

Memorandum

To : **John Macleod, Executive Officer**

Date: **December 2, 2002**

From : **Suzanne Marria, Acting Chief Deputy Director
Department of Industrial Relations
Division of Occupational Safety and Health**

Subject : **Subject: Division Evaluation of Petition No. 448, Re Title 8 Section 5110, Repetitive Motion Injuries**

INTRODUCTION

Labor Code Section 142.2 provides that interested parties may propose new or revised regulations appropriate for adoption concerning occupational safety and health and requires the California Occupational Safety and Health Standards (Standards Board) to render its decision no later than six months following the receipt of such proposals. Labor Code Section 147 requires the Standards Board to forward such proposals to the Division of Occupational Safety and Health for evaluation and report. Labor Code Section 147 requires the Division to submit its evaluation report to the Standards Board within 60 days of the Division's receipt of the proposal from the Board.

This evaluation addresses two letters received by the Standards Board requesting amendment of California Code of Regulations Title 8 Section 5110, Repetitive Motion Injuries. One letter is dated August 7, 2002 and was submitted by Mr. Tom Rankin, President, California Labor Federation, AFL-CIO. The second letter is dated August 9, 2002 and was submitted by Mr. Steven A. Benjamin, Business Manager, International Brotherhood of Electrical Workers, Local 551. Both letters note that Labor Code Section 6719 reaffirms the California Legislature's concern over the prevalence of repetitive motion injuries in the workplace, as well as the duty of the Board to carry out the provisions of Labor Code Section 6357. Labor Code Section 6357 directs the Board to adopt, on or before January 1, 1995, standards for ergonomics designed to minimize the instances of injury from repetitive motion. Both letters suggest that at the present time the Standards Board:

“has an opportunity to revisit the ergonomics standard and that consideration be given to a comprehensive, hazard-based, preventive approach to repetitive motion injuries.”

Mr. Rankin's letter also specifically suggests consideration for adoption of the regulatory proposal for prevention of cumulative trauma disorders developed by the Division and considered by the Standards Board in 1994 but never adopted.

At the monthly meeting of the Occupational Safety and Health Standards Board on September 19, 2002, a representative of the California Labor Federation, AFL-CIO, addressed the Board and provided a written statement intended to amend the petition letter submitted by Mr. Rankin. This statement suggested two options for addressing Mr. Rankin's original request:

1. Convene an advisory committee to review the proposed standard considered by the Standards Board in 1994 and attached with Mr. Rankin's petition letter of August 7, 2002. The statement acknowledged that consideration of the 1994 proposal could result in a lengthy process involving a great deal of staff time before a recommendation could be put before the Board.
2. Convene an advisory committee to examine specific aspects of existing Section 5110 along with considering a regulatory proposal developed by the California Labor Federation attached with the written statement to the Board. It was stated that this more limited task should require one, or at most two, advisory committee meetings, with a report back to the Board required by the end of calendar year 2002. The Federation statement indicated further that this more narrowly focused advisory committee should focus on at least the following aspects of Section 5110:
 - a. Subsection (a)(4) limiting the scope of the regulation to only those situations where two repetitive motion injuries have been reported to the employer within 12 months of each other.
 - b. The provision of subsection (c) which allows employers to avoid citation by claiming that known prevention and control measures they chose not to implement imposed "additional unreasonable costs" or had not been proven by the Division to be "substantially certain to cause a greater reduction in such injuries..."

BACKGROUND

California Code of Regulations Title 8 Section 5110 (8 CCR Section 5110) which is proposed by the petitioners to be amended was filed with the Secretary of State on June 3, 1997 and became operative on July 3, 1997. The proximate genesis of Section 5110 can be traced to Labor Code 6357 which required the California Occupational Safety and Health Standards Board to adopt

"[O]n or before January 1, 1995...standards for ergonomics in the workplace designed to minimize instances of injury from repetitive motion."

At the time Section 6357 passed in mid-1993, the Standards Board was relying on the Division of Occupational Safety and Health and its public Ergonomics Advisory Committee to develop an ergonomics standard for the Standards Board's consideration and adoption. In November of 1993, a Notice of Public Hearing was published in the California Notice Register which contained the ergonomics standard (8 CCR Section 5110) proposed by the Division based on the public advisory committee process. In November of 1994, after two large public hearings, and the submission of over 6,500 written comments, the Standards Board voted down the Division's proposed Section 5110 standard.

On January 19, 1995, the Standards Board was sued by the California Labor Federation, and three named injured workers, in Superior Court in Sacramento, California for its failure to "adopt" a standard "to minimize instances of injury from repetitive motion" by January 1, 1995. The Superior Court ordered the Standards Board to develop and adopt a standard which complied with Section 6357 by December 1, 1996.

In December of 1995, the Standards Board published a Notice of Public Hearing which contained a proposed repetitive motion standard developed by the Board without the assistance of the Division of Occupational Safety and Health. Public hearings on this proposed standard were held in Los Angeles and Sacramento respectively on January 18 and 23, 1996. On November 14, 1996, the Standards Board adopted new 8 CCR Section 5110 entitled "Repetitive Motion Injuries."

The Office of Administrative Law approved 8 CCR Section 5110 on June 3, 1997, and this new repetitive motion injury standard became legally enforceable in California on July 3, 1997.

Over the three-year period following its approval by the Office of Administrative Law, legal challenges to Section 5110 brought by both organized labor and employer representatives resulted in removal of the originally included exemption from the standard of businesses with nine or fewer employees.

Section 5110 consists of three subsections:

(a) Scope and Application. This subsection limits the application of the standard to only those places of employment where where a repetitive motion injury (RMI) has occurred to more than one employee under the following conditions:

- (1) The RMIs were predominantly caused by repetitive work;
- (2) Two or more employees with RMIs were performing identical work activities;
- (3) The RMIs were musculoskeletal injuries objectively identified and diagnosed by a licensed physician, and
- (4) The RMIs were reported by the employees to the employer in the last 12 months.

(b) Program designated to minimize RMIs. This subsection requires that each employer subject to 5110 implement a program designed to minimize RMIs. The program must include a worksite evaluation, control of exposures which have caused RMIs; and training of employees, as follows:

- (1) Worksite evaluation. Each job, process, or operation of identical work activity covered by this section or a representative number of such jobs, processes, or operations of identical work activities shall be evaluated for exposures which have caused RMIs.
- (2) Control of exposures which have caused RMIs. Any exposures that have caused RMIs shall, in a timely manner, be corrected or if not capable of being corrected [be] minimized to the extent feasible. The employer shall consider engineering controls, such as work station redesign, adjustable fixtures or tool redesign, and administrative controls, such as job rotation, work pacing or work breaks.
- (3) Training. Employees shall be provided training that includes an explanation of:
 - (A) The employer's program;
 - (B) The exposures which have been associated with RMIs;
 - (C) The symptoms and consequences of injuries caused by repetitive motion;
 - (D) The importance of reporting symptoms and injuries to the employer; and
 - (E) Methods used by the employer to minimize RMIs.

(d) Satisfaction of an employer's obligation. This subsection provides that any measures implemented under subsection (b) of the standard shall satisfy the employer's obligation under the standard to minimize RMIs unless it is shown that a measure known to but not taken by the employer is substantially certain to cause a greater reduction in such injuries and that this alternative measure would not impose additional unreasonable costs.

In 1999 the California Legislature passed Labor Code Section 6719 which

“reaffirms its concern over the prevalence of repetitive motion injuries in the workplace and reaffirm[ed] the Occupational Safety and Health Standards Board's continuing duty to carry out Section 6357.”

On November 14, 2000 Federal OSHA published a Notice of Final Rule for an Ergonomics Program Standard located at Title 29 of the Code of Federal Regulations, Section 1910.900 (29 CFR 1910.900). That rule took effect on January 14, 2001, however compliance with its substantive provisions was not required of employers until October 14, 2001.

On March 1, 2001, a joint resolution of disapproval under the provisions of Congressional Review Act (5 U.S.C. Sections 801-808) was introduced into Congress to "nullify" 29 CFR 1910.900. This joint resolution was passed by both the United States Senate and the United States House of Representatives, and was signed into law on March 21, 2001 by President George W. Bush.

On February 28, 2001 the Occupational Safety and Health Standards Board received at its office in Sacramento a letter from Margaret Robbins, Director of Health and Safety for the California Labor Federation, AFL-CIO, requesting the Board's consideration of amendments to Title 8 California Code of Regulations Section 5110, Repetitive Motion Injuries. The letter stated

“Specifically we petition the Board to revisit CCR Title 8 Section 5110, Repetitive Motion Injuries, and replace it with a more sound and protective standard containing the elements of the 29 CFR 1910.900 Ergonomics Program Standard promulgated on November 14, 2000.”

At the Standards Board's monthly meeting on July 19, 2001 Ms. Robbins' request was denied by a vote of the Board. In its decision denying the request of Ms. Robbins, the Board stated in part that it did not believe that the federal standard for ergonomics recommended by Ms. Robbins offered a sound approach for revising California's standard on the same subject. The Board decision stated further that revisions to Section 5110 at that time would have been untimely given the activity being undertaken by Federal OSHA to address the prevention of repetitive motion injuries.

WORKING GROUP MEETING

At its monthly meeting on October 17, 2002, the Standards Board requested that the Division convene a working group consisting of members representing employee and employer interests to explore the issues associated with the request by the California Labor Federation to amend Section 5110. A working group meeting, chaired by Division staff, was held on November 15, 2002. The working group consisted of four labor members and four employer members, and each group was asked to choose two experts to also present their views. A record of the working group meeting is included as Appendix I of this evaluation.

The working group meeting highlighted points of difference and potential agreement between employer and employee representatives. These points are summarized in the attached minutes of the meeting. Key points of potential agreement were:

1. There is a significant lack of alignment between the existing 2-injury trigger in Section 5110 and the terminology and systems for reporting injuries to employers in the workers' compensation system. Unfortunately, the workers' compensation system is the only system mandating any type of reporting that could trigger the standard, since section 5110 does not require the employer to establish any type of system to ensure that RMIs are reported. This lack of alignment is likely to contribute to under-reporting of repetitive motion injuries, which could undermine the effectiveness of the 2-injury trigger of Section 5110.
2. Legal restrictions on reporting of injury diagnoses to employers, in the interest of medical confidentiality, may result in cases of injury that would otherwise trigger the provisions of Section 5110 going unreported as such.
3. Any requirements focusing on how an employer must identify and address repetitive motion injury risk factors in their workplace should be clear and reasonable.
4. The occurrence of a work-related injury or illness at a workplace does not and should not by itself establish a violation of any Title 8 regulation.
5. If the scope and requirements of Section 5110 are expanded to increase expectations of small businesses, it will be essential that the Cal/OSHA Consultation Service be readily available to assist them with meeting these new responsibilities.

In addition to discussion by the working group and presentations by their chosen experts, the following four presentations were made at the meeting by Division staff:

1. Statistical Overview of Repetitive Motion Injuries in California
2. Activities of the Cal/OSHA Consultation Service Addressing Repetitive Motion Injuries
3. DOSH Enforcement of Section 5110 – Statistics
4. Section 5110 Enforcement Experience

Key conclusions of these presentations which are pertinent to the Division's evaluation of Petition 448 were as follows:

- Since 1996 the incidence rate for RMIs with days away from work in California has trended up approximately 20 percent, while the incidence rate for RMIs nationally has trended down approximately 15 percent.
- The average median days away from work for cases classified in the BLS Annual Survey as being due to repetitive motion is four to five times higher than the average median days away for injuries and illnesses resulting from all causes, and increased from 25 to 30 between 1996 and 2000.
- Since 1997, approximately only 16% of inspections involving evaluation of an employer's compliance with Section 5110 have resulted in issuance of citations for violation of Section 5110.

- The distribution of inspections for 5110 evaluations among major industry divisions are not consistent with their risk for occurrence of RMIs. Manufacturing with 20 percent of all RMIs with days away from work in 2000 received only seven percent of the inspections, while state and local government employers with 14 percent of RMIs with days away from work in 2000 received 31 percent of inspections.
- There is no consistent system for physicians to report employee injuries to employers as resulting from repetitive motion, thus undermining the effectiveness of the 2-injury trigger in identifying workplaces that would otherwise be subject to the provisions of Section 5110.
- Workplace activities can in some instances be so varied among employees that even when they are substantially similar no two employees can be shown to be conducting "identical" work activities, thus undermining the effectiveness of the 2-injury trigger in identifying workplaces that would otherwise be subject to the provisions of Section 5110.

DIVISION EVALUATION

The Division agrees with the Petitioner that changes in the existing regulatory framework for addressing RMI and other ergonomic hazards are warranted. However, the Division would suggest a different approach than that suggested by the Petition, for the following reasons.

There continues to be substantial confusion among the regulated public as to the interaction of section 5110, with its two-injury trigger, and section 3203, which requires all employers to have an Injury and Illness Prevention Program (IIPP) that addresses the hazards to which employees are exposed. At the Standards Board meeting of September 19, 2002, two representatives from industry commented that they believed section 3203 filled any gaps left by the jurisdictional provisions of section 5110. One possible interpretation of the relationship between the two standards is that where the jurisdictional criteria of 5110 are not met, section 3203 applies with respect to an employer's obligation to address RMI hazards.

The California Occupational Safety and Health Appeals Board follows a general rule of regulatory interpretation where two regulations potentially apply to a hazard, one of the regulations is more specific than the other, and both are silent as to how to apply the two regulations. The general rule is that the specific regulation will control in areas where the regulations are inconsistent with each other.

Since section 5110 took effect, the Division's policy has been to enforce section 5110 as the exclusive authority for addressing RMI hazards. However, the Division notes that there is ample reason to revisit this policy and that it may not reflect the only reasonable interpretation of the Appeals Board rule, especially in light of the fact that section 3203 does not stand simply as a regulation, but as the vehicle for implementing the statutory requirements of Labor Code section 6401.7.

The wording of section 3203 closely parallels that of Labor Code section 6401.7, which is the statutory provision requiring employers to establish and implement injury prevention programs. Both the statute and the regulation require employers to have an effective program that identifies, evaluates, and controls the specific hazards employees encounter in their work. There is no provision excluding any particular type of occupational hazard and there is no requirement for the reporting of two injuries to an employer before the requirement to address hazards takes effect. If section 5110 is to be viewed as the exclusive source of requirements applicable to controlling RMI hazards then there is an inconsistency

between its injury-triggered provisions and the hazard-triggered provisions of the Injury and Illness Prevention Program requirement.¹

Moreover, substantial inconsistency appears to exist between 5110 on the one hand and Labor Code sections 6400, 6402, 6403, and 6404 on the other. These are all employer-duty statutes that articulate different approaches to describing an employer's obligation to provide a safe and healthy work environment, but the consistent theme throughout all can be summed up as a mandate to do what is reasonably necessary to protect employees. Most if not all safety experts will agree that protection means prevention, and awaiting injury before engaging in prevention is not likely to be seen as reasonable in most situations.

DIVISION RECOMMENDATION

The Division believes that the most effective way to control ergonomic hazards is to do so through procedures that either parallel or are integrated into the Injury and Illness Prevention Program required by section 3203. Moreover, it is likely that employers who have effective Injury and Illness Prevention Programs are already addressing ergonomic hazards, to the extent they exist, whether they perceive this as a legal requirement or not. Therefore, the Division believes that the most effective and sensible way to approach a standard addressing ergonomic hazards is to structure it so that it builds on IIPP procedures already required to be in place. This will allow employers to address ergonomic hazards just as they would other hazards to the extent they are present and reasonably amenable to corrective measures.

The Division recommends that the Standards Board consider initiating the rulemaking process to amend section 5110 as proposed in Attachment II. This approach will allow the best features of existing 5110 to be retained and will additionally provide a means of (1) settling the confusion regarding the relationship between sections 5110 and 3203, (2) implementing a hazard-based approach to the prevention of RMIs consistent with Labor Code sections 6400, 6401, 6401.7, 6402, 6403, and 6404, and (3) taking reasonable action to respond to the Legislature's ongoing concern expressed in Labor Code section 6719.

Attachment I—Working Group Meeting Record
Attachment II—The Division's Proposed RMI Standard

¹ Another questions of clarity arises in connection with the obligation of an employer to address ergonomic hazards which are not necessarily RMI hazards.

Meeting Record

Cal/OSHA Working Group on Repetitive Motion Injury Friday November 15, 2002 Oakland, California

Working Group Members

Labor:

Teri Calderon, Communication Workers of America
Laura Kurre, Service Employees International Union, Local 250
Tom Rankin, California Labor Federation
Ray Trujillo, State Building and Construction Trades Council

Employers:

Juli Broyles, California Chamber of Commerce (**absent**)
Judith Freyman, Organization Resources Counselors
Marti Stroup, Associated General Contractors – California Chapter
Willie Washington, California Manufacturing and Technology Association

Working Group Experts

Ira Janowitz, Ergonomist, University of California San Francisco Ergonomics Program (**Labor**)
Laura Stock, Associate Director, Labor Occupational Health Program, University of California Berkeley (**Labor**)
Thomas Hilgen, CPE, Regional Ergonomics Practice Leader, Marsh U.S.A. (**Employers – by written statement**)

Attendees

Joe Adams, University of California Office of the President
Jay Bosley, Operating Engineers Local 3 Joint Apprenticeship Center
Analyst Black, California Highway Patrol
Charles Boettger, Contra Costa County Municipal Risk Management Insurance Authority
Officer Coffi, California Highway Patrol
Dorothy Crosby, ICS Group
Desmond DeMoss, Port of Oakland
Katlyn Diaz, Chevron Texaco Corporation
Ken Douglass, Los Angeles County Fire Department
Howard Egerman, American Federation of Government Employees

Connie Grondona, California State Association of Occupational Health Nurses

Jim Graham, Communication Workers of American, Local 9410
Kim Hagadone, California Department of Health Services, Occupational Health Branch
Robert Harrison, California Department of Health Services, Occupational Health Branch
Sandy Hart, ABI
Pam Haynes, California Labor Federation
Warren Hoemann, California Trucking Association
Wendy Holt, CBS/Viacom
John Hronowski, Communication Workers of America, Local 9410
Ron Hutton, Allergan
Bill Jackson, Granite Construction
Steve Johnson, Associated Roofing Contractors of the Bay Area

Elizabeth Katz, California Department of Health Services, HESIS
Michael Kranther, Los Angeles County Fire Department
Marshall Massie, Operating Engineers Local 3 Safety Department
Barbara Materna, California Department of Health Services, Occupational Health Branch
Bert Mazeau, Associated General Contractors – California Chapter
Steve Pearl, California School Employees Association
Teresa Pichay, California Dental Association
Barbara Pottgen, Health Services, University of California Berkeley
Janice Prudhomme, California Department of Health Services, Occupational Health Branch
Julia Quint, California Department of Health Services, Occupational Health Branch
Steve Rank, Western Steel Council/Safety Institute of Ironworkers District Council
Kevin Thompson, Cal-OSHA Reporter
John MacLeod, Occupational Safety and Health Standards Board
Chris Walker, Sheet Metal and Air Conditioning Contractors National Association (California Association)
Chris Walker, Automotive Repair Coalition
Richard Warner, Southern California Edison
Jane Wang, California Department of Fair Employment and Housing
Angie Wei, California Labor Federation

POINTS OF DIFFERENCE AND POTENTIAL AGREEMENT

Potential Areas of Agreement

It is important that the 5110 triggering mechanism based on injuries be consistent with information from the Form 5021 (Doctor's First Report of Occupational Injury or Illness), and from physicians, that are both geared toward workers' compensation purposes and terminology (Willie Washington, Laura Stock). Amendments to the triggering mechanism, or collaboration with the workers' compensation industry, should be pursued to assure that these two systems are consistent in approach and terminology.

It is not possible to prevent all repetitive motion injuries, but enough is known to address and reduce injuries in many instances.

Ira Janowitz: We shouldn't for perfect information before addressing the problem as there will always be some degree of uncertainty in addressing repetitive motion injuries (RMIs). Enough is known currently to base a triggering mechanism on risk factors.

Willie Washington: Experience as on-site safety engineer is that repetitive motion injuries can be reduced, but even sophisticated and extensive programs sometimes do not prevent all cases. His experience with Cal/OSHA in general is that demonstrating a strong effort to reduce injuries is usually sufficient to avoid serious citations.

Judith Freyman: Employers need an endpoint in the regulation with respect to expectations for preventive measures required.

Judgement, and a certain amount of trial and error, is required in choosing effective control measures to prevent repetitive motion injury. However, adjustable chairs and adjustable workstations for keyboard operators are now generally recognized as effective measures to prevent repetitive motion injuries (Judith Freyman, Ira Janowitz) and DOSH should be able to prescribe these under Section 5110(c).

Products labeled or marketed as "ergonomic" are not necessarily effective. The Board of Certified Professionals in Ergonomics (BCPE) explicitly avoids any endorsements of products. (Marti Stroup, Ira Janowitz)

Some construction employers have taken steps to reduce repetitive motion injuries, although they may not be labeled as elements of an "ergonomics program." (Marti Stroup, Ray Trujillo)

Cal/OSHA consultation should continue to make it a high priority to assist small employers with the process of identifying and correcting RMI hazards (Willie Washington, Tom Rankin).

Just the occurrence of a repetitive motion injury by itself does not necessarily mean an employer will be cited. (Willie Washington, Tom Rankin)

Robert Harrison: Recently, and especially with upcoming implementation of provisions of the Health Insurance Portability and Accountability Act (HIPAA), there may be barriers to physicians informing employers of diagnoses of occupational injury or illness, thus reducing 5110 triggering events. Judith Freyman acknowledged the problem but felt that it could be addressed by DOSH without amending Section 5110.

Differences

5110(a) 2-injury trigger:

Employers generally: The current 2-injury trigger is necessary to assure that 5110 is not triggered by injuries that are not

work-related, and an injury trigger is needed to assure that the most significant problems are addressed.

Labor generally: It is contrary to public health doctrine, and unethical, to not address a problem until injuries have occurred.

The trigger for Section 5110 should be based on the presence of risk factors for repetitive motion injuries. The 2-injury trigger is especially problematic, as a workplace with no identical work activities could have many cases of repetitive motion injuries but never be subject to the provisions of Section 5110. Many or most employees fear job loss or other reprisal if they report an injury as necessary to trigger Section 5110.

Judith Freyman: Before amending Section 5110 data should be obtained on which employers already have an RMI prevention program in place.

Laura Kurre: A program by itself may not be adequate especially if it is very minimal, such as consisting only of an information pamphlet.

Judith Freyman: DOSH difficulty with enforcement of Section 5110, particularly identification of appropriate control measures under 5110 (c), simply reflects the same difficulties that employers have in understanding causation of any particular repetitive motion injury in an employee and determining how to address it.

Marti Stroup: Numbers of Inspections and citations for Section 5110 are not good measures of its impact and employer response.

Tom Rankin, Laura Stock: With Section 5110(c) almost any preventive measure an employer takes is sufficient to satisfy the regulatory requirement. As a result, employers making a strong effort to address repetitive motion problems are placed at a competitive disadvantage to other employers who do very little.

Tom Rankin: Small employers are not experience rated for workers' compensation so good employers share the cost of all employers' injuries.

Marti Stroup: Individual psychological factors can affect risk for repetitive motion injury.

Ira Janowitz: Psychosocial factors that can affect risk for RMI are piece work, low job control, time and machine driven work, understaffing, and no employer response to employee concerns. A frequently cited study at Boeing of the psychological component of repetitive motion injuries risk is flawed by not differentiating the work of machinists doing various different jobs.

Other Points

Ron Hutton, Allergan. The increase in the incidence of days away from work due to repetitive motion injuries indicated by the BLS Annual Survey of Occupational Injuries and Illnesses as reported in the Division's statistical presentation could be due to greater recording of such cases resulting from increased employer awareness due to the adoption and implementation of Section 5110.

Steve Pearl, California School Employees Association. Amending Section 5110 could help sign language interpreters who work signing throughout the day for their assigned student often with little or no break time for rest and recovery.

Len Welsh, DOSH. Under Labor Code Section 6357 passed as part of AB-110, an RMI regulation was viewed as another way to control the costs of workers' compensation insurance.

Len Welsh, DOSH. Determination of causation of injury or illness is a focus of the workers' compensation system, not Cal/OSHA. Employers should focus on whether their concern is really with Section 5110 or with the workers' compensation system.

Minutes

Len Welsh introduced the working group meeting as an opportunity for the Division of Occupational Safety and Health to gather information useful to assisting the Cal/OSHA Standards Board in deciding on the request by the California Labor Federation for amendments to Title 8 Section 5110, Repetitive Motion Injuries (RMIs)

Len then introduced the working group members and their chosen experts as listed in the roster of attendees above.

The Division of Occupational Safety and Health then gave four presentations related to Section 5110:

1. Statistical Overview of Repetitive Motion Injuries in California
2. Activities of the Cal/OSHA Consultation Service Addressing Repetitive Motion Injuries
3. DOSH Enforcement of Section 5110 – Statistics
4. Section 5110 Enforcement Experience

The major conclusions of these presentations were as follows:

1. Statistical Overview:

- Injuries and illnesses classified as being caused by repetitive motion accounted for approximately 5 percent of cases with days away from work in the Bureau of Labor Statistics (BLS) Annual Survey of Occupational Injuries and Illnesses for calendar year 2000 (**see slide 4 in the attached presentation**).
- Since 1996, the year before Section 5110 was adopted by the Cal/OSHA Standards Board, through 2000, the incidence rate for RMIs with days away from work in California has trended up approximately 20 percent, while the incidence rate nationally has trended down approximately 15 percent. The increased incidence of repetitive motion injuries with days away from work in California appears to be due primarily to increases in the manufacturing and service sectors. (**see slides 5 through 8 in the attached presentation**).
- Since 1986, the trend in the BLS Annual Survey nationally is a reduction in injuries due to all causes with days away from work and a concomitant increase in cases due to all causes with days of restricted activity only (**see slide 11 in the attached presentation**). This trend is particularly pronounced in the manufacturing sector nationally and could contribute to an underestimation of the incidence of repetitive motion injuries as only cases with days away from work are included in the RMI incidence reported in the BLS survey.
- Nationally, and in California, the average median days away from work for cases with days away from work classified in the BLS Annual Survey as being due to repetitive motion is four to five times higher

than the average median days away for injuries and illnesses resulting from all causes (**see slide 10 in the attached presentation**).

2. Cal/OSHA Consultation Service Activity

- In calendar year 2001 the Consultation Service conducted 337 on-site assistance visits that addressed ergonomic problems. Also in calendar year 2001 Section 5110 was noted as a possible violation in 19 on-site consultations. In calendar year 2002 year-to-date Section 5110 has been noted as a possible violation in 24 on-site consultations.
- Consultation outreach activities in federal fiscal year 2002 (October to October) included distribution of 20,836 copies of publications related to prevention of musculoskeletal injuries, and ten presentations addressing ergonomic issues attended by a total of 1,403 employers

3. DOSH Enforcement of Title 8 Section 5110 – Statistics

- Each year the Division conducts approximately 9,000 on-site workplace inspections resulting in approximately 20,000 citations for violation of Title 8 regulations
- Since July 3, 1997 (5 years, 3 months), the Division has issued citations for violation of Section 5110 in 58 inspections, most of these involving more than one 5110 citation. During the same period the Division estimates that a total of 360 workplace inspections of repetitive motion injury issues were conducted, yielding a ratio of citations per inspection of approximately 16 percent. In comparison, approximately 55 percent of inspections reported as being conducted for bloodborne pathogens resulted in citations of the bloodborne pathogens standard (Title 8 Section 5193). Approximately 55 percent of all inspections initiated by complaints result in the issuance of citations. (**see slides 8 and 14 in the attached presentation**)
- There is not good correlation between the incidence of repetitive motion injuries and the percentage of cases in which 5110 citations have been issued. For example, 31 percent of 5110 citations occurred in public sector workplaces (primarily hospitals and police communication centers). However, only 14 percent of RMI cases with days away from work occurred in this sector which constitutes about 14 percent of the California workforce. By contrast, the manufacturing sector in California in 2000 which accounted for 13 percent of the workforce incurred 20 percent of the RMI cases with days away from work, yet only seven percent of the inspections resulting in 5110 citations were conducted in this industry sector. (**see slide 15 in the attached presentation**)

4. Enforcement Experience with Section 5110 – Case examples

- Challenges encountered in actual cases in meeting the 5110 threshold triggering elements:
 - a. Two patterns of work involving the same activities but for only slightly different periods of time each shift may not satisfy the “identical” work activity element.
 - b. Injured employees frequently do not seek medical attention.
 - c. Injured employees frequently are seen by a health care professional other than a licensed physician, for example a chiropractor, physical therapist, or nurse.
 - d. Injured employees frequently seek treatment but do not report this to their employer, or file a claim for workers’ compensation.
 - e. An injured employee may be diagnosed with a work-related injury by a licensed physician but the report to the employer may not identify it as being predominantly caused by a repetitive job, process, or operation.
 - f. The Form 5021 Doctors First Report of Occupational Injury or Illness is not constructed to provide the information necessary to satisfy the threshold requirements of Section 5110 because it does not require that the physician state that an injury is an RMI or that it is predominantly caused by work.

- With regard to Section 5110(c), it is particularly difficult for the DOSH compliance officer to prove that another measure is known to the employer and is substantially certain to cause a greater reduction in repetitive motion injuries and that it would not impose additional unreasonable costs. The result is that almost any measure taken by the employer to address repetitive motion injury risk is sufficient to fulfill their obligation under Section 5110(c), even if it does not satisfy the employer's own written policy.

After the conclusion of the presentations Tom Rankin asked if there were any other Cal/OSHA standards with an injury trigger like that of Section 5110(a) or a safe harbor provision for control measures like that of Section 5110(c). Len Welsh answered that there was not, although there are various other types of triggering mechanisms such as levels of chemical exposure.

Willie Washington said that the differences in terminology and focus of the workers' compensation system and the 2-injury trigger of Section 5110 could be a problem and that the Division should work with the workers' compensation industry to address this. He also questioned the validity of the statistical data for workers' compensation generated by the Workers' Compensation Insurance Rating Bureau and included in the Division's presentation of the statistical overview of repetitive motion injuries in California. He noted that terminology for different types of injuries and illnesses is not well defined or applied consistently by insurance carriers reporting to the Bureau. He said that the Form 5021, Doctor's First Report of Occupational Injury or Illness, was not intended to provide the information that could appropriately trigger application of Section 5110 to an employer's workplace.

Len Welsh agreed with Willie Washington that the triggering mechanism for Section 5110 did not align with the terminology and reporting requirements of the workers' compensation system.

Laura Kurre noted that the Cal/OSHA Standard for bloodborne pathogens (Title 8 Section 5193) requires employers to list employees conducting activities that could reasonably result in exposure to bloodborne pathogens. A similar risk factor approach should be applied to prevention of repetitive motion injuries.

Willie Washington, responding to the Division presentation on the challenges of investigating workplaces for violation of Section 5110, said that the investigative requirements were not that much different than for other Title 8 regulations. He noted that investigative requirements for issuing a citation to an employer have never been easy.

Willie Washington noted that while it may not be possible to prevent all repetitive motion injuries it is possible to reduce the frequency and severity of such injuries.

Len Welsh noted that Section 3203 requiring an Injury and Illness Prevention Program does not have an injury trigger, that employers must develop the program for hazards present at their workplace even if no injury has occurred.

Judith Freyman asked if the Division has data on which employers or types of employers have a program to address repetitive motion injury and which do not. Len Welsh thought that information in the Division presentation on the Cal/OSHA Consultation Service might shed some light on this question but it did not. Laura Kurre said that simply the presence or absence of a program was not sufficient to determine if the hazard of repetitive motion was being effectively addressed. She noted that some programs are inadequate such as those that only involve distribution of an informational brochure.

Judith Freyman said that the difficulty the Division has with enforcement of Section 5110 is analogous to that faced by employers. She wanted to know what the Division had done to try to address occurrence of repetitive motion injuries in workplaces where they are most common. Len Welsh noted that enforcement sweeps have been conducted in the garment industry but that since few of the employees in that industry are willing to come forward to report an injury to their employer, there are very few reported events that would trigger the standard. Judith Freyman wanted to know if there was data confirming that there had been few or no instances in the garment industry in which the 2-injury trigger had been satisfied.

Marti Stroup said that numbers of inspections and citations for Section 5110 were not effective measures of the impact of the regulation. She said that since Section 5110 became effective, many AGC employers had developed safety plans to address repetitive motion injuries, though they were not necessarily titled by the employers as “ergonomics programs.”

STATEMENTS OF WORKING GROUP EXPERTS

Laura Stock agreed with Willie Washington that if the injury-based trigger is retained it is important that it align in terminology and focus with the workers’ compensation system. In her presentation as an “expert” for the labor members of the working group Laura Stock made the following points:

- Studies in the last 5 years by NIOSH and the National Academy of Sciences have confirmed that repetitive motion injury can be work-related.
- There is less certainty about how to effectively control the hazard posed by repetitive motion.
- The existing injury-based trigger is contrary to public health doctrine and is in fact unethical.
- With the requirement of Section 5110 for two injuries from identical work before the standard applies, an employer with no identical tasks could have many repetitive motion injuries but not be subject to Section 5110.
- Limiting Section 5110 to injuries caused by repetitive motion ignores injuries from lifting and overexertion.
- The 2-injury trigger is not effective because many workers fear reporting an injury or symptoms to their employer.
- One approach to addressing the inadequacies of Section 5110 might be to address repetitive motion injury hazards through Section 3203, the Injury and Illness Prevention Program requirement, by providing a list of workplace risk factors that would trigger a requirement for development of a preventive program. She noted that the regulation in Washington state uses a risk based approach.
- The “safe harbor” provision of Section 5110(c) unlevels the competitive playing field, penalizing employers who make a strong effort to address repetitive motion injury problems.

Marti Stroup read a written statement (attached with these minutes) provided by Thomas Hilgen, CPE, Regional Ergonomics Practice Leader, Marsh U.S.A. The major concerns expressed by Mr. Hilgen were:

- There is not consensus among experts in the field as to dose-response characteristics of repetitive motion or specific control measures.
- Repetitive motion injuries are a multi-factorial problem and so are difficult to control
- There is no universal control measure that eliminates causes of repetitive motion injuries
- There is no recognized “seal of approval” for different control products.
- The 2-injury trigger of Section 5110 assures validity in cases pursued. A 1-injury trigger could result in many cases of questionable validity being pursued.
- Symptoms of repetitive motion injuries develop over time and are subjective with the result that it is difficult to identify the cause and, therefore, the solution for the problem.
- If the safe harbor provision of 5110(c) is removed, employers may be forced to spend resources controlling what they determine to be relatively low priority hazards. Shifting an employer’s focus from maximizing return on the safety investment to one or two repetitive motion injury hazards could result in delaying attention to the most hazardous or costly situations.
- With workers’ compensation insurance premiums steadily rising employers are already focused on reducing injuries.
- Data from the Annual Survey of Occupational Injuries and Illnesses shows that nationally the number of repetitive motion injuries has, at worst, stabilized between 1995 and 2000.

Ira Janowitz

- He noted that he is an ergonomist with the University of California at San Francisco and is certified by the Board of Certification in Professional Ergonomics.
- He said that employers have obtained a “return on investment” of two to three times for ergonomic injury control measures. It is important to have an “early warning system” for development of repetitive motion injuries.

- A program to prevent repetitive motion injuries can help with early return to work.
- The safe harbor provision of 5110(c) means that there is no burden on the employer to actively investigate effective measures for prevention.
- The high number of median days away from work found for repetitive motion cases in the BLS Annual Survey of Occupational Injuries and Illnesses is due to the fact that it is hard to rest the affected part of the body as it is usually so integral to activities of daily living.
- Only approximately ten percent of repetitive motion injuries are reported to employers.
- Injuries related to ergonomic issues, for example a tight valve handle, may resulting in traumatic injury, ie. hand slipping off the valve and contacting a hot surface.
- Much is known about prevention of repetitive motion injuries, and action should not be delayed until unobtainable “perfect” answers are developed.

WORKING GROUP RESPONSES TO EXPERT PRESENTATIONS

Judith Freyman said that even with the “safe harbor” provisions of 5110(c), it should be possible for the Division to enforce some well-recognized preventive measures such as adjustable chairs and workstations for keyboarding. Len Welsh agreed that this might be true but that there are many other less well-recognized preventive measures that the “safe harbor” provision makes almost impossible for the Division to require of an employer. Marti Stroup noted that control measures labeled and marketed as “ergonomic” were not necessarily effective. Len Welsh said that a “performance oriented” standard could provide for and allow discussion of “reasonable” control measures.

Laura Kurre said that the key issue is not ineffective control measures but rather what are the risk factors for repetitive motion injuries and how should they be addressed. Ira Janowitz reiterated that Section 5110 needed to focus more on addressing risk factors for injury.

Ray Trujillo said that employers in the construction industry have taken some preventive measures, which is why the incidence of repetitive motion injuries in construction is relatively low compared to other industry sectors.

Willie Washington said that Ira Janowitz was right to focus on real solutions to real problems in industry, but noted that many small employers would not recognize many hazards as being related to ergonomics or repetitive motion. He said that small employers needed assistance from Cal/OSHA Consultation in hazard recognition. He said that employers hate being responsible under workers’ compensation for merely aggravating conditions that are caused by conditions and activities outside of work.

Tom Rankin noted that small employers are not experience rated for their workers’ compensation insurance and so have little incentive to address workplace hazards. He said that labor wanted a preventive standard that would provide an incentive for small employers to evaluate their workplaces for repetitive motion hazards.

Ray Trujillo noted that it is not only particularly vulnerable employees such as those in the garment industry who do not report workplace injuries and illnesses to employees. He said that many employees fail to report injuries and illnesses out of fear of reprisal including loss of employment.

LUNCH BREAK

Marti Stroup said that no change is needed to Section 5110. She said that RMIs are unlike any other type of injury because there is a lack of consensus on risk factors and dose-response relationships. For example, it is not known how many twists of a screwdriver will cause an injury. The advantage of the injury trigger in Section 5110 is that it takes individual factors into account in determining if there is truly a problem that warrants a response by Cal/OSHA. She said that she and her organization preferred the approach being taken by federal OSHA of developing non-mandatory guidelines for individual industries and operations posing a high risk of RMIs.

Marti Stroup continued by noting that the California Labor Federation contends that Section 5110 is not preventive. She said that Labor Code Section 6357 stated that the Standards Board was to adopt a regulation to “minimize” repetitive motion injuries and her organization believes that Section 5110 as currently structured does do that. She felt it was important to retain a trigger for the regulation based on objective evaluation of an injury by a medical doctor to assure that the case is work-related. She said that it is important to employers to be able to understand clearly what is prohibited so that they can steer appropriately between lawful and unlawful behavior.

Laura Kurre noted that due to repetitive motion injuries, healthcare is one of the most dangerous industries with respect to frequency of lost time injuries. She said that Section 5110 was not effective in preventing repetitive motion injuries. She said that the 2-injury trigger of Section 5110(a) was ineffective and unethical, and that even where it is met and triggers a DOSH investigation, the safe harbor provision of subsection (c) means that little has to actually be done by the employer, a “paper program” could satisfy the requirement. She said that other musculoskeletal hazards including awkward posture and lifting needed to be addressed by regulation.

Judith Freyman said that work-relatedness remains an issue, especially with respect to false claims of injury by disgruntled employees. She said that the 2-injury trigger of Section 5110 was affirmed in the litigation over Section 5110. She said that employers were not convinced that the highly restrictive inspection procedures for 5110 developed by DOSH are really necessary for its enforcement. For example she questioned the suggestion that a doctor’s report to the employer could not trigger 5110 unless it specifically stated “repetitive motion injury.” She said that problems of under-reporting of injuries could be addressed by outreach to employees and particularly to physicians. With regard to the difficulties DOSH experiences in identifying two triggering injuries from “identical work activities,” she said that employers experience analogous problems with identifying the specific sources of RMIs so that they could be addressed for prevention.

Judith Freyman also said that data from the IMIS system for citations was inadequate for tracking purposes. She questioned use of 1997 as the base year for statistics on enforcement.

Judith Freyman said that even employers addressing repetitive motion injuries using extensive sophisticated programs are not able to mitigate all hazards and prevent all RMIs and so there is a need for an endpoint with respect to how much corrective action an employer is required to take. She said that DOSH needs to put more effort into effective application of Section 5110 before proposing amendments to change it.

Teri Calderon thanked the Board for addressing the problem of repetitive motion injuries. She said it was obvious that no one work station could safely fit both a large and a small employee. She said that when a worker becomes disabled and cannot work, eventually they must go on public assistance and so it becomes a community problem.

Willie Washington said that he would be happy to work with DOSH on resolving the lack of alignment between the workers’ compensation system and reporting of RMIs to employers that could trigger Section 5110. He said that the intent of Section 5110 was not to put up artificial barriers to its application. He said that to the extent that the specific language of Section 5110 inadvertently contributes to injury he is willing to consider amendments to it. He noted that in ten years working at the plant level in safety, if he was not able to eliminate all back injuries among workers for whom he was responsible, but that demonstrating his efforts was generally sufficient to prevent issuance of Cal/OSHA citations.

Ray Trujillo said that some of the statements of the employer representatives in the working group suggested that workers, but not money, could be easily replaced.

Tom Rankin said that Labor Code Section 6357 was passed by the California Legislature as part of the AB-110 package of reforms to workers’ compensation. It was viewed as another approach to addressing rising claims for workers’ compensation, particularly from keyboarding operations. He said the Standards Board had politicized the process of developing the required regulation and that what was needed now was to follow the law’s requirement for a regulation to “minimize” injuries resulting from repetitive motion. He said that his original petition letter to the Board asked for consideration of the 1993 proposal developed by DOSH, but that this request was later narrowed to focus primarily on amending the trigger and safe harbor provisions of Section 5110. He said that small employer premiums for workers’ compensation don’t fully cover costs of injuries and so employers with good loss experience must help cover those costs and so should be supporting a strong regulation. He said that given the triggering and safe harbor provisions of Section 5110 it is a miracle that any citations are issued by DOSH.

COMMENTS FROM THE AUDIENCE AND OPEN DISCUSSION

Ron Hutton said that a possible explanation for the increasing rate of incidence of repetitive motion injuries in California since 1996 noted in the Division's statistical overview may be increased recording of such cases by employers resulting from greater awareness due to the adoption of Section 5110.

Laura Stock replied said that the continued presence of so many cases of repetitive motion injury indicates a need for more work. She said that the 2-injury trigger mechanism of Section 5110 could not work as long as workers were fearful of reporting injuries. She said that DOSH is needed to intervene in employment situations where the risk is not being addressed at all and so to level the competitive playing field for responsible employers who do address the problem.

Howard Egerman, an employee with the Social Security Administration said that many employees are fearful of reporting injuries and so the triggering mechanism is ineffective.

Robert Harrison suggested that it can be difficult for employers to know that two RMIs have occurred in their workplace. He said that when he writes the report to employers of employees he sees as a physician he is compelled by medical confidentiality restrictions not to report their diagnosis but only restrictions on their work activities. He said that with implementation of the Health Insurance Portability and Accountability Act (HIPAA) in April 2003, there will be further restrictions on reporting of information to employers.

Judith Freyman responded that Dr. Harrison raised an important question but that it could be addressed without amending Section 5110. Willie Washington said that California law allows for communication between employers and their workers' compensation carrier, and that HIPAA specifically allows for communication of diagnosis to employers in workers' compensation cases.

Steve Pearl representing school employees said that amendments to Section 5110 could help address the problem of sign language interpreters who can be required to work all day with a student without a break. He said the current two-injury trigger makes addressing this group's risk difficult.

Ira Janowitz sought to clarify earlier suggestions that individual psychological factors could contribute to risk of repetitive motion injury. He said that "psychosocial" factors such as piece work, machine-paced work, understaffing, and lack of response to problems in the workplace by management could play a role in RMI risk. But, he continued, individual psychological factors were important primarily in the effectiveness of programs for early return to work. He said that a large study of 3,000 Boeing machinists which had been viewed as suggesting individual psychological risk factors was flawed because it did not differentiate between machinists with tasks with significant risk for RMI and those performing tasks with only minimal risk.

Len Welsh said that concern with determining "causation" of RMIs is a focus of the workers' compensation system, while the focus of Cal/OSHA is reducing risk factors for injury. He suggested that part of employer concern with Cal/OSHA regulation of RMIs might be due to a focus on workers' compensation issues.

Steve Rank said that the organizations he represents are committed to worker safety but are also committed to avoiding unworkable solutions to the problem of RMIs. He said that it would be important to avoid a "one size fits all" approach to the problem. He noted that what may be an unsafe load for one employee to manually carry may not be unsafe for another.

Len Welsh noted that simply the occurrence of an injury at a workplace does not mean that an employer has violated an applicable regulation.

Tom Rankin said that he is not proposing a uniform approach to addressing risk factors for RMIs in all workplaces. He said that he is seeking a requirement that all employers evaluate their workplace for risk and take appropriate action when it is found.

Warren Hoemann said that practical sense is key to preventing repetitive motion injuries. He said that when employees are told to work and drive safely they do.

Attachments: Four PowerPoint Presentations

Statistical Overview of Repetitive Motion Injuries in California

Cal/OSHA Consultation Activities

DOSH Enforcement of Title 8 Section 5110 – Statistics

Section 5110 Enforcement Experience

Letter from Thomas Hilgen, CPE

Attachment II

Proposed new section 5110.

§5110. Repetitive Motion Injury (RMI) and other Ergonomic Hazards

(a) Scope and application. RMI and other ergonomic hazards shall be addressed through the employer's Injury and Illness Prevention Program required by section 3203. The following are additional requirements specifically applicable to RMI hazards.

Note: The Cal/OSHA Consultation Service makes it a priority to provide assistance to small employers in complying with this and other occupational safety and health standards. This service is offered free of charge.

(b) Investigation of an injury pursuant to section 3203(a)(5) shall include a worksite evaluation if the injury reasonably appears to be a work-related RMI. The worksite evaluation shall include the following:

(A) An interview of the employee and observation of the employee's workstations or work locations.

(B) Observation of the employee's work and work processes.

(C) A record of the findings of the evaluation.

(c) In controlling RMI hazards pursuant to section 3203(a)(6) the employer shall consider engineering controls, such as work station redesign, adjustable fixtures or tool redesign, and administrative controls, such as job rotation, work pacing or work breaks.

(d) Training. Employees exposed to RMI hazards as determined by the employer pursuant to section 3203(a)(3), (a)(4), (a)(5), or (a)(7) shall be provided training that includes an explanation of the following:

(1) The manner in which the employer's Injury and Illness Prevention Program addresses RMI hazards.

(2) The RMI hazards that the employer has determined are to be addressed by the Injury and Illness Prevention Program.

(3) The symptoms and consequences of injuries caused by repetitive motion.

(4) The importance of reporting symptoms and injuries to the employer.

(5) Methods used by the employer to minimize RMIs.