programs. They authorized us to share their names and thoughts in these comments. Below are excerpts of letters from a few of these insureds.[14]

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[12] It is also worth mentioning that the data set reviewed in the ERG report was skewed to begin with. All of the establishments reviewed had been previously targeted by OSHA for reporting violations.

[13] *See* Workplace Safety And Health – Enhancing OSHA's Records Audit Process Could Improve the Accuracy of Worker Injury and Illness Data, GAO-10-10 (October 2009); OSHA Data Initiative Collection Quality Control: Analysis of Audits on CY 2006 Employer Injury and Illness Recordkeeping, Final Report, November 25, 2009, Prepared by: ERG.

[14] The full letters are attached as Exhibit B.

"In December 2015, Owen Steel will celebrate 1,000 days without a lost-time incident in our Columbia plant…. No pun intended – this achievement was no accident…. To regain control of the safety culture, we decided to make our employees our partners, not our adversaries. We adopted a simple safety incentive program…. To be clear, the safety incentive alone did not change the safety culture – we also modified housekeeping and PPE protocols, added educational and awareness programs, invested in newer and better equipment, and did more risk prevention analysis. But the most important piece – getting buy-in from employees to look out for themselves and for each other – was locked up by the incentive program."

David Zalesne, President of Owen Steel Company in Columbia, SC

"We attribute [our] significant improvement mostly to the safety incentive program that your team help us put in place. This program was implemented in such a way that it has encouraged our people to report even minor injuries. This program is more than just awarding money for no lost time injuries. This program puts safety on the minds of all of our employees. They think about safety because we put it in front of them daily. Safety is discussed by each department before the start of every shift. Every 30 days there's an event where safety is discussed with the entire plant and a small prize is distributed to a few employees for everyone's accomplishments. We've fostered a competitive spirit among teams and across shifts to see who can go the longest without a loss time injury. Because of these habits our employees are working much smarter and safer…. We strongly believe that Strategic Comp has helped change the culture at Lyons Industries for the better by developing habits that promote a safe work environment. The small prize that is awarded periodically is just 'icing on the cake.' When each team is successful, everybody wins. This is clearly seen in the attitudes and teamwork of our employees."

Lance Lyons, President of Lyons Industries, Inc. in Dowagiac, MI

"[W]e became very concerned about the number of workers' compensation accidents we were experiencing …. We entered into a business relationship with Strategic Comp in 2012 to … advise us on how to bring our losses under control. As part of the plan we created and implemented a Safety Incentive Program for our employees that has produced outstanding results. Our program promotes the reporting of all accidents no matter how small so they can be investigated by our internal safety committee…. We have made great progress in three years …. [Our Experience Modification] went from a high of 1.93 to 1.67 which we are expecting to drop even lower due to 2015 results. The program has made our employees more safety aware and has fostered a team effort towards our goal of making Deep South Equipment Co. a safer place to work."

John M. Parsons, Deep South Equipment Company in New Orleans, LA

V. Conclusion

OSHA has no basis to conclude that there is a significant under-reporting of recordable cases under Part 1904. In other words, there is no problem to be addressed.

Furthermore, OSHA has no basis to conclude that Incident-Based Incentive Programs suppress reporting of workplace injuries and illnesses.

Finally, even if there were a significant under-reporting of work-related injuries and illnesses, and even if it could be established that Incident-Based Incentive Programs caused under-reporting, it was contrary to sound public policy to regulate them without first analyzing whether their benefits – in terms of a reduction in the frequency and/or severity of work-related injuries, illnesses and deaths – outweigh their costs. We have provided persuasive data to demonstrate the significant benefits of Incident-Based Incentive Programs.[15]

If OSHA committed the necessary resources to study this issue, we are confident that OSHA would find what we have found – that Incident-Based Incentive Programs greatly reduce the number of serious accidents and injuries, illnesses, and deaths, which, of course, is the reason for OSHA's existence. The existence of a few anecdotes suggesting that some employers have used Incident-Based Incentive Programs to discourage injury and illness reporting cannot justify banning, or significantly limiting, the use of such an invaluable tool, which our experience and data have shown to be critical and incredibly effective in preventing accidents.

For all these reasons, we respectfully request that OSHA withdraw all aspects of the Final Rule, including its preamble and subsequently issued guidance, that purport to authorize OSHA to restrict or prohibit employers from utilizing Incident-Based Incentive Programs. OSHA should specifically withdraw and disavow any characterization of such programs as discriminating or retaliating against employees based upon their reporting of workplace injuries. OSHA should also withdraw and disavow any provision that purports to authorize OSHA to issue citations against employers who use Incident-Based Incentive Programs in the absence of employee complaints of actual discrimination pursuant to Section 11(c) of the OSH Act.

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[15] We also recommend that OSHA review the following study which also concluded that the positives of Incident-Based Incentive Programs far outweigh any negatives. *See* Paul M. Goodrum and Manish Gangwar, ASSE Foundation Research, "Safety Incentives: A Study of Their Effectiveness in Construction" (concluding that safety incentives led to a statistically significant reduction in lost-time injuries and noting that 75% of surveyed employees cited either "increases alertness," "safer work place," or "reducing accidents" as primary benefits to Incident-Based Incentive Programs, whereas only 4% pointed to hiding injury as a negative consequence) (full paper attached as Exhibit C).

Respectfully submitted,

Strategic Comp, a Division of the Great American Insurance Group

Jason Cohen, Divisional President

Exhibit A

Exhibit A

Example 1: "Company A" – a commercial bakery located in New Jersey.

In the five years prior to joining Strategic Comp, "Company A" averaged 1.46 indemnity claims per $ million of operations payroll. "Company A" did not use safety incentive programs during this time.

Strategic Comp began insuring "Company A" on October 1, 2011, but "Company A" did not implement incentives right away. "Company A" got off to a rough start and had a similar indemnity frequency for the first 5 months of our coverage. "Company A" finally implemented a safety incentive program on March 1, 2012. Since that time, "Company A's" indemnity claim frequency has dropped by over 50%.

"Company A"	Indemnity Claims/$ Million Operations Payroll
5 years before Strategic Comp (10/2006 to 10/2011)	1.46
5 months with Strategic Comp but without incentives (10/2011 to 2/2012)	1.24
3 years 9 months with incentives (3/2012 to 11/2015)	0.61

Example 2: "Company B" – a battery manufacturer located in Missouri.

In the five years prior to joining Strategic Comp, "Company B" averaged 0.94 indemnity claims per $ million of operations payroll. "Company B" did not use safety incentive programs during this time.

Strategic Comp began insuring "Company B" on March 31, 2013. For the first 16 months under our coverage, "Company B" did not use incentive programs. While "Company B's" indemnity frequency did decrease as compared to the 5 years prior to our coverage, "Company B" was not satisfied. It implemented a safety incentive program on August 1, 2014. Since that time, "Company B's" indemnity frequency has dropped 80% compared to the pre-Strategic Comp years.

"Company B"	Indemnity Claims/$ Million Operations Payroll
5 years before Strategic Comp (3/2008 to 3/2013)	0.94
16 months with Strategic Comp but without incentives (4/2013 to 7/2014)	0.64
16 months with incentives (8/2014 to 11/2015)	0.15

Exhibit B

Owen Steel Company
Columbia, SC | Wilmington, DE

Safety Incentives – An Owen Steel Success Story

In December 2015, Owen Steel will celebrate 1,000 days without a lost-time incident in our Columbia plant. That's **more than 1,000,000 hours** fabricating heavy steel, with no time lost to work-related injuries. No pun intended -- this achievement was no accident.

Several years ago, we made a commitment to a Culture of Safety. Of course, we always had rules and toolbox meetings. But as poor habits crept into the culture, injury hazards followed. Managers issued write-ups for violating safety rules, but that "discipline-first" approach was not working. From the employees' perspective, it was generally perceived as arbitrary, irritating, and mostly "too little too late" to prevent injuries.

To regain control of the safety culture, we decided to make our employees our partners, not our adversaries. Instead of handing out write-ups for violations, we decided to hand out cash for their commitment to working safely. We adopted a simple safety incentive program: For every month without a lost-time incident, we bring everyone together at the end of a shift and draw names – one entry for about every 15 employees. The employees whose names are drawn each get an envelope with cash – a token of appreciation for another safe month. Meanwhile, "scoreboards" installed around the plant count down the days to the next safety drawing – and track the increasing number of days with no lost time incidents.

To be clear, the safety incentive alone did not change the safety culture – we also modified housekeeping and PPE protocols, added educational and awareness programs, invested in newer and better equipment, and did more risk prevention analysis. But the most important piece – getting buy-in from employees to look out for themselves and for each other – was locked up by the incentive program.

Of course, we still have occasional incidents – we record all first-aid reports internally, and also refer about 25 claims per year to our comp carrier, ranging from minor bumps and cuts to ER visits for stitches or an eye-wash. But because of the safety culture and procedures, these incidents have all been relatively minor, and none has resulted in an employee losing work time for 1,000 days.

Myron Samuels, Safety Manager (803-251-7660)
David Zalesne, President (803-251-7565)

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Mr. Patrick Cary
Strategic Comp
P.O. Box 1445
Alpharetta, GA 30009

Patrick,

I wanted to share with you the success we've had with Strategic Comp's safety incentive program. As you know Lyons Industries manufactures fiberglass bathtubs, showers and kitchen sinks. Currently, we have 175 people working over two shifts. In the year prior to Strategic Comp becoming our worker's compensation insurance carrier we had a total of 76 lost time claims. The year before that was 72. In our first policy year with you that number dropped to 36. This year, six months into our policy year, the number of claims stands at 6. We attribute this significant improvement mostly to the safety incentive program that your team help us put in place.

This program was implemented in such a way that it has encouraged our people to report even minor injuries. This program is more than just awarding money for no lost time injuries. This program puts safety on the minds of all of our employees. They think about safety because we put it in front of them daily. Safety is discussed by each department before the start of every shift. Every 30 days there's an event where safety is discussed with the entire plant and a small prize is distributed to a few employees for everyone's accomplishments. We've fostered a competitive spirit among teams and across shifts to see who can go the longest without a loss time injury. Because of these habits our employees are working much smarter and safer.

We continue to educate our employees that when an injury happens, no matter how "minor", that they must bring it to their supervisor's or HR's attention immediately. If they need to go to the doctor, they know they can go without affecting the incentive program as long as they return to work the next day, even with restrictions. Our employees know that not reporting an injury is a serious offense, punishable by termination as stated in our employee handbook. Our supervisors work very closely with their teams and they quickly know if something is wrong, or if an injury happened. Everyone on the team knows that it's better to be "safe than sorry".

We strongly believe that Strategic Comp has helped changed the culture at Lyons Industries for the better by developing habits that promote a safe work environment. The small prize that is awarded periodically is just "icing on the cake". When each team is successful, everybody wins. This is clearly seen in the attitudes and teamwork of our employees.

Thank you again for all that Strategic Comp has done to change our culture!

Regards,

Lance D Lyons

Lance Lyons
President

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December 3, 2015

Office of Management and Budget

Gentlemen,

As a safety conscience company we became very concerned about the number of workers' compensation accidents we were experiencing and the deterioration of our EMR (experience modifier rate). We entered into a business relationship with Strategic Comp in 2012 to handle our workers' compensation insurance and advise us on how to bring our losses under control. As part of the plan we created and implemented a Safety Incentive Program for our employees that has produced outstanding results. Our program promotes the reporting of all accidents no matter how small so they can be investigated by our internal safety committee. Based on their findings adjustments can be made to work procedures to prevent injuries from happening in the future. We have made great progress in three years going from 20 recordable injuries in 2011 down to 6 in 2014. Our EMR went from a high of 1.93 to 1.67 which we are expecting to drop even lower due to 2015 results.

The program has made our employees more safety aware and has fostered a team effort towards our goal of making Deep South Equipment Co. a safer place to work.

Sincerely Yours,

John M. Parsons
President

Exhibit C

ASSE Foundation Research

Safety Incentives

A study of their effectiveness in construction

By Paul M. Goodrum and Manish Gangwar

A GREAT DEAL OF UNCERTAINTY exists regarding the effectiveness of safety incentive programs in construction. Most research on incentives involves case studies and theoretical analyses of their advantages and disadvantages. Using primary survey data from construction firms and craftworkers, this article examines the impact of incentives on the safety performance of U.S. construction firms. The study found that incentives are effective at improving many of the safety performance metrics used in construction. However, differences exist within the industry regarding perceptions of their effectiveness.

The performance of the construction industry has a tremendous effect on the U.S. economy. According to the U.S. Bureau of Economic Analysis, when one includes construction-related business involving design, equipment and materials manufacturing and supply, the construction industry accounts for 13 percent of the nation's gross domestic product (GDP), making it the largest manufacturing industry in the U.S. Unfortunately, the construction industry does not achieve this performance without significant cost to the safety and health of the workforce. According to NIOSH, 13.3 workers per 100,000 in construction were injured in 2001. Furthermore, the total number of U.S. fatalities in private construction in 2001 was 1,225—one-fifth of all workplace fatalities in the U.S.

Since the inception of OSHA in 1971, the safety performance of all U.S. industries has improved. According to the Bureau of Labor Statistics, the number of fatalities in construction alone has been reduced by half. This improvement is attributed to many industry efforts, such as adopting safer technologies, improved work methods, better training and more thorough accident investigations.

Another measure some construction firms take to improve safety is the use of safety incentives. However, a great deal of debate surrounds the ability of incentives to improve not only safety but also other construction performance measures. In particular, there is concern about the viability of incentives as a provider of substantial long-term improvements (Prichard).

Paul M. Goodrum, Ph.D., P.E., *is an assistant professor in civil engineering at the University of Kentucky, where he teaches undergraduate and graduate courses in construction engineering and project management. Goodrum has worked professionally in industry in both design and heavy construction. His areas of specialty include construction productivity, applied technologies and construction safety.*

Manish Gangwar *is a graduate student at the University of Kentucky, where he is pursuing a master's degree in construction management. Gangwar worked in construction for five years before enrolling at the university.*

Literature Review

Much has been written about the advantages and disadvantages of safety incentive programs. Proponents claim that worker behavior is affected by prevailing conditions and events. Behavior can be reinforced by positive feedback and discouraged by negative consequences (Geller 35). Furthermore, it is believed that incentives in the form of reward encourage and promote safe behavior and eventually improve safety performance (Geller 34; Sims).

Skeptics argue that safety incentive programs do not provide long-term improvement of safety (AFL-CIO). They question the motivation provided by these programs, since working safely already delivers significant intrinsic benefits to workers. Critics believe that attributing improved safety performance to incentives is misleading, since anecdotal evidence suggests these improvements diminish or even fall below original levels once the incentive programs end (Geller 34).

Another major concern is that these programs do not actually improve the safety behavior targeted, but merely change the reporting of incidents; incentive programs may cause employees to not report accidents so that they can qualify for awards. Indeed, OSHA has addressed the concern of inaccurate accident reporting due to incentives in its Voluntary Protection Programs (VPP) policies and procedures manual. "The on-site evaluation [of a company's safety incentive program] will focus on the incentive program's potential impact on the accuracy of reporting injury and illnesses data" [OSHA(b)].

In 1998, OSHA worked with Dennison Associates, an independent agency, to review the performance of safety incentive programs across multiple industries. This study examined the results of 27 different research projects on safety incentive programs

that existed from 1971 to 1987 among U.S. companies [OSHA(a) 10-15]. Incentive programs were divided into two main categories: 1) programs that reward improved safe work practices; and 2) programs that reward reductions in the number of injuries and illnesses reported [OSHA(a) 4-6]. The report found that all programs reviewed under these categories shared some improvement in safe work practices but not all safety-related work practices improved in all studies [OSHA(a) 7]. The study found no direct link between safety incentive programs and the reported number of injuries.

Forms of Safety Incentive Programs

Safety incentive programs can be divided into two categories: 1) injury/illness-based incentive programs; and 2) behavior-based incentive programs.

Injury/Illness-Based Programs

Injury/illness-based safety incentive programs are based on the number of injuries and/or illnesses as a criterion to reward workers and crews. Individuals or groups are rewarded for avoiding or lowering accidents during predefined periods. These programs work on the underlying assumptions that: 1) facilities and equipment are safe and do not cause any accidents; 2) workers have proper training and knowledge to use equipment; and 3) accidents are primarily the result of worker negligence or compromise on safety (Smith 44).

One problem with this approach is that it directly equates prizes with a number of injuries (Krause 28). Injury/illness-based programs present the temptation for workers to not report an injury so they will not lose individual incentives or be the reason that the whole group does not receive an award (Geller 37; Flanders and Lawrence). Another concern is that these programs may become trivial and hard to discontinue in the long-run because workers can view incentives as an entitlement; discontinuation may cause significant negative impact (Smith 44).

Injury/illness-based incentive programs may also provide false feedback and cause mistrust between workers and management (Krause and McCorquodale 34; Prichard; Smith 44). For example, suppose a crew makes a substantial effort to avoid injuries, yet unfortunately experiences an accident. As a result, this crew will not receive an incentive. Meanwhile, another crew that makes no effort to avoid injury may manage to do so and, thus, may still receive a reward.

Behavior-Based Programs

Behavior-based safety incentive programs observe worker behavior as a criterion for awarding incentives. Examples of rewarded behavior include participating in safety meetings and training; offering suggestions about how to improve jobsite safety; and other behavior that can help prevent accidents. Although such programs solve the problem of erroneous feedback and improve attendance in meetings and training, their effectiveness is still questioned. To address this problem, some sites gauge program effectiveness through regular tests and by providing two-way feedback.

These programs also help eliminate injury hiding by removing a direct link between an award and the number of accidents reported. Behavior-based observation can also provide data about equipment and facilities that put workers at risk for injury.

A downside of behavior-based incentive programs is that they are comparatively difficult to measure and monitor because employee behavior is inherently more complex and difficult to gauge (Geller 39). In addition, employee behavior changes constantly in reaction to external factors such as new facilities, new equipment and new workgroups.

Other Issues with Safety Incentive Programs

In both types of incentive programs, motivation is a critical factor. Positive reinforcement, feedback, and recognition and reward are considered the four major components for motivation in an incentive program (Daniels). Positive reinforcement, which means anything that increases the desired behavior, is considered the weakest and most misunderstood link (Geller 37; Daniels). Positive reinforcement can be a small gift or simple praise. Everyone has different likes and dislikes, which change over time, making reinforcement even harder to identify (Daniels). Another important point about effective positive rein-

Statistics Terms

Pearson Correlation

The correlation between two variables shows the degree to which the variables are related. Pearson correlation ranges from +1 to -1, where +1 represents a perfect linear correlation between the variables and -1 represents a perfectly inverse linear relationship between the variables. Zero denotes there is absolutely no linear relationship between two variables.

P-Value/Significance Value

P-value—sometimes called the significance value—represents the probability of getting something as rare or extreme as the given result. Therefore, the lower the probability, the less chance there is that two samples are from the same population. Statistically, a P-value of less than 0.05, which is five percent, is considered acceptable to reason that the discrepancy between two samples is assumed to be a result of two different populations, or, in other words, that two samples represent two different population groups with different measured characteristics.

ANOVA

Analysis of variance (ANOVA) determines the probability that two or more samples were drawn from the same parent population. The purpose of an ANOVA is to verify that the means of a measured variable for two or more samples are different enough to not have occurred by chance. In other words, if the group means do not differ significantly, it is inferred that the independent variable(s) did not have an effect on the dependent variable. The key statistics in ANOVA are the degrees of freedom (df) and the F-value that are used to identify the significance value.

Chi-Square analysis

Chi-square is a non-parametric test of statistical significance for cross-tabular or discontinuous data. Like the F statistics in ANOVA, the chi-square indicates the degree of confidence one can have in accepting or rejecting a hypothesis. Chi-square statistics, along with the degree of freedom, provide similar information about nominal data—whether they belong to one group or to two different groups of dissimilar characteristics.

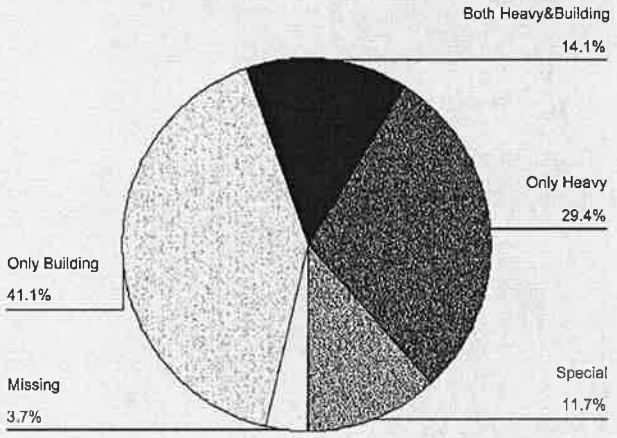
Table 1

Breakdown by State

State	Total Responses	Percentage
Kentucky	35	21.21
North Carolina	25	15.15
Tennessee	20	12.12
Ohio	16	9.70
Georgia	16	9.70
Virginia	16	9.70
Indiana	15	9.09
Florida	11	6.67
Alabama	7	4.24
Others	4	2.42

Figure 1

Breakdown by Work Type



forcement is that it should immediately follow the desired behavior, which is why positive reinforcement should be a daily affair (Daniels; Geller 38; Hinze 84). Ideally, peers are in the best position to deliver positive reinforcement.

To provide positive reinforcement, incentives can be awarded in different forms. Efficient incentives need to have more personal value than a significant dollar value. The dollar value of incentives is unimportant as long as the incentive is meaningful and a positive reinforcer to the worker (Toft). In addition, incentives should be distributed separately from normal compensation (Opfer). Many successful programs rely on low-cost gifts with high perceived value for this very reason. Leboeuf identified 10 categories of incentives: 1) recognition; 2) time off; 3) stock ownership; 4) special assignments; 5) advancement; 6) increased autonomy; 7) training and education; 8) social gatherings; 9) prizes; and 10) money (Sims; Toft). Some experts suggest that an incentive preceded by a celebration gives worker the opportunity to relive the event and further reinforce the behavior (Geller 37). Incentives and rewards should be specified and should be perceived as achievable (Geller 39). Finally, incentives should be based on long-term progress rather than on short-term achievement (Opfer).

Who will be rewarded is also an important consideration. Some have found that everyone who meets the criteria should be rewarded (Geller 39; Opfer). This gives workers a sense of belonging and makes them feel they are part of the safety initiative. Furthermore, incentives should be based on absolute criterion rather than competition to avoid unnecessary rifts among workers and crews (Opfer). It is also believed that it is better to reward many participants rather than an individual (Geller 38; Opfer). Likewise, a group should not be penalized for the failure of an individual's action (Geller 38). This is reflective of the belief that safety is a team effort and individuals do not cause accidents. Rather, accidents are the collective failure of the group. Most importantly, safety incentives are not a panacea to improve safety. Others have found that incentives cannot work without a comprehensive safety program that addresses training, culture, drug testing and other critical elements (Opfer; Hinze 82; Trahan).

Table 2

Differences in Annual Volume of Work, 2001

	Number of Companies	Mean Volume	F-Value	Significance	Pearson Correlation
With SIP	85	$101 mil	4.82	0.03	-0.18
Without SIP	54	$21 mil			

Note: SIP denotes safety incentive program.

Study Methodology

Clearly, significant differences of opinion exist on the effectiveness of safety incentives. The quantified effect of incentive programs on construction safety performance remains uncertain. Also, little is known about how different implementation schemes of safety incentives affect their performance. Furthermore, little is known about the effectiveness of safety incentives based on the perceptions and experiences of construction craftworkers. This article examines the effects of safety incentive programs on construction safety performance using industry data. First, differ-

ences in safety performance data between construction firms with safety incentive programs and those without are analyzed. Then, the impact of different implementation schemes is assessed. Finally, craftworkers' experiences with these programs are examined.

Table 3

Objectives Behind Implementing an SIP

Objective	Primary (3)	Secondary (2)	Tertiary (1)	Total Weight
To change workers' behavior	37	26	15	178
To improve workers' awareness	29	37	9	170
To reduce recordable accidents	21	11	21	106
To minimize losses	4	5	20	42
To minimize safety-related claims	1	7	9	26
To maintain good safety records	3	2	12	25

Data Collection

A great deal of previous research on safety incentives is based on anecdotal evidence. To collect empirical data on the use of safety incentives and company safety performance, two surveys were developed: a managers' survey and a craftworkers' survey. The managers' survey was designed for company safety directors and other SH&E professionals in charge of their company's programs. This survey examined how companies administered their safety incentive program, safety performance data, and the perceptions and experiences that each company had with its incentive program. The craftworkers' survey was administered only to workers who were currently employed by a construction firm that used safety incentives. This survey examined their personal experiences and perceptions of participating in a safety incentive program.

Table 4

Safety Performance Based on 2001 SIP

	With SIP		Without SIP				
	Mean	N	Mean	N	df	F-Value	Sig.
Lost-time workday incidence rates	1.45	81	4.99	56	136	9.35	0.00
Restricted workday incidence rates	1.26	74	2.53	54	127	3.65	0.06
OSHA recordable incidence rates	4.20	79	5.46	54	132	1.68	0.20

Note: Sample size does not equal 165 due to nonresponse.

Research Sample for Managers' Survey

In the process of creating the managers' survey, an extensive literature review was performed. Based on previous findings and the research objectives, a pilot survey was created and administered to three general contractors in Kentucky and Tennessee. Their comments and suggestions were incorporated into the actual survey. Next, the managers' survey was administered by mail to several construction firms in the Midwest and southeastern U.S. Of the 165 surveys received, 22 percent were collected from contractors in Kentucky; 14 percent from North Carolina; 12 percent from Tennessee; 10 percent each from Ohio, Georgia and Virginia; and the remaining 22 percent from Indiana, Florida, Alabama, Illinois, West Virginia, Michigan, Missouri and Texas (Table 1).

In 2001, the average number of workers for the sampled companies was 199. Fifty percent of the companies had less than 67 workers in 2001, and 10 percent had more than 368 workers. Of the 165 sampled companies, 42 percent were engaged in only building construction, 29 percent were involved in heavy construction, 14 percent were involved in both heavy and building construction, and 12 percent were specialty contractors (Figure 1).

Survey results were coded into SPSS (statistical analysis software) for detailed statistical analysis. Frequency tables, box plot, chi-square and analysis of variances (ANOVA) were used to analyze the survey results (see sidebar on pg. 25).

Research Sample for Craftworkers' Survey

The second survey was a one-page survey for construction craftworkers of companies with safety incentive programs. The researchers contacted six construction firms in Kentucky, Ohio and Tennessee who agreed to administer and return the completed survey. To help protect respondent anonymity, the survey requested no information regarding the respondent or his/her employer. The total sample size for this survey was 252 workers. The mean years of experience in the construction industry of all workers surveyed was 16.14. Fifty percent of the workers had less than 15 years of construction experience, and 10 percent had more than 31 years of construction experience.

Measures of Safety Performance

To quantify the effectiveness of safety incentive programs, four different measures of safety performance were collected in the managers' survey:

1) **OSHA recordable cases.** Cases when workers, due to an injury/illness sustained at work, must visit a doctor for more than first aid.

2) **Lost-time workday cases.** Cases when workers, due to an injury/illness sustained at work, are

Table 5

Differences in Performance Change Based on 2000 SIP

	With SIP Mean	N	Without SIP Mean	N	df	F-Value	Sig.
Lost-time workday incidence difference between 2001 and 1999	-1.02	60	1.41	55	114	4.82	0.03
Restricted workday incidence difference between 2001 and 1999	0.53	57	0.80	54	110	0.15	0.70
OSHA recordable incidence difference between 2001 and 1999	-0.92	61	-0.18	53	113	0.74	0.39

Table 6

EMR for Different Years Based on SIP

	With SIP Mean	N	Without SIP Mean	N	df	F-Value	Sig.
2001 EMR with SIP implemented in 1999	0.773	53	0.849	62	114	6.05	0.02
2001 EMR with SIP implemented in 1998	0.760	41	0.844	74	114	6.69	0.01
2001 EMR with SIP implemented in 1997	0.734	36	0.851	79	114	12.74	0.00
2000 EMR with SIP implemented in 1998	0.763	40	0.861	72	111	6.25	0.01
2000 EMR with SIP implemented in 1997	0.730	35	0.870	77	111	10.53	0.00
1999 EMR with SIP implemented in 1997	0.764	34	0.890	69	102	3.81	0.00

Table 7

Differences in Change of EMR Based on Various Timeframes for SIP

	With SIP Mean	N	Without SIP Mean	N	df	F-Value	Sig.
Difference in EMR between 2001 and 1997 with SIP 1997	-0.039	29	-0.008	56	84	0.04	0.50
Difference in EMR between 2001 and 1998 with SIP 1998	-0.022	34	-0.047	56	89	0.41	0.52
Difference in EMR between 2001 and 1999 with SIP 1999	-0.025	48	-0.043	54	101	0.34	0.56

not able to perform work fully or partly; this is a subset of total OSHA recordable cases.

3) **Restricted workday cases.** Cases when workers are not able to work to their full capacity due to an injury/illness sustained at work, and are assigned a lower workload; these cases are part of lost-time workday cases.

4) **Experience modification rate (EMR).** EMR is primarily used to establish workers' compensation (WC) insurance premium rates. EMR calculations are based on each employer's compensation claim experience over its last three years as compared to the average of the industry. EMR takes into account the number of accidents as well as the severity of cases. The managers' survey also collected total employee hours from each company; this allowed recordable, lost-time and restricted incidence rates to be calculated for each company using the following equation:

$$\text{Incidence rate} = \frac{\text{Number of cases} \times 200{,}000}{\text{Total employee hours per year}} \quad (1)$$

Data Analysis

Breakdown of Companies With & Without Safety Incentive Programs

Of the 165 companies sampled, 59 percent had a safety incentive program in 2001 and 41 percent did not. The mean safety incentive program was 5.87 years old. Fifty percent of the companies that had an incentive program had the program for less than four years, while 10 percent of the companies with a safety incentive program had used the program for more than 12 years. Significant correlation was found between the annual volume of work and safety incentive programs. Companies with a safety incentive program also had a substantial and statistically significant larger mean volume of work compared to those with no incentive program. Those with an incentive program had a mean volume of work of $101 million compared to $21 million for companies without a safety incentive program (Table 2). An F-value of 4.82 shows the difference in work volume to be statistically significant.

To begin to understand the motivation of why construction companies implement a safety incentive program, the managers' survey asked each respondent whose company had such a program to rate six objectives, in order of pref-

erence, for implementing the program. The objectives were to: 1) reduce recordable accidents; 2) improve safety awareness among workers; 3) change workers' behavior to adopt safer work practices; 4) maintain good safety records; 5) minimize safety-related claims; and 6) minimize losses. Table 3 shows the number of companies rating each objective as primary, secondary and tertiary.

To identify the three most preferred objectives for implementing a safety incentive program, different weights (3 for primary, 2 for secondary and 1 for tertiary) were assigned to the number of responses for each objective. For example, 21 companies weighted "to reduce recordable accidents" as their primary objective; 11 companies weighted the same as their secondary objective; and 21 companies weighted the same as their tertiary objective. Therefore, the total weight for this criterion was (21 x 3) + (11 x 2) + (21 x 1)=106 (Table 3). Based on this calculation, the top three objectives for implementing a safety incentive program were to:

1) change worker behavior to adopt safer work practices;

2) improve safety awareness among workers;

3) reduce recordable accidents.

As seen, many companies use a safety incentive program not only to reduce accident rates but also to have an impact on worker behavior. By changing worker behavior and safety awareness, safety performance should improve. The next section of the analysis examined whether this expectation is actually being achieved.

Effectiveness of Safety Incentive Program in Terms of Various Safety Performance Indicators

To estimate the impact of incentives on safety performance, the lost-time, restricted and recordable rates were compared between companies that did and did not have a safety incentive program in 2001 (Table 4). Among the 137 companies that indicated their lost-time workday incidence rates, a significant difference was seen in the mean lost-time workday incidence rates between companies with and without a safety incentive program in 2001. Companies with a program had a mean lost-time incidence rate of 1.45 compared to 4.99 for those without a program, which was statistically significant with an F-value of 9.35 (Table 4).

Of the 128 companies that indicated their restricted workday incidence rates, there was also a difference in mean restricted workday incidence rates between companies with and without a safety incentive program in 2001. The mean restricted workday incidence rate in 2001 for companies with a safety incentive program was 1.26 compared to 2.53 for those without such a program. The difference was statistically significant at the 94 percent confidence interval with an F-value of 3.65 (Table 4).

Finally, of the 133 companies that indicated their OSHA recordable incidence rates, a difference was found in mean OSHA recordable incidence rates.

Table 8

Differences Due to Crew or Worker Performance

Performance	Worker Only Mean	N	Crew* Mean	N	df	F-Value	Sig.
Lost-time workday incidence 2001	1.27	35	1.68	38	72	0.31	0.58
Restricted workday incidence 2001	1.09	31	1.34	35	65	0.32	0.58
OSHA recordable incidence 2001	4.08	33	4.14	38	70	0.00	0.96
EMR 2001	0.79	32	0.81	32	63	0.20	0.66

**Workers and supervisors*

Table 9

Differences Due to Measuring Criteria

	Injuries Mean	N	Behavior Mean	N	Both Mean	N	Sig.
Lost-time workday incidence 2001	1.24	30	1.57	25	1.77	18	0.84
Restricted workday incidence 2001	1.39	27	0.80	21	1.74	18	0.27
OSHA recordable incidence 2001	5.06	29	4.06	24	3.88	18	0.63
EMR 2001	0.84	27	0.79	22	0.78	15	0.51

Table 10

Differences Due to Incentive Period

	Less than One Month Mean	N	Monthly to Quarterly Mean	N	More than Six Months Mean	N	Sig.
Lost-time workday incidence 2001	1.07	26	1.34	21	1.99	30	0.52
Restricted workday incidence 2001	1.07	22	1.68	19	1.04	29	0.43
OSHA recordable incidence 2001	3.81	25	5.51	21	3.66	29	0.32
EMR 2001	0.796	22	0.829	18	0.813	28	0.85

The mean rate of companies with a safety incentive program was 4.20 compared to 5.46 for companies without a program. However, the difference was only statistically significant at the 80 percent confidence interval with an F-value of 1.68 (Table 4).

Safety incentives cannot work without a safety program that addresses training, culture and other critical elements.

Change in Safety Performance from 1999 to 2001

To identify whether safety performance changed differently over time as a result of safety incentive programs, differences in the change of various incidence rates from 1999 to 2001 were compared between companies with and without a safety incentive program in 2000. (Year 2001 was the latest incidence rates available for the study. Year 2000 was chosen to ensure that affects of a safety incentive program were reasonably reflected in the 2001 data.)

For companies that had such a program in 2000, the mean lost-time workday incidence rate from 1999 to 2001 decreased by 1.02, representing a decline of 44.16 percent from the 1999 mean lost-time workday incidence rate of 2.31. In comparison, for companies without a safety incentive program in 2000, the mean lost-time workday incidence rate from 1999 to 2001 increased by 1.41, representing an increase of 41.84 percent from the 1999 lost-time workday incidence rate of 3.37. The differences were statistically significant with an F-value of 4.82 (Table 5).

However, the mean restricted workday incidence rate from 1999 to 2001 increased for both categories of companies. For companies that had a safety incentive program in 2000, the increase was 0.53, representing an increase of 29.43 percent from the 1999 mean restricted workday incidence rate of 1.80.

For companies with no safety incentive program in 2000, the increase was 0.80, representing an increase of 55.96 percent from the 1999 mean restricted workday incidence rate of 1.43. However, the differences in incidence rates were not statistically significant with an F-value of only 0.15 (Table 5).

Furthermore, the mean OSHA recordable incidence rates for companies with a safety incentive program from 1999 to 2001 reduced by 0.92, representing a decline of 15.78 percent from the 1999 mean OSHA recordable incidence rate of 5.83. In comparison, the mean OSHA recordable incidence rate for companies with no safety incentive program from 1999 to 2001 reduced by 0.18, a decline of 3.08 percent from the 1999 mean OSHA recordable incidence rate of 5.84. The differences in OSHA recordable incidence rates were also not statistically significant with a F-value of 0.74 (Table 5).

Next, the research examined differences in EMR. Since EMR reflects a three-year average of a company's safety performance, EMR for particular years was compared with respect to when each company's safety incentive program was implemented in previous years (Table 6). The mean 2001 EMR for companies that implemented a safety incentive program in 1999 was 0.773 compared to 0.849 for companies with no incentive program in 1999, a difference of 0.076. This difference was statistically significant with an F-value of 6.05.

The difference in EMR between companies with and without a safety incentive program increased with the age of the program. The 2001 EMR for companies that implemented a safety incentive program

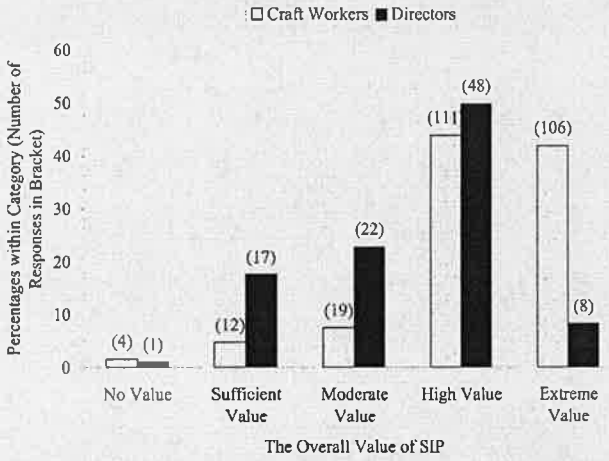
Table 11

Differences Due to Award Type

Award Type	Tangible Mean	N	Both Mean	N	df	F-Value	Sig.
Lost-time workday incidence 2001	1.13	54	2.35	24	77	2.73	0.10
Restricted workday incidence 2001	1.04	50	1.87	21	70	2.94	0.09
OSHA recordable incidence 2001	3.93	53	5.24	23	75	1.30	0.26
EMR 2001	0.82	46	0.78	24	69	1.04	0.31

Figure 2

Perceptions about SIPs: Overall Value

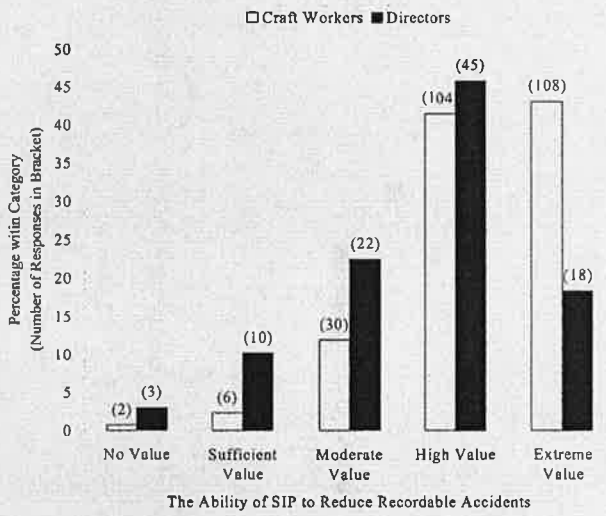


Note: Chi-square value of difference is 52.75 with 4 df and a P-value of 0.00.

in 1997 was 0.734 compared to 0.851 for companies that had not implemented a safety incentive program in 1997, a difference of 0.117. In fact, firms with a safety incentive program consistently had a lower and statistically significant different EMR for all other time periods examined in the study (Table 6). The study then examined whether changes in EMR were related to the use of a safety incentive program. As Table 7 shows, there was no statistically significant difference in EMR changes between 1997 and 2001 for the companies studied. For example, the mean EMR decreased by 0.039 for those with a safety incentive program as compared to a decrease of 0.008 for those without such a program. This difference was not statistically significant with an F-value of 0.04.

Figure 3

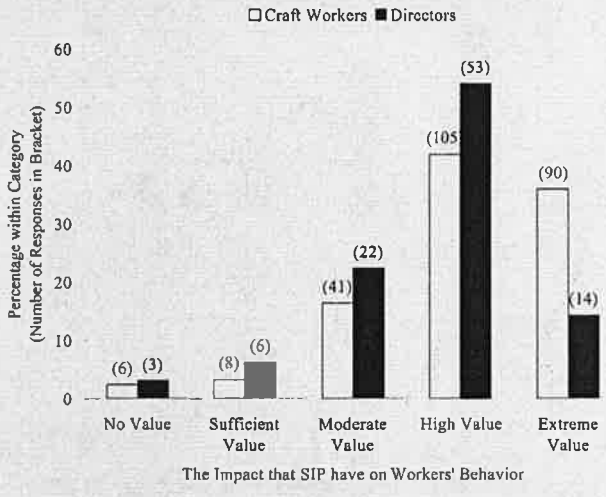
Perceptions about SIPs: Reducing Accidents



Note: Chi-square value of difference is 29.27 with 4 df and a P-value of 0.00.

Figure 4

Perceptions about SIPs: Impact on Worker Behavior



Note: Chi-square value of difference is 16.41 with 4 df and a P-value of 0.00.

Descriptive Statistics of Companies with a Safety Incentive Program

To assess whether differences existed regarding how safety incentives are implemented, the research examined differences in safety performance among just those companies that had a safety incentive program in 2001. The research examined several factors to determine whether they made any difference in safety measures among those companies with a safety incentive program: 1) who received incentives; 2) which type of incentives (injury- or behavior-based) were used; 3) the time period for awarding incentives; and 4) the type of award presented.

Forty-six companies—46.9 percent of those with a safety incentive program—evaluated only individual worker performance as an award criterion for the program. However, 44 companies—45 percent—evaluated whole-crew performance to award safety incentives. Meanwhile, eight companies—8.2 percent—did not respond to this question. The research examined whether differences existed based on who received incentives. Although companies that awarded incentives to workers only had slightly lower ratings, none of the differences were statistically significant (Table 8).

Thirty-eight companies—38.8 percent of those with a safety incentive program—based their program on injuries only, while 28 companies—28.6 percent of those with an incentive program—based their safety incentive program on behavior only. Twenty-three companies (23.5 percent) based their program on both injuries and behavior. However, nine companies, 9.2 percent of the companies with a safety incentive program, did not respond to this question (Table 9). There appeared to be little to no relation in accident rates and whether award criterion was based on injuries or behavior. Various incidence rates and EMR for 2001 were not statistically different for companies that measured injuries, behavior or both (Table 9).

Craft workers have a more favorable opinion regarding the effectiveness of safety incentives than do safety directors.

Next, the research examined whether the time period during which incentives were awarded made any difference. Of 98 companies reported to have a safety incentive program in 2001, 30.6 percent awarded incentives each month; 26.5 percent rewarded employees quarterly to bi-annually; and 36.7 percent rewarded employees bi-annually or less often. Furthermore, 6.1 percent of the participants did not respond to this question. Again, various incidence rates and EMR for 2001 were not statistically different among companies with different timeframes for awarding safety incentives (Table 10).

The research also examined whether the type of award—tangible versus intangible—made any difference. Sixty-six companies (67.3 percent of those with an incentive program) awarded tangible items such as cash, lottery, gifts and prizes. No company reported to award only intangible items such as trophies, certificates, time off and parties. However, 29 companies (39.6 percent) awarded both tangible and intangible awards (Table 11).

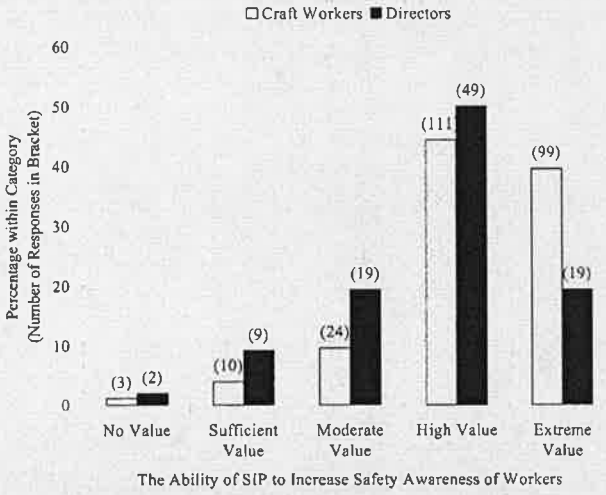
Companies that distributed only tangible awards had lower lost-time and restricted workday incidence rates than those which distributed both tangible and intangible awards. Firms that gave only tangible awards had a mean lost-time incidence rate of 1.13 and a restricted incidence rate of 1.04 compared to 2.35 and 1.87, respectively, for companies that also gave intangible awards. The statistical significance for both these differences was at or above the 90 percent confidence level (Table 11). Although companies that gave only tangible awards also had lower recordables and EMR, these differences were not statistically significant.

The managers' survey collected additional data about whether companies had other incentive programs (outside of safety); whether safety performance evaluation of supervisors was linked to safety incentives; whether a safety incentive program was changed after its inception; who attended award ceremonies; and who received incentives. For companies that had a safety incentive program in 2001, 49 percent had other incentive programs, compared to 43.9 percent with no other incentive program (7.1 percent did not respond to the question). In addition, 72.4 percent of companies with a safety incentive program in 2001 linked supervisor's performance to safety incentives, compared to 22.4 percent that did not (5.2 percent of companies with a safety incentive program did not respond).

In addition, 61.2 percent had changed their safety incentive program since it started, in comparison to 35.7 percent that had not altered their program since its inception (3.1 percent of companies with a safety incentive program in 2001 did not respond to this question). The study also examined whether the size of the incentive—as measured by its cost—had an impact on its effectiveness. In this sample of safety incentive programs, no such relation was found.

Figure 5

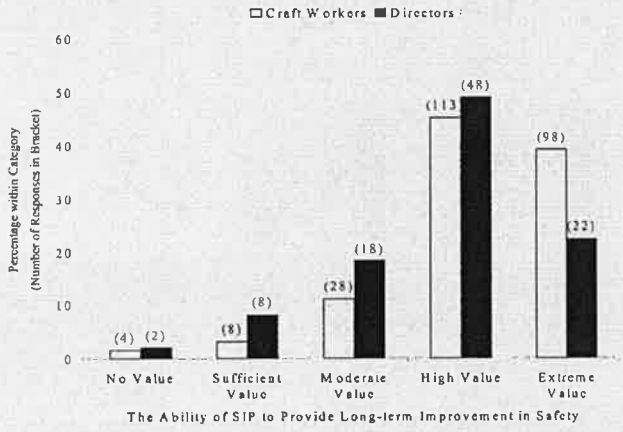
Perceptions about SIPs: Increasing Safety Awareness



Note: Chi-square value of difference is 18.13 with 4 df and a P-value of 0.00.

Figure 6

Perceptions about SIPs: Long-Term Improvement



Note: Chi-square value of difference is 12.55 with 4 df and a P-value of 0.01.

Of those with a safety incentive program in 2001, 10.2 percent awarded safety incentives to their workers only; 11.2 percent awarded safety incentives to everyone but workers; 13.3 percent awarded safety incentives to workers and foremen only; 62.2 percent awarded safety incentives to everyone—workers, foremen, superintendents, safety personnel, field engineers and even managers in some cases. None of the cited factors influenced safety performance, which was measured in terms of OSHA recordable cases, lost-time workday cases, restricted workday cases and EMR, of the companies surveyed in a statistically significant way.

Figure 7

Craftworkers' Perspective of SIPs: Advantages

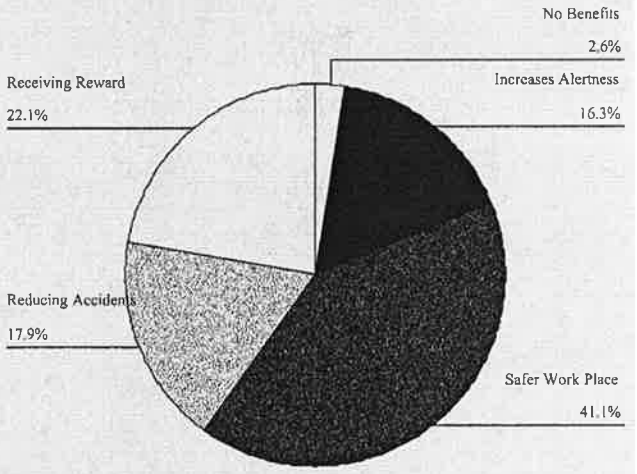
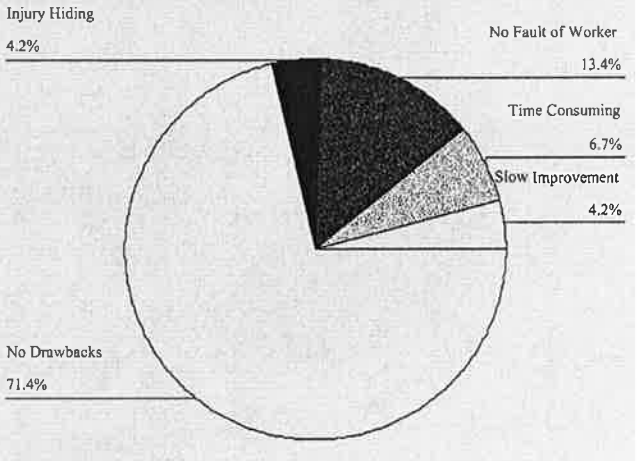


Figure 8

Craftworkers' Perspective of SIPs: Disadvantages



Management & Craftworker Perceptions

The study also examined differences in opinion between management and workers about various issues regarding safety incentive programs. The surveys asked 165 company safety directors and other management personnel, as well as 252 craftworkers, their opinions on: 1) the overall value of a safety incentive program; 2) its ability to reduce recordable accidents; 3) its impact on worker behavior; 4) the program's ability to increase safety awareness among workers; and 5) its ability to provide long-term improvements in safety (Figures 2-6).

Overall, craftworkers have a more favorable opinion regarding the effectiveness of safety incentives than do safety directors and other managers who oversee the programs. For example, 42 percent of surveyed craftworkers indicated there was an extreme overall value in safety incentive programs compared to five percent of surveyed SH&E managers. Craftworkers had a greater overall value of safety incentive programs than was perceived by management in charge of the programs. The difference was significantly different with a chi-square value of 52.76 with 4 degrees of freedom and a P-value of 0.00.

Likewise, workers' perception about the ability of safety incentive program to reduce recordable incidence rates was more positive than that of management. The difference was significantly different with a chi-square value of 29.27 with 4 degrees of freedom and a P-value of 0.00. Workers' perception about a program's ability to change their safety behavior was also more positive than management's perception. This difference was significantly different with a chi-square value of 16.41 with 4 degrees of freedom and a P-value of 0.00.

Employees' perception about the programs' ability to increase safety awareness among workers was more positive than management's. The difference was significantly different with a chi-square value of 18.13 with 4 degrees of freedom and a P-value of 0.00. Finally, workers' perception about the ability of safety incentives to improve long-term safety performance was more positive than was management's perception. Again, this difference was significantly different with a chi-square value of 12.55 with 4 degrees of freedom and a P-value of 0.01.

Advantages & Disadvantages of Safety Incentive Programs: Worker Perceptions

To further examine the experience that workers have with safety incentive programs, craftworkers were asked to identify both advantages and disadvantages of

working under a safety incentive program. The most popular advantage was making the workplace safer—indicated in 41.1 percent of total responses. This was followed by receiving the award as a benefit in and of itself (22.1 percent); reduction in accidents (17.9 percent); and increase in safety alertness (16.3 percent) (Figure 7).

Meanwhile, workers identified the most popular disadvantage as the fact that many accidents—and the resulting loss of incentive—are not the fault of workers themselves, but are the result of factors beyond their control. In addition, 6.7 percent believed safety incentive programs consume too much of a worker's time and slow production; 4.2 percent believed the programs are a slow way to improve safety; and 4.2 percent believed that these programs increase nonreporting of accidents (Figure 8). Meanwhile, 71.4 percent of surveyed craftworkers said that the use of safety incentive programs posed no disadvantages.

Conclusions

As a result of these findings, the following conclusions can be drawn.

1) Among the companies surveyed, those that have a safety incentive program have lower lost-time incidence rates, restricted incidence rates and EMRs compared to companies that do not.

2) There is some indication, as measured by differences in lost-time incidence rates, that the companies with a safety incentive program experienced a greater improvement in safety between the studied periods 1997 and 2001 compared to the companies with no safety incentive program.

3) Rewards based on crew versus individual performance, injury versus behavior performance and different time periods for giving the awards made no difference in effectiveness of the programs among the sampled companies. However, companies that used only tangible awards versus those that used both tangible and intangible awards had slightly better safety performance measures.

4) Craftworkers have a more favorable opinion of the effectiveness of safety incentive program than do company mangers.

5) While craftworkers recognize that safety incentive programs have some disadvantages, most feel there are no drawbacks and believe their greatest advantage is improving jobsite safety.

While these findings support the use of safety incentive programs to improve jobsite safety, such a program should not exist by itself. Instead, it should be part of an overall comprehensive SH&E program that not only involves workforce training but also engineers safety into the construction process. The study found that safety is improved by the use of incentives based on traditional outcome measures. The study did not examine the impact of safety incentives on worker behavior during the construction process. This is worthy of future research and could be accomplished by incorporating behavior-based safety measures. ■

Practical Applications

It is evident that companies which want to reduce their experience modification rates, lost-time workday incidences and restricted workday incidences can use safety incentive programs successfully. The study also found that various other factors, such as injury- or behavior-based incentive programs, period of incentives and kind of awards, do not change the effectiveness of safety incentive programs in a significant way. It was also found that craftworkers have a much more positive reaction to incentives than do their managers. While safety incentive programs do lead to awards being given to craftworkers, most craftworkers think that the greatest advantage of these programs is the improvement in jobsite safety.

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