

Thursday, November 15, 2007

9:30 a.m. to 12:30 p.m.
San Francisco City Hall, Room 250 (Chambers)
1 Dr. Carlton B. Goodlett Place
San Francisco

“Nail Polish and Product Safety in the Workplace”.

BACKGROUND

A Growing Industry with Increasing Exposure to Health and Safety Risks

There is growing concern about the workplace health and safety conditions for the nearly 94,000 nail technicians working in California.¹ Besides the risks of developing musculoskeletal injuries from repetitive stress motion and contracting infectious diseases, these workers are exposed to a wide array of toxic and potentially hazardous chemicals found in nail products.² Nail polish, polish removers and artificial nail materials can contain carcinogens, organic solvents and other chemicals known or suspected to cause cancer as well as cause harm to human reproduction and development, central nervous system impairment, skin sensitization, irritation to mucous membranes, inflammation of the eyes, nausea, headaches, dizziness, anxiety, muscle fatigue, and respiratory damage.³ Yet, despite a growing awareness of the dangers posed by prolonged exposure to the ingredients in nail products, there is concern that inadequate attention has been given to these issues.

From the early 1990's until just a few years ago, the nail services industry experienced phenomenal growth. The number of salons doubled to almost 60,000 nationwide. *Nails Magazine* attributed much of the growth in this \$6 billion industry to the Vietnamese who helped to make nail salon services easily affordable for the teens and working women who comprise more than 90 percent of all customers.⁴ As a result, it is not

surprising that nail salons serve as the core of the Vietnamese community's economic support.⁵

California's nail salon technicians are mostly limited-English proficient Vietnamese women of child bearing age.⁶ They usually work long hours and may bring children to the workplace. Many (about 20 percent) are not employees of the salon but may instead rent a booth in the salon as an owner-operator.⁷ Many nail technicians are friends or family members of the salon owner.

Language, cultural, and economic barriers make nail technicians especially vulnerable. They enter the industry because the amount of time and expense required for technical training is minimal compared to other fields. Proficient English skills are not required and capital investment for tools, supplies and facilities is modest. Since it is so easy to enter this industry, competition is fierce.

In 2006, "competition" was cited as one of the biggest problems facing nail technicians.⁸ As a result, nail technicians have little job security. They must work quickly and for many hours at a time in order to increase their customer base and maximize their earnings. In addition, health and safety information is not usually available in Vietnamese, products are often insufficiently labeled and nail technicians must depend on the shop or building owners to see that there is proper ventilation and air circulation in the work area. According to Tin Nguyen, director of the Vietnamese Nail Care Professional Association (VNCPA), all of these factors make it difficult for nail technicians to take a proactive role in protecting themselves from toxic exposure in the workplace.⁹

Nail salon work has been linked with poorer mental processing functions among workers and children who are exposed in utero to the chemicals in nail products.¹⁰ One study identified increased spontaneous abortions among salon workers where nail services were performed.¹¹ Another showed that proper ventilation reduced asthma symptoms among nail technicians.¹² Surveys of nail salon workers have also been conducted in which they self-report numerous work-related symptoms and health impacts associated with toxic exposure.¹³ Health hot lines in Connecticut and California have received numerous calls from salon workers worried about the impact of their work on their pregnancies.¹⁴ Nevertheless, comprehensive scientific research on the long-term effects of daily exposure to the chemicals found in nail products is sorely lacking.

This dearth of knowledge is especially troubling to workers and environmental, health and consumer advocates because they believe it allows the industry to ignore the

concerns they are raising about the potentially adverse effects of chronic nail product exposure.

Government Oversight of Products and the Workplace

Federal Oversight

The U.S. Food and Drug Administration's (FDA) legal authority over cosmetics differs from their regulation of other products, such as drugs and medical devices. Cosmetic products, including nail products, and their ingredients are not subject to FDA premarket approval authority, except for color additives. According to the FDA, cosmetic firms are responsible for substantiating the safety of their products and ingredients before marketing. FDA regulations do prohibit or restrict the use of several ingredients in cosmetic products and require warning statements on the labels of certain types of cosmetics. In general, except for color additives and those ingredients which are prohibited or restricted from use in cosmetics by regulation, a manufacturer may use any ingredient in the formulation of a cosmetic provided that the ingredient and the finished cosmetic are safe, the product is properly labeled, and the use of the ingredient does not otherwise cause the cosmetic to be adulterated, improperly labeled, or deceptively packaged.¹⁵

The European Union bans about 1,200 chemicals for use in cosmetic products, while the United States bans only nine – bithionol, chlorofluorocarbon propellants, chloroform, halogenated salicylanilides, methylene cholordie, vinyl chloride, zirconium-containing complexes, and prohibited cattle materials. Other cosmetic ingredients – hexachlorophene, mercury compounds, and sunscreen ingredients – are restricted in cosmetic use by regulation.¹⁶

Three of the toxic chemicals commonly found in most nail products that are of greatest concern are dibutyl phthalate (DBP), formaldehyde, and toluene. DBP is a chemical that makes plastic more flexible. Formaldehyde is used in nail hardener as a preservative and toluene is used as a solvent. These chemicals are linked to cancer and/or adverse reproductive outcomes,¹⁷ are banned from use in nail products by the European Union,¹⁸ and are on California's Proposition 65 list of chemicals known to cause cancer or reproductive toxicity, but are not prohibited for use in cosmetics in the United States.

The Cosmetic Ingredient Review (CIR), a panel of scientists funded by the Cosmetic Fragrance and Toiletry Association, conducts safety assessments of its members' products. The CIR studied DBP, formaldehyde, and toluene, and found these ingredients to be "safe as used" or "safe with qualifications." Even if the CIR did

determine a product was unsafe, it has no real enforcement authority so it would be up to the manufacturer to voluntarily reformulate the product or take it off the market.¹⁹

The U.S. Environmental Protection Agency is responsible for gathering health and safety and exposure data on pollutants and toxic substances that can affect public health. An agency review of Material Safety Data Sheets (MSDS) found that common nail products also contain many other chemicals that can pose a threat to workers and consumers' health. For instance, artificial nails commonly contain benzoyl peroxide, butylmethacrylate, ethyl methacrylate, hydroquinone, isobutyl methacrylate, methacrylic acid, and titanium dioxide. Acetone is used in finger nail glue and nail polish removers. Butyl acetate, xylene, sulfonamide formaldehyde resin, and camphor are found in nail polish. Over exposure to these chemicals can cause eyes, skin, and mouth irritation. Some of these chemicals adversely affect the respiratory or central nervous systems.²⁰

The U.S. Department of Labor's Occupational Health and Safety Administration (OSHA) sets Permissible Exposure Limits (PELs) at which many of these chemicals are considered safe, however, these standards were developed almost 40 years ago to prevent acute exposure in industrial settings.²¹ It is not clear to what extent exposure to lower amounts of these chemicals, often in combination with one another and over longed periods of times, is safe. When it comes to the reproductive health issues of women, this is of particular concern because as indicated by air monitoring in many salons, PELs are hardly ever exceeded.²²

California's Safe Cosmetics Act

In 2005, California enacted SB 484 (Migden, Chapter 729, Statutes of 2005), creating the Safe Cosmetics Act. The law requires manufacturers to provide the state with a list of their products that contain chemicals known to cause cancer or reproductive toxicity and gives the state authority to conduct studies and investigations about the impact of hazardous chemicals in cosmetic products. Based on these studies, the state is authorized to make recommendations regarding the establishment of permissible exposure limits and authorizes the Division of Occupational Safety and Health (Cal/OSHA) in the Department of Industrial Relations to regulate these products.²³ The Department of Public Health, the entity responsible for implementing the legislation, is in the process of establishing a Web site, telephone help line, and developing a reporting form for manufacturers, all of which should be in place by July 2008.

Beginning January 1, 2007, manufacturers using DBP, formaldehyde, and toluene must disclose product ingredients that are on state or federal lists of chemicals that cause

cancer or birth defects. The year after the California law was passed, one of the major manufacturers, OPI Products, announced that it would remove DBP from its nail products. Soon after the law took effect in 2007, OPI announced it would be phasing toluene out of its products.²⁴ While OPI has not committed to remove formaldehyde from all of its nail products, it does make alternative products that do not contain the chemical.

In fact, since DBP, formaldehyde, and toluene are prohibited in cosmetic products sold in the European Union, international brands like OPI, Sally Hansen, and Revlon, have all developed nail products that do not contain these chemicals. However, since the United States does not prohibit it, companies may still choose to market nail products containing these and other dangerous ingredients in this country.

State Oversight

The California Air Resources Board's regulatory authority is mainly concerned with outside air contaminants. To improve outdoor air quality, it establishes emission limits for volatile organic compounds (VOCs) which have a measurable impact on outdoor ozone levels. The board has established a one-percent by weight VOC limit for nail polish removers in an attempt to eliminate all VOCs that contribute to outdoor ozone levels. The board is considering requiring nail coatings to be reformulated in order to reduce its ozone-forming potential. While the board lists toluene, formaldehyde, xylenes, and DPT as toxic air contaminants, in order to prohibit the use of these chemicals in nail products the board must be able to demonstrate that there are potentially harmful exposures to the public in outside air.

The Department of Toxic Substance Control focuses on matters dealing with exposure to toxic waste disposal. It is responsible for ensuring appropriate disposal, treatment, and cleanup of hazardous waste products throughout the state. It is not likely that the relatively small quantities of toxic waste disposal from each nail salon would come under its scrutiny. The department has created a multi-state agency group called the California Green Chemistry Initiative to address the effects of toxic chemicals in the environment with a more comprehensive approach rather than on a chemical-by-chemical basis. Its goals are to establish a consistent means for assessing risk and reducing exposure to toxins while seeking alternatives.²⁵

The state Board of Barbering and Cosmetology's primary concern is the consumer. Current regulations require that ventilation in buildings be in compliance with the Uniform Building Code, but what is adequate for an office or store may not be adequate where even low levels of toxic chemicals are in constant use and where workers suffer

prolonged exposure. Cosmetics containing hazardous substances that have been banned by the FDA are prohibited, but there are many other toxic chemicals in use that have not been banned by the FDA. The board also determines the curricula for schools of cosmetology, approves the textbooks they use, and develops and conducts the state licensing examination for nail technicians. According to the board, the biggest obstacle they face is that inspections are primarily conducted in response to consumer complaints because of the low number of inspectors relative to the large number of establishments and licensees in California. Also, the board does not currently have an effective outreach program to limited-English-proficient workers and consumers.

The Department of Industrial Relations's Division of Occupational Safety and Health (Cal/OSHA) is charged with protecting workers from safety hazards at the workplace. Department regulations establish permissible exposure limits for several hazardous substances used in cosmetology, including methacrylic acid, methyl methacrylate, toluene, and acetone. According to Cal/OSHA, enforcement inspection is the most important tool it has to protect the health of California workers. However, Cal/OSHA has only conducted nine inspections of nail salons within the past five years. These inspections have resulted in eleven violations in four establishments. Generally, Cal/OSHA only responds to worker health and safety issues if a worker files a complaint. Cal/OSHA does target high risk industries for random inspections, but the nail salon industry is not one of them. Cal/OSHA also cites the absence of data about whether various cosmetics are harmful to workers and the prevalence of independent contractors (over whom they have no jurisdiction) in the nail salon industry as the most significant obstacles to addressing harmful exposure to toxic chemicals in the workplace.

The Office of Environmental Health Hazard Assessment (OEHHA), a part of the California Environmental Protection Agency (Cal/EPA), assesses the public health risks of specific chemicals and develops and recommends health-protective exposure standards for air, water and land to such regulatory agencies as the Cal/EPA, the Department of Public Health and the Department of Agriculture. OEHHA also administers the Safe Drinking Water and Toxic Enforcement Act, (Proposition 65 program), and evaluates all currently available scientific information on substances considered for placement on the California Proposition 65 list. OEHHA is presently evaluating the health effects of DBP, one of the chemicals listed on the Proposition 65 list of chemicals that is used in a variety of consumer goods, including many cosmetic nail products.

Concerns Raised by Advocates

In recent years, many advocates, including members of the California Healthy Nail Salon Collaborative, joined forces and initiated the Campaign for Safe Cosmetics, which has been instrumental in drawing public attention to this issue. In major cities throughout the country including Boston, Chicago, Dallas, San Francisco, and Seattle, where Vietnamese and Vietnamese American women dominate the industry, public awareness of the serious health risks faced by nail technicians has increased. The state of Washington is also considering legislation similar to California's Safe Cosmetics Act.

Advocates have presented a series of recommendations to help protect nail technicians and consumers from harmful exposure to toxic chemicals.

- Increase federal regulation of all cosmetic products and make the FDA accountable for reviewing products and recalling those found to be hazardous. In the European Union, cosmetic products must be proven safe before they are even allowed on the market. In the United States, it is just the opposite. Nothing in the law requires manufacturers to prove to the FDA that their products are safe before they are put on the market.
- Conduct more research on the health effects of long-term (low) exposure to these chemicals. More research on the chronic health problems, infertility, birth abnormalities, and cancer risks associated with this occupational group is necessary.
- Provide better education on the possible dangers and health impacts associated with using and working with these products. Federal law requires suppliers and distributors of nail products to provide Material Safety Data Sheets (MSDS) for any product containing a potentially hazardous material. MSDS must be written in a manner that is easy to understand and translated into the primary language of those handling the products.
- Provide safety and health information and recommend best practices in the primary language of affected individuals, in a format that is clear and easy for them to understand.
- Improve the educational process by giving greater emphasis to the prevention of toxic exposure both in the curricula approved by the state for schools of cosmetology and on the state licensing examination for nail technicians.

- Provide exhaust ventilation systems that remove harmful dust and vapors from the indoor workplace and replace it with fresh, outside air, and special ventilated tables that remove contaminants from the breathing zone of the customer and the technician.
- Inform consumers about what measures must be taken to minimize their exposure to toxic chemicals in nail salons.

With the passage of SB 484, California has taken a major first step in protecting the health and safety of nail salon workers and customers. But more steps must be taken to ensure the health of workers and consumers. This hearing is intended to explore the following questions: What additional actions should be taken to reduce the health and safety risks posed by toxic exposure in the nail salon industry? What limitations exist in the current state and federal regulatory scheme? What increased authority is needed by the state and federal government? How can outreach, education, and training be more effectively provided? What additional research is needed?

END NOTES

- ¹ Board of Barbering and Cosmetology memorandum, September 27, 2007.
- ² Health and Safety in the Nail Salon Industry, www.asianlawcaucus.org.
- ³ Protecting the Health of Nail Salon Workers, March 2007. United States Environmental Protection Agency, Office of Pollution Prevention and Toxics, www.epa.gov.
- ⁴ *NAILS Magazine* 2006-2007 Big Book.
- ⁵ Roelofs, et.al., Results From a Community Based Occupation Health Survey of Vietnamese American Nail Salon Workers, *Journal of Immigrant Minority Health*, 2007.
- ⁶ *NAILS Magazine* 2006-2007 Big Book.
- ⁷ Board of Barbering and Cosmetology memorandum, September 27, 2007.
- ⁸ *NAILS Magazine* 2006-2007 Big Book.
- ⁹ Neighborhood Newswire, "Nail Salons May Cause Health Risks to Workers," by Lorraine Sanders, January 2, 2007, www.sfpower.org.
- ¹⁰ *Neuropsychological Symptoms Associated With Low-Level Exposure to Solvents and (Meth)acrylates Among Nail Technicians*, Gina L. LoSasso, Lisa J. Rapport, and Bradley N. Axelrod, *Cognitive and Behavioral Psychology*, Abstract: Vol. 14(3), July/September 2001. *Child Neurodevelopmental Outcome and Maternal Occupational Exposure to Solvents*, Dionne Laslo-Baker, Maru Barrera, Dafna Knittel-Keren, Eran Kozler, Jacob Wolpin, Sohail Khattak, Richard Hackman, Joanne Rover, Gideon Koren, *Archives of Pediatric and Adolescent Medicine*. Vol. 158, No.10, October 2004.
- ¹¹ Glossed Over – Health Hazards Associated With Toxic Exposure in Nail Salons: A look at the health hazards associated with toxic exposure in nail salons and recommendations for improving conditions for nail salon employees and customers, Alexandra Gorman and Phillip O'Connor, *Women's Voices for the Earth*, February 2007.
- ¹² Ibid.
- ¹³ Roelofs, et.al., Results From a Community Based Occupation Health Survey of Vietnamese American Nail Salon Workers, *Journal of Immigrant Minority Health*, 2007.
- ¹⁴ "The High Price of Beauty," Virginia Sole Smith, *The Nation*, October 8, 2007.
- ¹⁵ United States Food and Drug Administration (FDA) 2005, Washington DC, www.chsan.fda.gov
- ¹⁶ Environmental Working Group (2005), *Skin Deep Database*, www.ewg.org.
- ¹⁷ "Glossed Over – Health Hazards Associated with Toxic Exposure in Nail Salons", February 2007.
- ¹⁸ Ibid.

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- ¹⁹ “FDA” (2005) Authority Over Cosmetics,” Center for Food Safety and Applied Nutrition/Office of Cosmetics and Colors, March 3, 2005.
- ²⁰ Protecting the Health of Nail Salon Workers, March 2007. United States Environmental Protection Agency, Office of Pollution Prevention and Toxics, www.epa.gov.
- ²¹ U.S. Department of Labor, Occupational Safety and Health Administration, Permissible Exposure Limits, www.osha.gov.
- ²² “Glossed Over – Health Hazards Associated with Toxic Exposure in Nail Salons”
- ²³ SB 484 (Migden), Chapter 729, Statutes of 2005.
- ²⁴ “Leading Nail Polish Manufacturer Removes Toxic Ingredients,” press release, *Women’s Voices for the Earth*, March 29, 2007.
- ²⁵ California Department of Toxic Substance Control, Pollution Prevention: Green Chemistry Initiative, www.dtsc.ca.gov.