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HEALTH AND SAFETY ORGANIZING: OCAW'S WORKER-TO-WORKER HEALTH AND SAFETY TRAINING PROGRAM*

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Abstract

In 1987, the Oil, Chemical, and Atomic Workers International Union (OCAW) was funded as one of the original eleven awardees of the Superfund Worker Training Program of the National Institute of Environmental Health Sciences. The OCAW, with the Labor Institute, developed a hazardous waste worker and hazardous materials emergency responder health and safety training program that was specific to its members in the represented industries. A social history is developed to explore a union-led, worker health education intervention. The program sought to develop worker-trainers who would conduct the training, using the Small-Group Activity Method, participate in curriculum development, and ultimately use health and safety training as a vehicle for identifying, developing, and mobilizing health and safety activists among the membership. Although the direction for this effort came from progressive leadership, it arose from the political economy of labor/management relations within specific industrial sectors.

The Oil, Chemical, and Atomic Workers International Union (OCAW) was one of the original awardees of the national Superfund Worker Training Program (SWTP) which is conducted under the auspices of the National Institute for Environmental Health Sciences (NIEHS). The SWTP was mandated in the Superfund Amendments and Reauthorization Act of 1986 as a grant program that would develop and deliver worker health and safety training for workers engaged in specific activities and work processes that involve hazardous waste operations and emergency response (HAZWOPER)[1] [1–4]. From the start of the SWTP to the present, the worker health and safety training program established by the OCAW has provided strong leadership for worker-trainer-based approaches to health and safety training. The OCAW has developed a model for both educating and mobilizing workers. This article results from a case study of the first five years of the OCAW training program.

In 1999, the OCAW merged with the United Paperworkers International Union (UPIU) to form the Paper, Allied Industrial, Chemical and Energy Workers International Union (PACE). The OCAW health and safety department, along with its NIEHS-funded worker training program, was incorporated into the PACE health and safety department. Since this article addresses the training program's first five years, the union is referred to as the OCAW, rather than PACE, in most instances.

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[1]The NIEHS SWTP has since expanded into the NIEHS Worker Education and Training Program (WETP). Within its first five years though, it remained the SWTP and therefore is referred to as such in this article.

This article does not explain the evolution of the OCAW's health and safety training program to its present state. It does, however, provide a social-historical context that explains how and why the program came to establish an independent approach to health and safety training. The case study pursued three central objectives. The first was formulated around the OCAW's goal to develop workers as health and safety systems analysts who would collectively address faults in the employers' systems. The case study was conducted to understand how the strategy is specific to the industrial sectors represented by the OCAW as well as reflecting the ideology of key union leaders and their allies.

The second objective regarded the training program's intention to build on two earlier OCAW strategies for health and safety education and advocacy. One was a network of Occupational Safety and Health Education Coordinators (OSHECS), production line workers who had received training and then passed on their knowledge about health and safety issues through training, outreach, and support to workers and locals. The other was an established network of health and safety professionals and scientists recruited to support union efforts to protect the health and safety of members and the public. The case study was designed to understand the development and success of these two strategies as they were applied to the OCAW's training program.

The third objective addressed the OCAW's training program goal of establishing a model of excellence for worker health and safety education and training in the petrochemical, oil, chemical, and nuclear industries. The union strives for excellence in curriculum, trainer training, worker-trainers, and training and evaluation. It has worked to develop the degree of excellence that it believed necessary to "disarm company critics" [5]. The OCAW emphasized democratic participation by its members. The case study explored the relationship between the program leadership and the union's members and the ways in which democratic participation was encouraged and supported.[2] The OCAW represented workers in three industrial sectors: oil, petrochemicals/chemicals, and nuclear (primarily weapons and research facilities).

The OCAW's focus in the first five years of the program was primarily on workers in the oil and petrochemical/chemical industries. A brief description of the industries, as they existed in the mid-1980s, offers background explaining the nature of the work and the context within which the OCAW operated. This is followed by a description of the union's health and safety training program's roots.

THE OIL AND PETROCHEMICAL INDUSTRIES

Oil Production and Refining

The oil industry has been described as having four vertical levels: production, refining, marketing, and transportation [6]. U.S. crude oil production was roughly 60 percent of the world total in 1947. It had dropped as low as 13.7 percent by 1977, and rose only to 16.1

[2]See [2] for a discussion of the case study research methods. Additionally, all uncited quotes in this article are from key informant interviews conducted by the author between 1996–1998.

percent of world output by 1984 [6, p. 40]. Changes in crude oil production levels have significantly impacted the other levels.

In the 1970s, two shocks hit. The first was the Arab nations' embargo against industrialized western nations in response to the Egypt-Israeli War in October 1973. The second was sharp oil price increases after the fall of the Shah of Iran in 1979. By the mid-1980s, U.S. oil companies were responding to changed international and national conditions (deregulation of U.S. oil prices, environmental regulation, economic recession). Shutdowns of some major facilities occurred and a wave of mergers swept through the sector. Smaller companies struggled for survival as the industry faced a crisis of "… too much product and no place to put it" [7]. Major companies also began to diversify into other fuels (uranium, coal).

Chemicals and Allied Products

The chemical industry is a grouping of industrial sectors, several of which are closely linked to the petroleum industry, often comprised of companies operating in both industries. The U.S. Census Bureau broadly classifies these sectors into a single grouping, Chemicals and Allied Products (SIC 28). The industry is intensely competitive, but also shares much common information. The primarily large companies that comprise a majority share of the industry invest heavily in research and development. Several have divested of basic chemical operations and moved to specialty products or pharmaceuticals [8–10].

The petrochemical industry has not been labor-intensive. Production is generally through continuous-flow process, rather than batch, operations. Continuous-flow process operations are highly automated and require relatively few workers. However, they use advanced technologies, and employed workers tend to have generally higher educational levels than many manufacturing workers. Wages and benefits are higher too. Nonetheless, labor costs account for less than 10 percent of total industry costs. The rate of productivity, per worker, also is relatively high. It has been a highly profitable industry.[3]

Workers in the chemical and allied products industries have not been represented by a single union. Industry workers have historically been represented by one of five AFL-CIO unions or small independent unions. By the late 1960s, the two main chemical industry unions were the International Chemical Workers Union (ICWU), and the OCAW. The OCAW is the larger, but neither is a particularly large union. The United Steel Workers of America and the International Brotherhood of Teamsters also represent chemical workers. The industry has had a pattern of independent local unions at specific facilities. This pattern, along with steady reductions in the number of production workers due to automation, has restricted membership in the AFL-CIO unions.

In the early 1980s, the petrochemical industry was undergoing major restructuring. Bower has identified four major trends causing instability: increased feedstock prices, improved yields through technology advances, a prolonged recession in the global economy, and product competition from countries with rich oil and gas supplies [10, p. 19]. The increase in

[3]See [11] for a fuller discussion of the industry and its relationship to the OCAW. For a discussion of the health and safety hazards of the industry, see [5].

feedstock prices was reducing profit margins. Another factor creating difficulties was the body of environmental laws regulating production of toxic substances and disposal of toxic wastes.

The crisis facing petroleum and chemicals (particularly petrochemical) in the early 1980s had a significant impact on the OCAW's relations with the industry, the AFL-CIO, and the health and safety movement.

ROOTS OF THE OCAW PROGRAM

The OCAW was created in 1955 when the Oil Workers International and the United Gas, Coke, and Chemical Workers unions merged [11]. Both unions were created during the CIO organizing drives of the 1930s. Both were politically progressive and had higher wage members than most CIO unions. The OCAW has been an AFL-CIO affiliate which represents members in oil, chemicals, energy, pharmaceuticals, and allied industries. In oil, the OCAW represents mostly refinery and pipeline workers and some transportation workers.

THE OCAW AND HEALTH AND SAFETY

The OCAW has a long history in health and safety. It became perhaps the leading AFL-CIO union in promoting health and safety as a central labor issue after the 1960s. Much of it was due to the work of Tony Mazzocchi, who was a young president of Long Island, N.Y. Local 8–149 in 1956 when he joined the movement against nuclear weapons testing. That move introduced him to politically progressive scientists and their students. Environmental activist Barry Commoner was one of them; Glen Paulson, a student of Rene Dubos at Rockefeller University, was another. Mazzocchi learned much from his new activities and began to translate it into work for the OCAW, such as collecting members' baby teeth for Strontium-90 uptake analysis [12].

Under the presidency of A. F. Grospiron, the OCAW assumed a leadership role in the developing health and safety movement. In 1967, Mazzocchi and others in the union presented a resolution to the union's 9th Constitutional Convention, which called for the union to: 1) develop a health and safety program to be implemented by educational, collective bargaining, and political action; 2) support each bargaining group in efforts to negotiate a joint labor-management safety committee to police conditions within the workplace; 3) have each local develop relationships with the press and community leaders so that the public could be informed of developing health and safety hazards, and that these locals give consideration to hazards to the community, as well as, the workforce; and, 4) work with the labor movement and other sympathetic organizations in support of federal, state, and local legislation and regulations to protect health and safety and to "place human values above property values" [13]. The resolution was passed.

Mazzocchi followed that by lobbying, with several other union health and safety activists, for the Occupational Safety and Health Act and, when it was in place, the OCAW only days later delivered its first health and safety complaint to the new federal agency. It requested an inspection at the Allied Chemical Corp. facility in Moundsville, West Virginia [14]. A few

years later, the OCAW won a strike against Shell Oil over health and safety issues, in part by forging coalitions with scientists and other unions. In Oklahoma, the union pressed the case against nuclear industry hazards; in that battle, union activist Karen Silkwood met an untimely death.

The union also looked to its internal apparatus, creating a health and safety office, hiring an industrial hygienist, and developing an internship program for medical students. Mazzocchi became the OCAW vice president in charge of health and safety in 1977. That year, the union's "Oil School" was born to deliver a course called "The Hazards of the Petrochemical Industry." And, when Eula Bingham was head of OSHA, the OCAW encouraged OSHA to institute a health and safety training grants program called New Directions. The OCAW won a grant in '79 to present a two-week course to 11 rank-and-file members so they could become Occupational Safety and Health Education Coordinators (OSHECS). Glen Erwin was an OSHEC: "We were kind of like circuit-riding health and safety specialists" [15]. They coordinated training for workers, with help from professionals. It was a model that was incorporated later into OCAW's hazardous waste worker training program. The OCAW also continued its occupational physician training; interns and doctors performed health hazard evaluations, medical surveillance, and worker education at plants.

THE LABOR INSTITUTE

In 1974, Mazzocchi created a small non-profit organization called the Labor Institute to provide research and education for labor struggles. The institute later became a key player in OCAW's hazardous waste worker training program under the SWTP.

The institute addressed a range of labor issues, including health and safety. The institute was not directly affiliated with the OCAW. In fact, its only interaction with the union, aside from one training in 1976, was with a local at a Merck facility in New Jersey. An intern named Les Leopold in the OCAW's legislative office, then recently graduated from Princeton University, headed the institute's training activities.

The institute had conducted economics training sessions in 1976. Leopold noticed a "pedagogical problem" in that they were delivering the message that workers did not need conservative economists to run their lives, but instead they needed radical economists to run their lives [16]. Leopold came to believe that to help democratize the unions, an effort to enhance workers' abilities to take more control was necessary. It would mean more than helping them understand the ideas of progressive professionals. So Leopold began to explore participatory adult education methodology. With several large grants, he developed curriculum that employed a range of training methods, including role plays, discussion groups, projects, games, videos, and music. But he found them to be exhausting for trainers and of limited value for trainees. The trainers had to be expert in a range of topics—economics, labor issues, participatory training—and have a strongly progressive perspective. That made recruitment difficult. The institute's training sessions were "teacher-centered," trainers' knowledge and performance took center stage. But Leopold wanted it to be "student-centered;" he wanted the focus on dialogue between participants.

Small-Group Method

In 1980 Leopold attended a participatory training conference at the Highlander Research and Education Center in Tennessee. David Clemens, a conference participant, had been working for the British Trade Union Council (TUC) and was visiting the United States to help develop a manual for the shipbuilders union. Clemens presented small group training activities that he had been using and, according to Leopold, his training was rooted in Freirian methods. Clemens invited Leopold to visit Bradford, England to learn more about the TUC approach. Leopold visited the TUC for one month and saw an "organized process of small group education … the training was small group-centered as opposed to trainer-centered. Most of the time the workers functioned in small groups, rather than listening to the trainer" [16].

Training Trainers

The Labor Institute was asked to conduct a training of trainers for a national meeting of housing organizations at the Wilder Training Preserve in Minnesota. Leopold designed the training so that people would have an opportunity to "learn by doing." The training involved several days of collective curriculum development. Then the group met with a housing group in Minneapolis and conducted the training as part of their own training as trainers. Its success convinced Leopold that he could develop curriculum about technical subjects, since he had known nothing earlier about housing. Since he lacked expertise on technical health and safety, Leopold would be no more, and perhaps less, of an expert on the subject matter than the workers being trained. This, he believed, would facilitate a process to move training from being teacher-centered to being learner-centered. Leopold came to call his new approach the "small-group activity method" (SGAM).

Using the Methods With Workers

The Labor Institute successfully used the SGAM at a General Motors facility in Linden, New Jersey, where a United Auto Workers (UAW) local faced concession bargaining in contract negotiations. The local wanted training that would help workers move beyond their fears of job loss so that they would not demand that the bargaining committee agree to a "give-back." A curriculum addressing these issues was used in a training of 30 workers who would become trainers. Then, with some further support from Leopold, these 30 worker-trainers conducted another ten classes in which 350 workers were trained. The training was so popular and effective, according to Leopold, that the company denied further release time for those who had not been trained.

The curriculum was developed into an anti-concessions booklet. The local ran a national anti-concessions conference in advance of the vote on the concession contracts. The concessions were passed by a small majority, but the Linden local defeated them by the highest margin of any local, nearly 4–1. Leopold was ecstatic. He believed that the training helped workers to talk with each other rather than be consumed with isolating fears of the threat of job loss. He also believed that the training was influential in the successful election of the reform group in the local. "So now we knew we had a live tool that was based on the way workers work—informal groups. It cushioned them from the fear of individual competitive academic classes and lectures, and feeling dumb" [16].

OCAW'S INTERNAL POLITICAL STRUGGLES

Mazzocchi ran for president of the OCAW in 1979 and 1981 as a leader who advocated challenging the industry's restructuring measures and its control of the workplaces and industry. He lost each time to a candidate who would be more willing to compromise with employers: Robert Goss. In 1981, Robert Wages, an attorney for the union, was appointed assistant to the president. The 1981 campaign was so divisive that Goss left office, believing that he would not be able to unite the union. The OCAW's Executive Board appointed Joseph Misbrener as president and Wages as vice president. Both were successfully re-elected in 1985.

Power had shifted away from those supporting Mazzocchi's leadership to others who took a less confrontational stance against employers' demands. The crisis in both the oil and petrochemical industries likely established the basis for this change by the membership, which was concerned that jobs would be lost unless concessions were made.

During this period, the Labor Institute received a request from Joseph Anderson and Paul Renner, the president and chief steward respectively of an OCAW local at a Merck facility in New Jersey, to develop economics training for their members in anticipation of an upcoming battle with the company. The institute developed a "Merckonomics" program and booklet. In May 1984, Merck locked-out the union workers for six months. In June 1984, the Merck Council of union locals, which was led by the New Jersey local, conducted a national strike against Merck.

The Misbrener administration did not strongly support the Merck Council in its strike. The striking locals were largely Mazzocchi supporters. Some Mazzocchi supporters believed that Misbrener feared a successful strike would have been a boost for a successful presidential run by Mazzocchi. The strike ended with a concession to a two-tiered wage structure that would be progressively implemented over ten years. At the New Jersey local, Renner lost re-election while Anderson won the presidency again. But Anderson stepped down, refusing to run a divided local. Both returned to the shop floor.

TRAINING GRANT—UNION BACKGROUND

As vice president, Wages was responsible for health and safety policy development. The split in the union at that time caused a retreat from the activist health and safety positions shaped by Mazzocchi. The union decreased its health and safety activities between 1980 and 1986, and did not provide the national leadership role assumed in the 1970s. The relationship with the medical interns who had worked with the union through its New Directions grant was mostly discontinued. The union's industrial hygienist left under pressure. By several accounts, health and safety activities were minimal by 1986. A number of factors likely weakened the OCAW's program, including: 1) weakening of OSHA's New Directions program, and funding reductions to grantees; 2) a shake-out in the oil and petrochemical industries, associated with a large drop in OCAW membership; and 3) divisive political fights for union control.

As the Misbrener administration continued to concede to industry demands, Wages reassessed his political alignment within the union. “We were tired of getting our ass kicked. We were more inclined to form coalitions, broad coalitions, and fight” [17]. Wages and Mazzocchi had initiated communications about redirecting the union’s efforts. Among other things, Wages wanted to strengthen health and safety [16–19].

The OCAW had commissioned scientists and public health professionals to review and analyze a videotape of an oil industry employer-selected training course. The reviewers found that the training was “… largely irrelevant to oil refinery hazards … blatantly pro-management in its assumptions, anti-OSHA, and often incorrect technically” [20]. Wages testified that employers generally boycott union-sponsored training courses. He criticized OSHA’s promotion of voluntary health and safety efforts “with the keystone being a joint committee effort. Our experience has been that industry’s definition of ‘joint’ is ‘you agree with what I want to do’” [20].

A Request for Applications for NIEHS’ SWTP was released in early 1987. Wages was interested in applying, believing that a training program around hazardous waste issues could be a “precursor to a more sophisticated training program generally” [17]. On Mazzocchi’s recommendation, the Labor Institute was brought in to write the proposal and develop the program if a grant was awarded. All agreed that worker-trainers would conduct the training and the training would be based exclusively on the SGAM that the institute had developed.

OCAW SUBMITS A PROPOSAL TO NIEHS

Michael Merrill had been working with Leopold at the Labor Institute since the later 1970s. The assignment to write the OCAW proposal to NIEHS was given to Merrill, with assistance from Sylvia Krekel, an occupational health specialist who had worked with the OCAW Health and Safety Department since 1973.[4] Approximately 30,000 OCAW members employed at hazardous waste treatment, storage, and disposal facilities (TSDF) regulated in accordance with the provisions of the Resource, Conservation, and Recovery Act (RCRA), were the proposed target population. An eight-hour refresher course would be developed and taught by worker-trainers, a larger group of OSHECs. They would be intensively trained in a train-the-trainers course, and then would teach the hazardous waste courses in teams. The OSHECs would maintain their jobs in the plants, and work one-quarter-time as training instructors. The Labor Institute would develop curriculum for the train-the-trainer and the hazardous waste course[5] [21].

The idea of a Refresher Training course came from the union’s assumption that employer-provided training was generally inadequate. The OCAW also believed, as did most industrial

[4]Sylvia Krekel became the Director of the Hazardous Waste Worker Health and Safety Training Project. She later married and her last name became Kieding.

[5]The OCAW’s targeting of RCRA facility workers was based on explanations in OSHA’s interim final rule for hazardous waste operations and emergency response. The rule was issued in December 1986, several months before the due date for the NIEHS proposals. OSHA had determined that because Section 126 of SARA was a freestanding statutory provision rather than an amendment to CERCLA, the Congress intended to provide protection to all workers who deal with hazardous wastes. OSHA specifically listed workers at RCRA facilities. The targeted workers would be those with hazardous waste operations duties or potential for involvement in an emergency response to a hazardous materials incident.

unions, that the employer had a responsibility to provide health and safety training for employees assigned to hazardous operations. Therefore, refresher training would add to the training workers would receive, as opposed to fulfilling the employers' obligations.

Worker-to-Worker Training Program Using Small-Group Activity Method

The OCAW already had developed its model of worker-trainers with the OSHECs in New Directions programs. The institute had developed a system for training worker-trainers and for a SGAM-based curriculum that could be delivered by worker-trainers. A merging of the two models was proposed. The training would be substantially different from what OCAW members generally received from their employers. Employer-provided training rarely gave workers the information they needed to improve their working conditions and was usually delivered by professionals who often could not present it in a way that could be understood and/or would be relevant to workers. The format was almost always a lecture without opportunity for workers to participate in discussions about how to make changes in workplace conditions. Finally, it usually had a "blame-the-worker" orientation that implied that health and safety hazards exist because workers are not careful. In some of the most hazardous industrial sectors, such an orientation could, at best, generate cynicism, if not outrage [15, 16, 22, 23]. The OCAW proposed a different model and orientation.

The Labor Institute would develop high-quality materials to explain health and safety issues in relevant and understandable ways. The curriculum would be developed by educational and technical experts, such as physicians and industrial hygienists. Workers would be recruited to become trainers. They would attend a comprehensive train-the-trainer to learn how to facilitate training that incorporated the SGAM. A workbook of activities would be distributed. The worker-trainers would learn and discuss the technical information in the workbook adequately enough to comfortably facilitate a training session. The worker-trainers, however, were not intended to become technical experts. Instead, they would rely on the technical expertise presented in the workbook and guide workers through the workbook activities. As questions were raised in a class, the worker-trainers would note them and refer them to associated technical experts who later would give information to the trainees.

"This active or participatory approach to teaching lifts the burden of needing to be an expert from the shoulders of prospective trainers. At the same time, it ensures that trainees have available to them the best and most accurate information relevant to the topics being discussed" [24].

The Goals of the Grant

The goals of the OCAW-proposed program were:

- To raise the safety and health training standard throughout the represented industries;
- To ensure that OCAW members receive the best possible training; and,
- To foster an active "culture of safety" in the workplace through use of worker-trainers skilled in learner-centered, participatory teaching methods [25].

The OCAW has other goals for its program as well. Though not specifically stated, the proposal suggests goals that participants stated in interviews as part of this research. They include:

- To protect workers from unsafe exposures to toxic materials;
- To develop the capacity for trained workers to become “watchdogs” of company safety programs and “systems analysts” who could challenge faults;
- To support the ability of a core group of workers in every facility to communicate, advocate, and mobilize around health and safety issues as they arise in time;
- “To challenge one of the most basic features of the organization of work in a capitalist economy—the separation of conception from execution, thinking from doing” [26]; and
- To develop a program of excellence that demonstrates to management the value of union-sponsored training and thereby receives management buy-in, facilitating program self-sufficiency through management purchase of courses [26].

BUILDING THE PROGRAM

Mazzocchi confidently left development and organization in the hands of Leopold and the Institute and Krekel at the OCAW. Twenty-four OCAW members were chosen to be the OSHECs involved [27]. (It was not until later that the term worker-trainers became more generally used than OSHECs.) Leopold visited some OSHECs who had been trained and active in earlier training. He and a consultant discussed with them the roles of workers as trainers within the union. Recruitment selections were based on several criteria, including: regional, political (union), and gender/race/ethnicity considerations. The worker-trainers maintained their positions in the plants, taking negotiated leave time to engage in training duties for which the union supplemented their income. The majority of worker-trainers were officers, stewards, and health and safety activists in their locals. At least 25 percent of them had degrees from an institution of higher education. Approximately one-third were women [25].

Curriculum Development

In addition to interviewing the OSHECs, Leopold visited other union members around the country to talk about hazardous waste issues and identify production processes that put workers at risk of exposure to hazardous wastes. He needed to find experts (professionals) to develop curriculum. Dr. Steven Markowitz of Mt. Sinai School of Medicine worked closely with Leopold on information about toxicology and the health effects of hazardous chemicals. They developed a curriculum activity entitled “Toxic Myths.” It described the misconceptions, or myths, about toxic chemicals, human exposure, and how scientists assess health risks.

Leopold and Markowitz organized a curriculum to train the worker-trainers and also be used in the courses. It was developed as a workbook comprised of course modules and activities.

The completed draft was given to the New York Committee on Occupational Safety and Health (NYCOSH) for review and Leopold got much useful feedback. The curriculum was developed for two purposes. It was to be used to teach worker-trainers the material and how to present it. It also was the basis for any eight-hour course that the worker-trainers would deliver. The curriculum included activities that would take up to 24 hours to present. For any particular training course, the worker-trainers would choose among the available modules.

Each activity requires an introduction by the trainer. Then the group reads the supporting material in the workbook for each activity. Then they collectively engage in problem-solving. One member of each group records the group's opinions, decisions, and strategies. When all groups have completed the activity, the trainers facilitate a "report-back" by each group to the larger one giving their ideas for resolving the problems in the activity. After the larger group discusses the presented ideas, the trainers summarize the discussion, highlighting key points.

First Training of Trainers at Rutgers

In Spring 1988, 24 worker-trainers gathered with Leopold, Merrill, and OCAW staff for the initial training. The goal was to develop the worker-trainers' ability to select from the basic 24-hour curriculum eight hours of activities for the courses they would deliver to workers. Eventually, the full workbook would be used for a 24-hour course. At this point though, Leopold and Merrill believed that going beyond an eight-hour format would overwhelm the worker-trainers. It was an entirely new format for all of them.

Leopold introduced himself and explained that the goal of the train-the-trainer was to teach them how to teach. He said that after the first two hours, they would do most of the talking for the week; he had not prepared a set of expert presentations for them. Initially the worker-trainers were upset and confused. The format was different from any they had ever experienced. "But, by the end of the second day, they were walking on air. They were floating because they were using and hearing their own voices" [18].

The worker-trainers learned how to facilitate the SGAM. This was a learn-by-doing model, but the "doing" in this case was active participation in study and discussion of health and safety issues, and collective problem-solving. The worker-trainers were learning how to help fellow workers grow skilled at analyzing the health and safety hazards and risks they faced on the job, and then developing strategies to prevent the risks.

Observers from the OCAW international, occupational health and safety organizations, and other unions attended the Rutgers training. Several of them began discussing testing issues. Of particular concern was how Leopold and Merrill would know whether the worker-trainers had learned what they needed to know. They believed that some form of testing should be determinative. Leopold and Merrill made clear that they would not test the workers, that the training was to teach workers how to analyze the health and safety systems within their workplaces, not to become health and safety experts. The testing issue later became a main point of conflict for the OCAW within the NIEHS program.

The worker-trainers left Rutgers and gradually took on their own courses. Part of the train-the-trainer process included monitoring the worker-trainers once or twice at classes. Leopold and Merrill went around the country to continue the “apprenticeship” of the worker-trainers [16]. They observed the trainers and “coached” them from the back of the room. Glen Erwin, a worker-trainer who had his first class recorded on videotape so that he could watch it later, said, “We had a video right in your face, and I guess every mistake made, I made. Yeah, I think Les and Mike were there, but they weren’t in there to pull us out of the fire” [15]. The process gave workers confidence in their competence as trainers.

The OCAW Approach to Training Delivery

The OCAW had specific ideas about the nature of health and safety training that differed from most mainstream worker training. The dominant mode of training within the industry was to inform the worker of the work practices and behaviors that would ensure their health and safety. It assumed that the workplace was inherently safe and that inappropriate worker behavior was the primary cause of injuries and illnesses. The OCAW assumed that the workplace, for OCAW members, was inherently hazardous; that in most cases employers were not ensuring a healthy and safe workplace; and that the purpose of health and safety training was to help workers identify the weaknesses and failings of specific safety systems in order to correct them.

The Control of Toxic Hazards

The OCAW training does not simply explain to workers the different methods for controlling workplace health and safety hazards. It helps workers develop the ability to evaluate whether the controls in place are proper for preventing “serious exposure to toxic hazards” [28, p. 157]. A case study of a hazardous waste operation is presented, detailing the work tasks and established controls. The course participants are asked to answer these questions:

1. What controls that are in place do you feel are proper? Why?
2. Which ones do you feel are inadequate? Why?
3. What controls would you recommend be requested for this situation?; and
4. Now switching to real life, what is the most important hazard in your facility that you feel needs improved controls, and what controls would you recommend?” [28, p. 159].

Again, a set of fact sheets provided information about work environment controls. The questions and fact sheets helped workers to think critically about the controls in place and their adequacy. The workers were encouraged to think about controls they would implement. Then, having practiced thinking about a case study, workers were directed to focus on their own workplaces, and apply what they learned toward improving their working conditions.

Program Implementation

As the core elements were developed and worker-trainers began to deliver courses, the program faced new challenges. The union had anticipated that employers might initially be

reluctant to accept the training. The OCAW's plan was to deliver the training after shifts and on weekends in local union halls, and as word spread of its value and excellence, entree could be made toward gaining management acceptance and buy-in. OCAW members were not eager for the training at first. The classes were small. Workers were not willing to give up their time for a course, assuming that it would be the same as employer-provided training. Also, the restructuring of the industries caused reduced employment levels in the plants, while at the same time, the remaining workers worked harder and longer. Time away from work was increasingly limited [18, 22]. Gradually, workers who attended the training encouraged others to attend.

ISSUES FACING THE OCAW

Continued Curriculum Development

As the OCAW personnel presented the training courses, they learned more about hazardous waste issues in the plants. Workers in the classes would raise technical issues that worker-trainers came to realize needed to be included in the curriculum. The OCAW training program hired an industrial hygienist, Joel Carr, onto the Labor Institute's staff. He had worked in the labor movement for a decade, directing health and safety for several unions.

With Carr's assistance, the OCAW began the next phase of curriculum development. Some worker-trainers were extremely knowledgeable about hazardous materials incident emergency response issues. William Hoyle, in particular, was critical of the one emergency response activity in the workbook. He and others had read the emergency response regulations and available materials and they wanted a full emergency response course. Leopold and Carr worked with several worker-trainers to develop a curriculum. The OCAW was ready to move beyond the 8-hour basic refresher course. It also was ready to incorporate the worker-trainers into curriculum development.

Personal Protective Equipment and Hands-On Training

Emergency response training raised the issue of how to address personal protective equipment (PPE). Leopold and Merrill learned much of what they knew about health and safety from Mazzocchi. For many years, Mazzocchi had been saying that there was no such thing as fully protective equipment; that some amount of hazardous material is bound to get beyond the equipment to the worker. The established industrial hygiene hierarchy of controls places PPE as a last resort, when engineering and other controls cannot be implemented. For the OCAW team, it meant that when it comes to emergency response activities, in which no other controls are possible, the health and safety focus must be on how to prevent the circumstances that could result in an emergency, not how best to equip workers who must jeopardize their health and safety in the response.

The agreed-upon program message was that if any worker was going to be assigned to hazardous materials response, he or she should first receive hundreds of hours of emergency response training.[6] Therefore, the OCAW workbooks do not present PPE as the solution to hazardous waste operations and emergency response work. Instead, they approach the subjects from the perspective of how workers can determine whether their employers have

implemented an appropriate and adequate PPE and/or respiratory equipment program. In this way, OCAW members learn to analyze whether the employer's programs comply with OSHA requirements, and that the PPE provided for adequately trained workers is correct for the intended purpose.

Incident Tracking and Investigation

The OCAW reported to NIEHS that, compared with many others, the petrochemical industry maintained a low rate of lost work-day injuries, but a higher fatality rate [25]. Oil and petrochemical industry restructuring in the mid-to-late-1980s and early 1990s was accompanied by increased rates of catastrophic incidents, such as explosions. The Texas City local of the OCAW, with 39 contracts and 2,500 members, asked the international to develop a preventive approach to catastrophic incidents. A plan was developed for recording and evaluating near-misses. The plan was reviewed by worker-trainers and labor-management attendees at an Oil School session. It was dubbed an incident tracking, or near-miss, plan. Its purpose was "to discover what procedures and operations could contribute to a major catastrophe" [25]. The OCAW would use the information to plan preventive action. An activity would be included in the emergency response workbook on how to implement the system in their plants.

The incident tracking and investigation system was proposed for funding to NIEHS in 1992. The OCAW maintained that in order to fully implement the plan, a full-time coordinator was needed. It proposed a three-year pilot project to serve as an industry model for near-miss tracking. Thirty-six locals were to participate. However, the program was not funded by NIEHS, probably due to limited funds rather than limited interest.[7]

Evaluation

The OCAW implemented evaluation measures to determine the effectiveness and usefulness of its efforts. The worker-trainers were asked to evaluate and give feedback about the curriculum in train-the-trainer classes. Merrill changed the activities as he and Leopold discovered that some were ineffective. In the first year, Merrill interviewed the 24 worker-trainers. Their talks were tape-recorded and transcribed to maximize their value as a tool. The worker-trainers spoke to the effectiveness of the program.

Evaluation quickly became an important element for OCAW because of "some initial skepticism from those who believed safety and health too technical to be taught by anyone without an advanced degree" [5]. Merrill volunteered to coordinate the evaluation process out of a concern that evaluation conducted by a health education specialist "… could drive the program to a teacher-centered model … before we could get things going" [18].

[6]The OCAW was consistent with OSHA, the National Fire Protection Association, and other emergency response organizations on the matter of emergency response training. OSHA had conducted a review of the recommended training requirements for offensive emergency response activities (that is, acting to abate the hazard and correct the damage causing the emergency); a minimum of between 140–160 hours of training was required.

[7]The NIEHS has awarded funds to PACE to pursue its Triangle of Prevention Program (TOPP) which incorporates the incident tracking and investigation system proposed earlier. This program has been successfully adopted at more than twenty facilities.

Since this was a new model, Merrill realized that innovative evaluation methods were needed that would capture the strengths and weaknesses of the program. “We got enormous pressure from the evaluation professionals to institute evaluation methods that would [require] conducting a class in a typical academic pattern …” [18]. The OCAW incorporated four aspects into its evaluation efforts: participant evaluations; worker-trainer evaluations and reactions; company evaluations; and impact evaluation.

The OCAW program incorporates an annual refresher training for all worker-trainers, including evaluation of the curriculum and program so that information can be collected from the worker-trainers who are interviewed during breaks. The information has demonstrated that the program “… not only provided important safety and health education to the union’s membership, it also enriched the lives of the worker-trainers” [5].

In the first two years, 17 company managers attended at least one eight-hour course. Merrill interviewed as many as possible for two reasons. First, the OCAW needed to know what the health and safety professionals and management thought of the training. Second, if they found it acceptable, the union could use their feedback to build stronger ties with management in an effort to get the companies to purchase courses. Repeatedly in his writing, Merrill pointed to the willingness of construction contractors to accept worker training from building trades unions and said that the OCAW hoped to encourage petrochemical employers to do the same.

Leopold and Merrill worked with the worker-trainers to develop mechanisms for evaluating the impact of training. Many of them volunteered to collect data from participants; two volunteered to design a common survey instrument. It showed that the course was well liked and that the training helped them to be “… more effective advocates of safety and health at work, and it contributed directly to positive changes in the workplace” [5]. Several years later, the OCAW recruited an evaluation specialist who expanded the effort to assess the training’s impact on working conditions.

Program Administration

In 1991, Joseph Anderson was hired as the grant administrator, directing the entire training program. Anderson had been president of the Merck local in New Jersey that had worked with the Labor Institute. He had been a strong supporter of the training method since 1979. Anderson oversaw the expansion of the number of worker-trainers to about 30.

The program had developed quickly and successfully, but as many NIEHS awardees discovered, rapid development often came at the expense of cohesive administration. By 1991, a major curriculum development project was stalled and financial administration was inadequate. The OCAW, like some other SWTP awardees, was not accustomed to operating as required under a large federal grant. Between 1990 and 1992, the OCAW developed the competency to manage the program well.

The OCAW’s emphasis on a worker-trainer-based program created a contradiction: strong management seems to oppose permitting workers to take charge. Anderson soon realized though that in order for the worker-trainers to be able to assert control, strong administration

was required. “To keep the thing moving, you have to administrate in a very hands-on fashion,” he said [23]. He steadily took charge, demanding completion of the next set of curricula and appropriate financial accounting.

Developing curriculum is not simple. Several participants said that Leopold was excellent at it, but that it was a difficult and intimidating job for others, particularly workers. Few worker-trainers volunteered to do it, and those who did often were not comfortable with the work. It was 1995—eight years into the program—before a strong, competent, and confident team comprised of worker-trainers was in place.

New Recruits and Changing Roles for the First Worker-Trainers

The recruitment of new worker-trainers created the need for further development of the train-the-trainer and apprenticeship process. A second train-the-trainer was scheduled, again at Rutgers, where Merrill was on the faculty. Leopold recruited four of the original worker-trainers to lead that training, using an updated version of the original curriculum; Erwin was one of them. “The thing that’s really been used to develop the skills the most is that trainers are used to train other trainers, training the next group” [15].

Bradley Dodge was a new recruit. He was a pipefitter/welder at a Chevron plant near San Francisco. Dodge was an activist in his local, serving on the joint labor-management health and safety committee, and he was a shop steward. He remembered coming to the train-the-trainer, anxious that people would not be welcoming. Instead, he was instantly welcomed and made to feel he was a valuable part of the program. For him, the trainer training provided an “… opportunity to participate in the methodology as well as begin to understand the materials and to understand some of the bigger themes that we were trying to get to” [22]. Dodge had attended college and taken apprenticeship and employer-provided training where an instructor told students how to do things. Here, he learned about centering around the workers: “This is the only way in the long run that the message can truly be carried” [22].

After that class, the experienced worker-trainers began to mentor the newer ones. During sessions conducted by the newer trainers, the experienced trainers helped out, providing “training tips,” if the new trainer faced a difficult situation. It was similar to the way that learning takes place on the job. “Traditionally, when we go to work, workers learn from workers. We call it ‘tag-along training’ in the plants. You spend so many weeks of tag-along training with somebody that knows the job” [15].

Curriculum Action Team (CAT)

By 1990, all new curricula involved the participation of a curriculum action team (CAT). Writers’ classes were held to support the team’s development. The CAT got involved in work for the Oil School classes, which were being changed to the SGAM format. They also developed smaller activities addressing new health and safety developments, such as Process Hazard Analysis (required under the OSHA Process Safety Management standard).

Some professionals continued to work with worker-trainers on curriculum development. Around 1994, Renner, the former officer of the Merck local, was hired as the curriculum

development coordinator. Renner had put himself through college and law school while working at the plant. A radiation health physicist and industrial hygienist named Mark Griffon worked as a consultant to the OCAW. Griffon assisted the CAT in producing curricula for courses in the nuclear industry. Curriculum development is a collective process in which the CAT is central.

Outreach, Marketing, and Self-Sufficiency

Most employers remained resistant to contracting with the OCAW for health and safety training. Consequently, gaining access to the number of workers the union wanted to train remained difficult. The OCAW program offered a stipend up to $50—a limited incentive—for course attendance. The OCAW tried to get employers to purchase training from the union, seeing this as a way to open joint labor-management dialogue over improving conditions in the plants.

A number of companies have purchased the training from the OCAW. They included British Petroleum, Mobil Oil, Ethel Corp., and Goodyear. The purchases did not necessarily indicate a willingness to work with the union jointly on health and safety issues. Often, a contract results when a company has received citations from OSHA. Some companies are willing to accept the decisions of health and safety managers who genuinely believe that the OCAW training is better than other training and worthwhile because it creates openings for joint labor-management actions to improve conditions.

Post-Training Testing of Workers

The effort by the NIEHS SWTP to develop a set of minimum criteria for programs developing and delivering training for hazardous waste operations and emergency response workers forced discussions between the awardees about testing trained workers. kMerrill took the lead for the OCAW, which opposed testing workers. In response to employer pressure to test workers at the end of a course, Merrill had written an article about testing that set forth much of the OCAW position.

Merrill’s criticism was directed at the proposed rule issued by OSHA on the accreditation of hazardous waste operations training programs. OSHA sought to require basing worker certification on trainees’ ability to pass a 50-question test. Merrill and the OCAW program argued that the emphasis should not be on whether workers had learned how to work safely but on the degree of responsibility assumed by employers. They argued that the NIEHS program and its awardees were undermining the model established by the program. He called for a requirement for employers to demonstrate that they had provided their employees with training from a nationally recognized, fully accredited training program. And before they are accredited, he said, training programs should be required to submit to a full-scale peer review by an independent panel of health professionals and training experts no less comprehensive and rigorous than that used in the competition for federal grants [29].

In the oil and petrochemical industries, accidents and excess exposures are common aspects of work. Merrill and the OCAW argued that these hazards were the inevitable result of “normal” operating procedures. Using accident literature, they argued that accidents result from a particular organization of work in a set of industrial processes. Merrill argued that in

order to change that organization of work, workers had to be empowered through education and the right to express and enforce their concerns, supported by mechanisms for doing so [29].

Merrill and the OCAW never argued against educating workers to engage in appropriate work practices. They argued, however, that testing workers to determine how well they had learned the information would reinforce the imbalance of power in labor-management relations that supports, and ensures, that oil and petrochemical workers would remain at risk of work-related injuries, illnesses, and fatalities.

The OCAW believes that it lost the argument. The minimum criteria document developed through the NIEHS-sponsored consensus process, however, does not call exclusively for testing workers. It does have a detailed section on “Proficiency Assessment” [30]. A compromise was reached, accepted by the OCAW, to set criteria for a written test, if a written test were to be used. So the OCAW was able to present an alternative discussion about worker testing that was given enough consideration to warrant a compromise, indicating the strength of their arguments and respect for their program.

JOBS AND THE ENVIRONMENT

In 1992, the OCAW conducted two training courses in the Chicago area in which both workers and community residents participated. The training was done cooperatively with the National Toxics Campaign (NTC). It provided a forum for workers and residents to discuss local hazardous waste issues collectively. Individuals from the two groups engaged in small-group activities together. Mary Elsner of the Chicago Area Committee on Occupational Safety and Health (CACOSH) attended and reported on them to Stan Holt of NTC. “Workers and community activists got to know one another, shed stereotypes they held about the other group, and found common ground” [31].

Results included: 1) community residents who had sued a local company met with workers employed by that company to discuss common concerns; 2) at Chicago area environmental conferences, the community activists shared what they had learned in the courses. Discussions about toxics use reduction strategies included workers’ perspectives; and 3) some activists and workers continued working on and talking about environmental issues and strategies.

At an October ‘93 meeting of the training program’s Advisory Board, the OCAW was urged to request that NIEHS support inclusion of community activists and environmentalists as participants in training courses that address issues impacting both workers and community residents. A “Jobs-and-the-Environment” curriculum had been developed by the Public Health Institute and the OCAW by this time.[8] One board member, Steve Lester of the Citizens Clearinghouse for Hazardous Waste, strongly advocated this approach and invited environmental activists to attend the OCAW Oil School.

[8]The Public Health Institute is affiliated with the Labor Institute.

NIEHS agreed to support an OCAW proposal to present an 8-hour course on a Saturday in a local union hall to an audience of community environmental activists and union members. This effort led to the CAT's development of a "Just Transition" curriculum, which would become a springboard for addressing issues of environmental justice.

EQUIPPING WORKERS FOR SYSTEMS ANALYSIS

The OCAW believes that within inherently dangerous industries, workers need to be skilled as health and safety systems analysts in order to mobilize for maximum prevention of risks related to hazardous conditions. The union's program has never denied the importance of safe work practices for protecting workers' health and safety. However, in industries in which contracting of operations to outside employers and their employees is common, untrained workers unfamiliar with facility safety systems and procedures create safety threats. Under these circumstances, proper work practices by the facility's employees will have little preventive impact against contractor-related catastrophic incidents. Therefore, the OCAW wants to develop the ability of members to become active participants in joint labor-management health and safety committees. The training helps to develop their expertise as systems analysts who can identify problems and present solutions that cannot be challenged on technical grounds.

IMPACTS OF THE PROGRAM

The OCAW program's greatest impact within the union has probably been the development of a network of competent worker-trainers. They are a base of trained health and safety activists who can work together to strengthen their union's efforts to prevent work-related injuries, illnesses, and fatalities. They also work to increase the power of workers in the industry and in U.S. society.

The program has helped to build the union. It demonstrates to the membership that the union is working on their behalf. Basing the program on worker-trainers has promoted development of a union health and safety program that is grounded and present on the shop floor. The program has spawned leaders. Most of the first worker-trainers have become international representatives or leaders or officers in their locals. It has created a union career path for some members.

The program has become a forum for workers to talk with one another about issues that are often too frightening to discuss anywhere else. Workers know that they can lose their jobs by raising serious health and safety issues. They also know that their chemical exposures may have the potential to cause cancer or other types of chronic, and often fatal, diseases. "You know, washing your parts off in benzene 20 years ago and you just, every time you go to the doctor you're afraid that every ache and pain you get, you know, it's the cancer's developed" [15].

The training has given workers a vehicle for sharing their solutions for eliminating hazards. As one worker discusses the way a job is done, another may tell how they changed the operation to prevent a hazard. The program has built on the workers' tradition of transferring

information in informal groups, such as through tag-along training, and provided a forum in which it can expand [15, 22].

Workers are also less accepting of the “inherent” dangers of the industry once they have been supported by training. “It’s activism throughout the system” [22]. Many trained workers report that they have a different set of expectations about their relationship to their employer. Workers are getting used to proposing solutions and sometimes achieving positive change [18].

The program has revived the OCAW’s health and safety activism that had diminished by the mid-1980s. It has strengthened support for action by the leadership [16–18]. It has built a network of activists who can pursue these issues from the shop-floor upwards. “I wouldn’t have guessed years ago that we would have trained as many people as have been trained to the skill levels that they have developed” [32].

The training also has helped union members, staff, and leaders critically analyze their own strategies and objectives. The worker-trainers have expressed concerns about their complacency to recruit and develop new leaders. As elsewhere, leaders often find it easier to address challenges themselves than to recruit and train others to do so.

CONCLUSION

The OCAW, in collaboration with the Labor Institute, used funding from the NIEHS SWTP to develop an innovative health and safety education and training program for its members. The program built on a set of health and safety strategies established by the union during the 1970s. The objectives of these strategies were to identify local health and safety issues and provide the support necessary to facilitate health and safety activism at the point of production. The objectives and strategies were central in the OCAW’s training.

The training established under the SWTP had additional goals and objectives that required a refinement of earlier strategies. The program sought to minimize the union’s reliance upon supportive professionals and instead expand the network of worker-trainers who could help union members gain access to and understand technical and legal issues. A further goal was that with this understanding workers at local facilities would be able to “… communicate, advocate, and mobilize around health and safety issues as they arise” [26]. The OCAW wanted production line workers to become safety systems analysts who could challenge faults in the existing system and present strategies for improvement. This required the integration of the production line workers and their local unions that increased workplace democracy into plant operation decision-making and control. The OCAW program has promoted incorporation of workers into production planning processes as an essential strategy for preventing workplace injuries, illnesses, and fatalities.

The represented industries’ structures present formidable barriers to success. Due to the elaborately bureaucratic and hierarchical organization of each represented industry, management supporters of the union’s program are often overruled. The dominant paradigm of placing responsibility for injuries, illnesses, accidents, and fatalities upon workers’ behavior has blinded much of management to the excellence of the OCAW training. For the

OCAW, which regards the industrial sectors it represents as inherently dangerous, "… employees can only be safe … when they are directly and constantly involved in preventing accidents" [29].

In interviews for this case study, program participants were asked whether they believe that the OCAW model resulted from the organization of work and labor-management relations within the represented industries. They consistently said that the model resulted from the ideology of its originators. The data strongly suggests this to be the case. Yet, the case study presents a strong relationship between the organization of these industries, at a point of economic and political industrial crisis, and the political strategies of the union. The OCAW seems to have developed a program that specifically addresses the structural and political dynamics of the industries whose workers it represents. Developing a clearer understanding of the relationship between these strategies and the specific labor-management relations within the represented industries may require additional research that incorporates interviews with corporate and health and safety managers and perhaps even corporate trustees.

The OCAW program has established itself as a leading organization within the NIEHS SWTP. Its leadership has resulted in a broadened understanding of strategies that the labor and health and safety movements can apply to worker health education. The OCAW's emphasis upon excellence and evaluation has helped to demonstrate the value of an occupational health and safety intervention program. It has repeatedly stressed the importance of giving voice to workers in order to understand the nature of these public health problems and the basis for successful intervention strategies. The OCAW program recognizes the limits of worker health education as only one aspect of industrial health and safety programs. It has implemented a strategy that emphasizes developing workers' abilities to impact these programs.

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