

**The Self-Regulated Workplace:
Joint Worker-Management Governance of Occupational Safety and Health**

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Introduction

This is a report on a set of 8 site visits to workplaces that have joint labor-management committees that are charged with improving health and safety conditions. These workplaces have adopted an informal, associational approach to health and safety regulation, as opposed to one that is driven only by regulatory standards and the threat of sanctions.

The purpose of these visits was to identify best practices in the institutional design and the operation of such committees. The work sites were not selected as a scientific sample of all workplaces with and without committees, but rather were selected on the basis of suggestions, from the labor and business communities, of committees that had been around for some time and were believed to be functioning well. All of the work sites, we found, have engaged in extensive hazard abatement activity, mainly undertaken by the committees themselves. However, this study does not attempt to demonstrate (although we do believe) that committees are an effective mechanism for improving workplace safety and health conditions. To show this, one would have to study both workplaces with committees and those without, and we have not done this.

We have the more modest goal of simply identifying some features of committees that seem to be working well and appear to be contributing to hazard abatement. We did, however, note that we did not encounter any committee member at any of our sites that felt that committees were not an effective mechanism. Despite the lack of a control group, we observed committees doing positive things to improve health and safety, which led us to believe they were effective mechanisms.

The OSHA Record

Why are we considering a new mechanism for regulating health and safety in the U.S? Simply put, we are doing so because of the common view of scholars that the federal Occupational Safety and Health Administration (OSHA), and the way it has been regulating up to now, has been at best a disappointment, and at worst a failure.

McGarity and Shapiro, who were asked to write a book by the Administrative Conference of the United States evaluating OSHA, concluded that OSHA had failed to meet its early promise (McGarity and Shapiro, 1993). They note that the progress that was made in OSHA's first decade was reversed by the Reagan administration, which initially appointed administrators which were hostile to OSHA's mission.

They are also disappointed with the pace of OSHA's rulemaking, both in terms of the number of rules promulgated and in terms of the speed at which each rule is made. For instance, they note that OSHA has set standards for only a small portion of compounds found in the workplace that are known to be carcinogens. For instance, as of 1986, over 2000 compounds were suspected human carcinogens, but only 20 of these were regulated by full OSHA standards.

McGarity and Shapiro look at the U.S. safety and health record and find it lacking, as compared with other countries. For instance, they note that Germany (on the high end) has a workplace fatality rate which was (in 1986) 70.4 percent of the U.S. rate. Japan (on the low end) has a rate which is only 30 percent of that of the U.S. Other major industrialized countries are intermediate between these rates; all have lower rates than that of the U.S.

Noble (1986) agreed with McGarity and Shapiro that OSHA's record was not particularly good. He attributed OSHA's failures to the statist/legalistic mode of regulation (see below) that he associates with liberal (as opposed to radical) politics, and maintained that only an associational approach would be truly effective.

Why the Associational Approach to Regulation?

There are three basic approaches to regulation, which one might term the market-liberal, statist/legalistic, and associational/informal approaches.

In the market-liberal approach, a laissez-faire public policy is pursued, and firms are allowed to do as they choose, providing workplaces that are as safe and healthful as the labor market will bear. This policy is usually modified by allowing parties or classes of parties injured by externalities to sue (using the concept of a tort, an injury to persons or property, from the common law), or by creating a market in which producers of a negative externality trade the rights to produce it, in some total quantity determined by the state. This latter approach is appropriate with respect to pollution but would not be acceptable with respect to worker illness and injury, since no one would openly accept a fixed level of illness and injury; all parties claim that they are constantly trying to reduce this.

Note that this market-liberal approach is often thought of as "deregulation" or the absence of regulation. However, if the right to sue for tort damages in the case of injury remains, the market/liberal approach can be thought of as a mode of regulation, since the state is involved in providing the forum for

the redress of grievances, and the force that backs up the order of a judge or jury. One cannot have the proper functioning of markets without the state to enforce property rights, and torts can be thought of a way of maintaining property rights; the courts have the ability to “make whole” any damages to persons or property by requiring the payment of money damages. Nevertheless, the market/liberal approach is often thought of as the absence of regulation. (Some define regulation as occurring only before-the-fact; if this is the case, then torts are not a mode of regulation, but they are still a legal regime.) Only anarchy would be the complete absence of regulation.

The second approach, the statist/legalistic one, is the one followed by the several major U.S. regulatory agencies established in the early 1970s, such as the Environmental Protection Agency (EPA) or OSHA. Standards are set by a central authority, and companies are expected to conform to these standards. Small armies of inspectors and lawyers are set up to enforce the standards. If companies do not comply with the standards, they can be liable for fines and/or injunctive relief. Typically, proceedings against companies are undertaken first in administrative forums; if satisfaction is not obtained there, there is typically a route of appeal into the courts.

The third approach, the associational/informal approach, also relies on standards, but the method of enforcing them is different. Firms are required by the state to set up joint labor-management committees, whose mission is to monitor standards and work collectively to reduce the problems that are the targets of the regulation, i.e. levels of pollution or workplace hazards. Both management and labor representatives are given some training in the area of regulation concerned, in order to facilitate their participation on the committee. Disputes within the committee are handled as they are in a collective bargaining agreement, by mediation or binding arbitration. Intervention by state regulators and the courts is used only as a last resort.

The statist/legalistic mode of regulation has led to many colossal failures, such as massive illegal emissions and worker deaths. The reason for these failures is simple: a system that is based on policing requires massive numbers of police to work, and Congress has not committed the resources for these police, nor would it be practical to do so, given the large number of firms to be policed. Also, the policing approach is generally directed at detecting failures and imposing penalties. There is no significant emphasis on prevention.

The situation is similar to that found in health care. Many observers feel that one of the positive features that health maintenance organizations (HMOs) have brought to health care in the U.S. is a renewed emphasis on preventative care. It makes more sense to prevent an illness before it occurs than it does to treat it after it occurs, and it is usually less expensive. Similarly, if joint committees can make workplaces safer and prevent accidents, this will be more effective than the occasional fine imposed for unsafe conditions, on the rare occasion that OSHA sends an inspector to examine a worksite. Effectively, committees “deputize” in every workplace a new cop-on-the-beat, the worker herself.

While federal regulatory agencies have created standards for the safe use of equipment and chemicals, the number of production processes to be regulated, in a complex economy like that of the U.S., is astronomical. In order to adequately police all the firms and to promulgate enough standards to keep up with the rapid change in production processes, regulatory agencies would have to be much bigger than they are. Given the overall deregulatory mode that the Federal government has been in since the Carter years, this is a political impossibility. Even if it were possible, it might not be desirable, because of the costs, both to the government, and to industry and the economy as a whole.

Because of the failures of the statist/legalistic mode, many scholars and policy-makers are looking with interest at the associational/informal approach. The associational approach, however, faces a major political hurdle; since the U.S. has been historically highly committed to the market-liberal approach, the idea of “interfering” with the operations of vast numbers of firms in order to achieve regulatory goals is foreign and is easily resisted. In addition, since firms themselves have only contradictory commitments to regulation, desiring to comply in order to avoid penalties, but also to avoid complying in order to lower costs, they are likely to resist any effort to embed regulatory institutions within themselves. They give a variety of arguments against this associational approach. One of their arguments is that health and safety matters are better handled by professional staff, rather than relatively untrained committees. Another is that committees are only necessary in more hazardous workplaces; some workplaces, they argue, such as offices, are relatively free of hazards (compared to, say, a construction site), and committees in such less-hazardous sites are a waste of time and money.

Another reason why the associational approach has difficulty in the United States is found in labor law. The National Labor Relations Act, in section 8(a)(2), forbids the formation of company-sponsored or

dominated employee associations. This has discouraged the formation of systems for employee representation that are outside the conventional collective bargaining system, and it has tended to preserve conventional hierarchical management systems within firms and has discouraged firms from experimenting with worker self-management. However, there are indications that the U.S. labor movement may be willing to accept a legal exception to 8(a)(2) in the area of joint committees for health and safety, provided that some guarantees are put in place that worker representatives on such committees will be independent from management.

Management, on the other hand, may resist the establishment of committees because they create a precedent for worker democracy in the firm and may be the first step on a slippery slope toward a firm which is controlled by its workers in areas other than health and safety.

Rees (1988), among others, has noted that the attitude of the Federal government to regulation has changed. The 1960s raised the general level of consciousness of social problems, including problems such as unsafe roads, workplaces, and unsafe air. This consciousness led to the establishment of such regulatory agencies as OSHA, EPA, and the Consumer Product Safety Commission in the early 1970s. A business-led backlash against this new regime led to the first deregulatory moves in the Carter administration. Deregulation accelerated under Reagan, who often appointed officials to lead these agencies that were hostile to their mission. This trend moderated in the later Reagan years, and under Bush, and has moderated even more under Clinton. But even under Clinton, the climate is nothing like that of the early 1970s. Political elites (although not the public) are hostile to regulation. Rees suggests that if the pendulum is swinging back in the other direction, we may not see a swing back to the statist/legalistic approach, but rather to some variant of the associational approach. Rees creates a typology of associational approaches, depending on whether the system is total or partial, and whether it is voluntary or mandatory. He uses the term “self-regulation”; thus we have “mandated partial self-regulation,” “mandated full self-regulation”, and “voluntary self-regulation”. Rees points out that in all societies, a good deal of the regulatory apparatus lies not in the written statute but in the rules and norms of institutions in society. This is a view of power that is similar to that of Durkheim or Foucault, in that power is embedded in the norms of institutions, and the behavior patterns of participants in them, rather than in explicit directions from one actor to another.

Another reason why we would want to turn to an associational approach, as opposed to the current statist/legalistic one, is for efficacy. Much as economies become more productive if there is greater investment in workers' education and skills, workplaces become more safe and healthful the more education that the workforce is given on health and safety. For instance, many office workers do not use their computers properly, in that they work too long without breaks, and sit improperly. This can lead to hand and back problems, which are common in the workforce today. Some simple education on ergonomics can vastly reduce these problems, even without expenditure on additional equipment. The beauty of the associational model is that institutions are created within the firm that exist to promote the regulatory goal. These institutions, since they are, to some degree, democratic (typically having elected rank-and-members as well as management members), need to promote education in order to function properly. Any law that mandates committees should therefore mandate some ongoing training for committee members. In addition, such training will likely be focussed on the industry in question, creating a group of people, over time, within the firm who are familiar with health and safety issues in that industry. This is likely to produce positive effects. Because of unrealistically steep discount rates on future utility, information problems, transaction costs associated with changing jobs, and uncertainty, workers and firms are not likely to invest in gathering this information on their own. They might learn to do so if they were playing a repeated game, but injury and illness (of a particular kind) is often a one-time event.

Experience with the Associational Approach

Several countries, U.S. states, and provinces within countries throughout the world have adopted an associational approach to the enforcement of safety and health regulation.

One such program is the Cooperative Compliance Program (CCP) established in the California construction industry by OSHA (CAL-OSHA, the state branch), described in Rees (1988). This was a joint program between firms, unions, and OSHA itself. Instead of the "cop-on-the-beat" approach normally taken by OSHA, a more cooperative relationship was established. There were significant drops in the accident rate after the CCP program was established, and both participants in the program, and Rees himself, attributed these drops to the CCP. Rees uses this success to promote his idea of "regulatory pluralism", which involves a willingness to consider alternatives to traditional rule promulgation and penalty-based enforcement, and an admission that one regulatory strategy will not suit all situations.

Rees explores the reasons that he believes led to the success of the CCP. The CCP consisted of two main elements: a joint labor-management committee and a compliance officer assigned by CAL-OSHA to work with the safety department and the committee. Rees believes that the existence of OSHA enforcement as a credible threat and a source of legitimacy strengthened the hand of safety officers and engineers within the firm, and created another source of legitimate authority beyond the traditional lines of authority. This, in turn, made the committee effective, because only if the committee operates with legitimacy can it enforce any of its decisions, either informally or formally. For Rees, both the “carrot” of cooperation and the “stick” of possible penalties are necessary; it is the latter that helps induce cooperation. A similar situation exists with the committees that we are studying herein; without the threat of OSHA enforcement and penalties, the committees will not be taken as seriously. Thus the distinction that we drew earlier between the associational/informal mode of regulation, and the statist/legalistic one, need not be stark; I believe the best system is a mix of the two.

Many business interests want to substitute voluntary, cooperative compliance for the current system, which involves penalties in some cases (a small fraction). If you look at committees or other institutions as a source of legitimate power, where their legitimacy increases their power, than it is clear that some fear of penalty needs to be retained.

The Study

The study was carried out jointly by Meridian Research, a private research organization, and the Center on Wisconsin Strategy (COWS). It was partly motivated by a proposed bill in Congress that would have mandated committees in some workplaces.

Initially, 5 sites were visited, in 1994. Three of them were sites of the same large multinational company recommended to us by our business contact group, Organization Resources Counselors, which is a lobbying group concerned with labor/management issues. The multinational company had adopted committees as part of its health and safety strategy. Another 3 sites were selected through Meridian Research’s contacts in the labor movement.

After 5 sites had been visited, funding for the project was pulled. The Republican takeover of the House in fall of 1994 made passage of a bill mandating committees extremely unlikely. Meridian Research withdrew from the study. However, COWS decided to complete the study on its own, visiting three

additional sites, all recommended by sources within the labor movement in Wisconsin and Illinois, in early 1995.

A summary of the eight sites is given in the following table. All of the sites are in manufacturing, except for one construction company and one sales and service office.

Site	State	Employment	Committee Required by Law?	Unionized?	Industry	Number of Committee Members	Frequency of Meetings
1	Washington	325	Yes	No	Electronics Manufacturing	15	Monthly
2	California	170	Not specifically	No	Sales and Service Office	15	Every 1-2 months
3	Colorado	2700	No	No	Electronics Manufacturing	Many departmental committees	Monthly
4	California	100-130	Not specifically	Yes	Pipefitting for Chemical Industry	12	Monthly
5	Michigan	80	No	Yes	Valve Manufacturing	7	Monthly
6	Wisconsin	325	No	Yes	Rubber tubing	9	Quarterly
7	Illinois	605	No	Yes	Vehicle Clutches	11	Monthly
8	Wisconsin	1500	No	Yes	Electronics Manufacturing	2 (but several larger, topical committees)	Monthly (generally)

Regulatory Background

In only one of the sites (site 1) was the committee mandated directly by law, which was in Washington State. Two of the sites were in California, which requires a written injury prevention program. Such a program must identify the person responsible for the program, indicate methods for identifying and abating hazards, include a safety and health training program for workers, create a system for communicating with workers on safety and health matters, ensure employee compliance with safe and healthy work practices, and correct hazards in a timely manner appropriate to their severity. In addition, the employers must train workers on handling existing or new hazards. The California law does not require committees. It permits them as a aspect of the required program. If a program involves committees, the California law requires that they perform the following duties: review of employer inspections, investigation of accidents, and investigation of hazards.

None of the other sites had any legal requirement for committees.

The Washington State law requires that committee members be elected, but the members at site 1 were volunteers. The company had applied for a variance from the law, but it had been denied. However,

they had not proceeded to elect committee members. So the company continued to be not strictly in compliance with the law.

This is an illustration of the often-observed fact that the written law and the law as it is practiced can often be different. It also illustrates (in the case of this company, a large multi-national that tends to have business practices that are considered advanced by many other business people) the reluctance to introduce a practice, elections, which are alien to all the other mechanisms in the firm.

We asked workers at site 1 what their reaction would be to having elected committee members. Some people said that it would make little difference, since the people who volunteered would end up being elected. Others said that elections would help matters, because it would make the committee more legitimate and more accountable to the workforce.

Site Descriptions

Site 1

The first site, in Washington State, made expensive, sophisticated electronic equipment, in small quantities. The site was very large, modern, and clean; the workers were all neatly attired. The present facility was opened in 1981. The plant had recently gone through a severe downsizing, through early retirements and voluntary severance packages. Employment has declined from 1000 to 325. There are two main areas in the plant, the assembly and the test areas. The jobs in the assembly area require little background or training; workers in the test area are associate-degree-level technicians.

Site 2

The second site that we visited was a sales and service facility in Southern California. Because of the nature of the facility, much work occurs off-site, at customers' offices. Approximately 170 people work out of the office, of which 30 are managers. As a result, the second most significant source of injuries is auto accidents, after repetitive stress injuries. (In general, auto accidents are one of the most important occupational hazards, but short of providing driver training and vehicle maintenance, there is little that a particular worksite can do about them.)

Site 3

Site 3 was the largest of the three sites that we visited of this one company. The facility makes microchips and printed circuit boards that use those microchips. It has production areas, clean rooms in

which the wafers from which the chips are cut are fabricated, and testing areas for both boards and chips. Like site 1, the site has gone through a recent downsizing, going from 3500 employees to 2700, through attrition, relocations, and voluntary severance packages. A majority of the workers are women. Since it is such a large site, it has a complex organizational structure.

Site 4

Site 4 was a pipefitting contractor near San Francisco. The company is relatively small, averaging 100-130 employees, with 50-60 of these being essentially permanent employees who are unlikely to be laid off. As is the case with many small businesses, the company is dominated by the personality of its president, who is a union plumber and pipefitter, and owner of the company. The contrast between this firm and the rational-bureaucratic operation of the multinational firm in sites 1-3 could not be more stark. The company is a union contractor, and it has a close relationship with the building trades unions. It has worked for many years as a contractor for a large chemical company, and thus has a dependent relationship with this company.

Site 5

Site 5 was a small manufacturer in the suburban Detroit area. The United Auto Workers' safety and health staff provided this site to our study. The company manufactures a variety of valves. It employs 68 hourly union members and 18 salaried people.

Site 6

Site 6 was a plant in Wisconsin that manufactures rubber brake line and air conditioning hoses. The plant is divided into two sections, one for brake line, and one for air conditioning hoses. The plant operates around the clock, with three non-rotating shifts and about 325 total employees, of whom 275 are hourly workers represented by the United Rubber Workers union.

Site 7

Site 7 is an Illinois branch plant of a large transnational corporation that manufactures clutches for tractors and automobiles. It is primarily dependent on a single contract with a large company which makes tractors and other farm equipment. There were 605 employees in the plant at the time of our visit, including 423 hourly shop-floor workers. The plant is organized by the steelworkers.

Site 8

Site 8 is a plant in Wisconsin that manufactures electronic equipment for vehicle and aerospace use. It is a subsidiary of a large automobile company and has about 1500 employees, including about 1100 hourly workers. Most of the workers are represented by the United Auto Workers, while some are represented by the International Brotherhood of Electrical Workers and the International Association of Machinists.

Committee Characteristics

The following table summarizes some of the characteristics of committees at the eight sites. For those variables rated from 1 to 3, 1 is low, 2 is moderate, and 3 is high. Except where these are based on direct, observable facts, such as whether or not there was a separate ergonomics committee, the values were assigned as “seat-of-the-pants” estimates as a result of the site visits. Operationalization here is admittedly weak.

	Site							
	1	2	3	4	5	6	7	8
Management Commitment to Committee Work	1	3	3	3	2	2	3	3
Committee Conducts Walk-Throughs	Y	Y	Y	N	Y	Y	Y	Y
Committee Domination by Professional Staff	3	2	2	1	1	1	1	2
Separate Ergonomics Committee	N	Y	Y	N	N	Y	Y	Y
Regularity of Meetings; Institutionalization	3	3	3	3	3	3	2	3
Escalation Procedure for Problems	Y	Y	Y	N	N	N	Y	N
Site has Self-Managed Work Teams	N	N	Y	N	N	Y	N	N
Hazard Abatement	3	3	3	3	3	3	3	3

We can see from this table that all the sites engaged in significant levels of hazard abatement, which is not surprising, since we selected the sites because they were said to have well-functioning committees. Almost all the sites have committees that meet regularly and are institutionalized. Almost all of them also conduct regular walk-throughs in the workplace, looking for hazards. Only some had a separate committee to deal with ergonomics.

We can also see that only some of the sites had a mechanism for escalating problems up the management hierarchy. Self-managed work teams were also relatively rare, although many sites are considering implementing them. There was some variation in management commitment to committee work, an important variable. Only a few sites had a problem with professional domination of committee work, and such domination is not always a problem, if professional staff can promote hazard abatement effectively. (Democracy in committee structure is not a goal in itself, but only insofar as it serves hazard abatement).

Safety Committee Structure and Procedures

Most of the safety committees we studied had between 7 and 15 members. Fewer members would have been not representative of the workplace, and more than 15 would make running the committee informally difficult. All the committees operated informally, and by consensus. Minutes were typically taken. The committee was typically chaired either by a company safety officer (sometimes one with professional training), a union safety steward, or both. All the committees conducted walk-throughs of the workplace, and problems found were discussed in the committees. Most had implemented some way of incorporating employee suggestions. In addition, committee members monitored safety conditions continually, and sometimes took immediate action.

Committee members were typically volunteers. They tended to serve for a year or two at a time. At some of the sites, members could stay on the committee as long as they liked.

In one case (site 1), a professional staff member, who was a certified industrial hygienist, chaired the committee and tended to set its agenda. A situation like this could cause a problem in that other committee members might not assert themselves enough, and rely too much on the

professional, who obviously cannot be in all places at all times. One of the advantages of the committee system is that it puts more trained eyes in the workplace to look for hazards.

In all committees, committee members receive ongoing safety training which is over and above that given to other workers. In addition, the committee often oversees the ongoing OSH training program offered to the entire workforce. If there is a union, often its resources for OSH training are utilized.

In larger workplaces, there were often committees organized by work areas or by topic. The most common topical committee was a separate ergonomics committee. The committees tend to be representative of different areas of the plant, and different shifts. Sometimes there is a structure of multiple committees; a plant-wide committee with representation from separate committees broken down by topic or by area in the plant. Larger companies also tend to have more specialized staff. For instance, at site 8, there were staff devoted to exposure monitoring.

Often awards are given out for working on the committee, and to employees making good safety suggestions.

Committees often examine workers compensation records and OSHA recordable injury records to attempt to quantify trends in OSH. The nature of the injuries and illnesses sustained often suggests areas on which to focus. Repetitive stress injuries are an issue at all the manufacturing facilities we visited; these are difficult to reduce. The more effective committees tend to track problems better and get them resolved faster; some committees had problems which tended to fester.

At all sites, the committees are advisory to management. Management makes the final decisions as to what steps to take. However, committees are often granted the discretion to spend relatively small amounts of money on their own to improve conditions.

Occasionally the committees encounter workers who are reluctant to take steps to improve their own safety, because these steps are some trouble. This attitude is often found among maintenance workers, who are viewed as “cowboys.” Generally, the committees use persuasion

rather than coercion to get workers to comply, although sometimes they will try to influence managers to impose more discipline on workers.

Hazard Abatement

Committees were engaged in a wide variety of hazard abatement activities. To give the reader a flavor of what they were, here are a few selected from the sites. There were many more.

- Installation of lift tables and use of carts and conveyer belts to reduce lifting
- Purchase of new equipment, such as adjustable tables, chairs, and hydraulic screwdrivers, to reduce repetitive stress
- Replacement of hazardous freons and solvents with safer compounds
- Development of lockout/tagout procedures for hazardous equipment
- Replacement of old, poorly ventilated paint room
- Improvement of lighting

Management Commitment to Committee Work

Because committees are advisory, and because management calls the shots in virtually all workplaces, management commitment to committee work is critical if committees are to be a success. Most committee members expressed general satisfaction with management commitment. This is not surprising, because it is more enlightened management that tends to consent to the establishment of committees in the first place (although they may sometimes be won by unions in tough bargaining.)

On the other hand, there were often problems reported. For instance, some of the workplaces did not have an escalation procedure for problems, so that if lower-level management or supervisors did not deal with a problem, it was not moved up the management hierarchy. At all sites, committees were frustrated with sometimes slow action, or inaction, on problems. Problems sometimes led to injuries before they were corrected, a particular frustration of committee members.

Sometimes supervisors had a different view of a safety problem than did the committee; this was the occasion for some negotiation. Often, groups of workers (maintenance workers, for instance) were non-compliant with safety committee recommendations, and management was often

reluctant to force them to change their behavior. Since the committees had no power to supervise, but could simply advise workers and management, they sometimes felt stymied.

In addition, safety and health committees tend to attract those members of the workforce who are the most committed to and interested in safety and health, and these people are likely to want to invest more in the OSH area than does the typical manager, who is balancing the cost of changing materials, procedures, and equipment against reducing the injury rate (and thus workers' compensation payments) and improving worker morale (insofar as this is a concern.) Managers tend to vary significantly in their commitment to safety; often when a plant changes top managers, the safety atmosphere changes considerably. Also, policies set by headquarters can have significant impact on attitudes to safety, by making it a priority. At site 8, union safety officers push the idea that all injuries are preventable; managers tend to take a cost-benefit view, perhaps feeling that preventing all injuries would be too costly, even if they don't say so explicitly. Since there is a general norm that injuries should be prevented, managers will not cite cost alone in avoiding an expenditure, but may claim that the expenditure is not needed or may not work.

Very few of the sites pay much attention to safety in evaluating managers' performance. However, many of the sites report some movement toward including it as a more significant factor.

The union sites tend to appreciate the joint nature of the committees. Without management participation in the committees, committee recommendations would not be taken as seriously, according to the union safety officer at site 8. At site 1, there was little management participation on the committee, and committee members were trying to change this. Note that union commitment to the work of the committees was not an issue at any of the union sites; OSH was a significant issue for all the unions, and many of them had been instrumental in setting the committee up and assuring its continued success.

Workplace Organization

The increasing importance of temporary and contingent workers brings serious safety concerns. Several of the sites that we visited used temporary workers. New hires typically have higher accident rates,

since they are inexperienced. Companies need to take full responsibility for training temporary workers in safety and health. If relatively unprofitable or hazardous work is being spun off from large companies to smaller, more vulnerable sub-contractors (as we saw at site 1), then safety conditions at these companies is a concern. It may be the case that the firm alone is not the appropriate location for committee activity; instead, networks of committees in interacting firms may be the appropriate regulatory mechanism.

Changes in work organization, such as the establishment of work teams and job rotation, can have significant impact on OSH. We observed these phenomena at several of our sites, and comment on their likely significance in the concluding section of this report.

Labor-Management Relations

We noticed a significant difference between non-union and union sites in the operation of the committees. Simply put, committees in the union sites seemed more “joint”; that is, rank-and-file members of the committee were more assertive and more likely to challenge the views of management. This is, of course, what we would expect, since workers in union shops tend to have more power and job security, and thus feel more comfortable in speaking up. This may give union shops an advantage in the efficient operation of the committees, since union workers may more effectively gather information to bring back to the committee. This is compatible with the theory of Freeman and Medoff (1984) that unions have two faces, the “monopoly” face and the “voice” face. Such a union advantage in the operation of committees would be an aspect of the “voice” face; unions enhance productivity by improving communication in the workplace, and thereby improving the production process in terms of efficiency, quality, and safety.

However, all the non-union sites (sites 1-3) we observed in this study were in a single large high-technology company, which has “advanced” management practices that are designed to exercise close control over all aspects of production. Therefore, it produced an environment which could be intimidating to workers, especially in the case of recent downsizing. For instance, at site 1, we asked a worker if she would ever consider calling OSHA directly (as is every worker’s right). She said no, she wouldn’t, out of fear for her job. One could envisage a smaller non-union firm with a policy that encouraged worker input without fear of retaliation. Still, the presence of a union tends to allow workers to speak more freely.

Overall Conclusions and Best Practices

While the sites and committees that we examined were diverse, we found many commonalities in their structure and operations. It was actually quite remarkable the extent to which committee procedures were similar, given that none of our sites had any direct or indirect contact with one another, except for sites 1 through 3, which were all within the same company.

We came to the following overall conclusions from our eight site visits. Collectively, many of these conclusions represent what we would consider best practice in the use of joint committees.

- Committees appear to be an effective mechanism for improving workplace health and safety. All of the work sites had improved conditions as a result of committee activity. The presence of committees raises awareness of health and safety issues among the workforce, which most likely improves behavior and thus safety and health. The workforce is utilized as a resource to improve conditions. A worker doing a particular job has most likely formed some idea of the hazards of that job, and his or her input is valuable. While most of the sites we visited were exemplars, we have no doubt that there are few workplaces that could not benefit by having a committee in place.

Of course, since we did not compare sites with committees with sites that lack them, this is not a scientific conclusion, but we believe it nevertheless, based on our observations of committees at work, doing useful things. However, the presence of committees may itself be a dependent variable, dependent, for instance, on the desire of management to reduce workers compensation costs, or on union mobilization in specific industries.

We selected committees that were said to be functioning well; if committees are mandated, it is possible that some of them will not function well. At the least, however, we saw that committees have the potential to function well.

- Most of the sites had committees with a between seven and twenty people. A committee size in this range seems reasonable. Smaller committees will be unrepresentative, and larger ones can be unwieldy. Most of them were fairly evenly divided between rank-and-file workers and managers. Those sites that had weak or middling management participation and commitment tended to have relatively weak committees.

- It is important that committees reflect the various functional areas within the establishment. In large establishments, it makes sense to have committees for each shift or for each functional area within the establishment. Since a large part of the function of committees is employee education, outreach, and communication, it is important that mechanisms be in place for regular communication between the committee and the workforce as a whole. Such channels can include regularly scheduled training, meetings to discuss safety issues, and mechanisms whereby rank-and-file workers can formally and informally communicate safety concerns to committee members. Many of the committees we studied had all these features; all of them seem important.

- It is important that committees meet regularly, and be insulated from the ebbs and flows of managers' fortunes. Some of the committees were in flux because of various changes at the company. An effort needs to be made to minimize them. Making the maintenance of the committee part of someone's job at all times is a way to help institutionalize it. In addition, it is important that committee members do regular safety audits or walk-throughs, both to keep rank-and-file workers attuned to safety problems and to actually catch problems on the floor. It is important that committees keep systematic records of OSH conditions, that they track problems, and target goals for injury and illness reduction.

A reporting requirement on committee activities, customized to the firm, will assure that committees at least attempt to collect data on a regular basis and to think about improvements. The collection and study of systematic data was only done by a few of the committees that we studied. This data collection could be in conjunction with reporting of OSHA recordables and worker's compensation records. Ideally, a safety data network could be set up, and firms could observe and plot their own safety data and that of similar firms. Such a network could include such valuable information as regulations and material safety data sheets (MSDSs) and could be integrated into an OSHA consultation program. Suppliers could be used to network firms using similar technologies so that they can share information on using these technologies safely. Such networks need to be sensitive to firms' proprietary concerns.

- Most committees operate by consensus. However, they need a mechanism for resolving conflicts. Consensus may not always lead to an optimal outcome; voting may be necessary in some cases. However, since committees are typically advisory, a divided committee may not be able to influence management.

- Most committee members are volunteers. Most worksites do not have enough people wanting to serve on the committee to warrant elections; however, provision should be made for elections where they are necessary. There should be some balance made between limiting the terms of committee members and having them serve long enough to become familiar with OSH issues. It seemed that at some worksites, some workers became permanent committee members, which is not consistent with the goal of disseminating knowledge about OSH among the workforce by having many people serve on the committee over time.

- The degree to which employees are able to enforce OSH issues and deal with management on an equal basis—true empowerment—is directly related to their objective power in the workplace. This power is difficult to measure, but is related to skill level, union presence, bargaining power, and job security. Workers are more likely to express “voice” on OSH issues if they are truly empowered, and are more likely to see that management follows problems through. If a work site is downsizing, for instance, it is difficult to see how employees can be aggressive on safety issues. Management needs to create an environment in which employees feel free to speak out on safety issues without fear of retaliation. It seemed like all of our sites had made progress toward this ideal. However, the objective power of workers in a particular situation (that is, their bargaining power) still highly affects the probability that they will speak up on a health or safety matter.

- Small companies are in need of associations, which can be run by employer associations, unions, or both, to provide services. We saw this clearly in our visits to the two small firms in sites 4 and 5, both of which had made use of resources provided by the union. OSH training and work-process engineering are two such services that are well provided by such consortia. Otherwise, committees are likely to be under-informed. Consortia are often better at delivering such services than consultants are, since they can customize their

advice to the industry more readily. And they are likely to be cheaper. OSH training can be integrated into other consortia services, such as modernization services. Consortia can also help firms comply with regulatory requirements, for instance in preparing a safety manual for several similar firms, thus saving them the expense of each preparing their own. Incentives can be created to encourage firms to work together on health and safety issues specific to particular industries, such as state funds set aside to subsidize such activities, whether undertaken by employer associations or unions.

- Committees are good at identifying problems. They may not be so good at fixing them. Problems may linger for months or longer. Without someone being responsible for problems, they tend to not be alleviated. Management needs to be committed to committees' work in order for them to be effective. There needs to be (as there was at several of the sites we visited) a mechanism to "escalate" unresolved problems up the management hierarchy if they are not resolved.

- The role of professional health and safety staff should be carefully thought through. Although it is unlikely that a line worker could be educated in health and safety issues to the same degree as a professional, committee members need to get ongoing training to be more informed and to reduce the "information gap" between them and professional staff. Effective committees need to have participation by all members, and not simply be led by staff. Part of the purpose of committees is to diffuse health and safety information back into the work force as a whole, and well-educated committee members are essential to accomplish this.

Those work sites that can afford professional staff in the OSH area also gain many advantages. OSH staff can train committee people, and may be able to identify problems that committee members will miss. They can act as an invaluable resource to everyone in the firm, especially in the interpretation of technical data. In the case where the firm cannot afford professional staff, it is necessary to contract for OSH training of committee members, who require more such training than other workers.

- Committees can play an important role in establishing firm-specific standards where OSHA has not yet set a standard. Committee members can consult the scientific literature in accessing the risk from a

particular substance or work practice and collectively agree upon a solution with an acceptable level of risk. In some cases in which OSHA had promulgated a standard, the committee may want to go further. Committees at our sites did not restrict themselves to areas in which OSHA had a standard.

- Changes in work organization can have serious effects on health and safety. Self-managed work teams need to take joint or individual responsibility for enforcing safety rules, and their work needs to be integrated with that of joint committees. Also, there is the danger that self-managed work teams will neglect safety to meet quotas or to earn incentive pay. Generally, if workers have a greater stake in the profitability of the firm, they will take greater risks.

- More and more firms are adopting job rotation. We saw at several of our sites that work rotation can affect ergonomics; work stations need to be designed to be adjustable so as to accommodate different workers. The pace of work also can seriously affect safety and health, especially with respect to ergonomics; the committee must work with management to determine an acceptable pace of work for each job. On the other hand, work rotation can also be beneficial to workers, since it can reduce repetitive stress by allowing workers to use different muscle groups in different jobs, and it can reduce psychological stress by making the work day more interesting and varied.

- Repetitive stress injuries, because of their prevalence, and because it is hard to reduce their incidence, need to be given special attention by committees. Committees, and employees in general, need ergonomic training. Seemingly expensive investment in equipment, such as mechanical screwdrivers or well-designed chairs and keyboards, can bring big savings in worker's compensation premiums or disability payments. The \$1000 chair is often a object of ridicule by those skeptical of ergonomic concerns, but \$1000 is not much compared to medical costs and worker's compensation payments that last for six months or a year. Especially in the Michigan plant (site 5), we saw that investments in capital equipment paid off in large improvements in ergonomics, and reduced injury rates.

- During our visits, committee members often expressed frustration on being unable to act directly to correct unsafe situations. Awareness of a problem does not necessarily, in all firms, lead to its correction. Typically, the committee has to go through an area supervisor, who may or may be sympathetic to the safety issue raised. Policy makers should consider the creation of a limited “right to act,” so that committee members or other employees can act directly to shut down unsafe conditions, rather than waiting for management to act. In some unionized settings, we found that a de facto right to act already exists, in that the union stewards are themselves powerful enough to shut down equipment in an emergency. However, such a right to act seems important enough to require in all work settings.

- Management commitment is critical to improving safety and health conditions. This is an obvious point, since in virtually all firms, management holds most of the power. We often saw differences between blue-collar supervisors, middle management, and upper management on the degree of practical commitment to health and safety. With the leveling of management hierarchies and the reduction in the numbers of managers and supervisors that is occurring in so many firms, both in the US and worldwide, many of the managers and supervisors that are left are overworked, and in such a situation, health and safety sometimes become low-priority items. Here, committees can step in to fill the void and to prod supervisors, who in practice often has to be the “cop on the beat” enforcing safe behavior on the part of workers. One way to improve the responsiveness of managers and supervisors is to include safety on their performance reviews.

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