Via Facsimile

July 26, 2006

The Honorable Elaine L. Chao Secretary of Labor U.S. Department of Labor 200 Constitution Avenue, NW Room S-2018 Washington DC 20210

Dear Madam Secretary:

Re: Petition for an OSHA Emergency Temporary Standard for Diacetyl

The United Food and Commercial Workers International Union (UFCW) and the International Brotherhood of Teamsters (IBT) hereby petition the Department of Labor to immediately issue an Emergency Temporary Standard (ETS) for diacetyl (2,3-butanedione, CAS # 431-03-8), a chemical used in flavorings. Exposure to diacetyl has been associated with many cases of severe lung disease among workers in microwave popcorn facilities and in factories where flavorings are produced and used. While the disease has been labeled "popcorn workers' lung" workers throughout the food industry are at risk if they are exposed to diacetyl.

We urge your proper discharge of the Occupational Safety and Health Act, which states:

The Secretary shall provide...for an emergency temporary standard to take immediate effect upon publication in the Federal Register if she determines (A) that employees are exposed to grave danger from exposures to substances or agents...and (B) that such emergency standard is necessary to protect employees from such danger. (emphasis added)

An ETS is needed because workers will continue to be under grave danger of life-threatening illness during the time it would take for OSHA to set a Permanent Standard.

Workers exposed to diacetyl are at continuing high risk for a severe, irreversible, and potentially fatal respiratory disease, called *bronchiolitis obliterans*, because there are no enforceable OSHA standards requiring exposures to be controlled.

Diacetyl is an artificial flavoring used to impart the taste of butter in popcorn, pastries, frozen foods, and candy. Dozens of diacetyl-exposed workers employed at popcorn plants have developed occupational lung disease and at least three have died. There is strong evidence that *bronchiolitis obliterans* is caused by exposure to diacetyl. This evidence comes from studies done by the National Institute for Occupational Safety and Health (NIOSH) at the factories in which workers have developed the disease, as well as laboratory studies in which animals have been exposed to diacetyl or butter flavoring, and developed severe lung damage. 1,2,3,4,5,6,7,8,9

The disease is not limited to popcorn factories; cases of work-related lung disease have been reported among diacetyl-exposed workers employed at factories where the flavorings are produced.¹⁰

According to the Flavor and Extract Manufacturing Association, approximately 70 U.S. companies are involved in the making and marketing of flavorings, and 3,000 workers are employed in producing flavorings. Moreover, tens of thousands of food production workers may be exposed to diacetyl and/or other chemicals that make up butter flavoring in industries including food-flavoring manufacture, microwave popcorn, butter, cheese, cake mixes and flours, cookies and crackers, candy, chocolate, flavored oils and syrups, potato chips and other snacks, and frostings.

The UFCW and IBT petition OSHA for an ETS that would require employers to:

- Control airborne exposure to diacetyl to below 0.05 ppm, averaged over an eight-hour work period. This is a provisional level pending determination of the level which protects workers against a significant risk of suffering severe respiratory disease.
- Provide NIOSH-approved air-purifying respirators with organic vapor cartridges and particulate filters or supplied-air respirators to all employees exposed above 0.05 ppm and to employees with any airborne exposure on request.
- Provide medical surveillance and consultation to all employees exposed above 0.05 ppm.
- Conduct monitoring of airborne exposure to diacetyl.

In addition, the UFCW and IBT petition OSHA to immediately:

- Issue a bulletin to all employers and employees potentially exposed to diacetyl stating that exposure may result in severe illness. This bulletin will notify employers of the hazard and ways to protect workers; failure to take appropriate precautions to protect workers would be grounds for citations under OSHA's General Duty clause.
- Conduct inspections at facilities where workers are exposed to diacetyl. In workplaces where dangerous or uncontrolled exposure occurs, citations should be issued under OSHA's General Duty clause.
- Begin rule-making proceedings to establish a Permanent Standard to protect workers from exposure to all flavorings. The Permanent Standard should include a permissible exposure limit that protects workers against a significant risk, methods of compliance, a detailed medical surveillance program, appropriate exposure monitoring, training, and information.

We have attached a statement submitted by 40 leading occupational health physicians and scientists summarizing the evidence that exposure to diacetyl poses a grave danger to workers, and supporting the call for immediate action to prevent irreversible lung disease among diacetyl-exposed workers. The statement of the physicians and scientists should be considered incorporated in this petition.

On behalf of the thousands of workers exposed to this highly hazardous chemical, we look forward to your timely and favorable response to this petition.

Respectfully submitted,

Joseph T. Hansen International President

United Food and Commercial Workers

International Union

James P. Hoffa
General President

International Brotherhood of Teamsters

Attachment

REFERENCES

¹ Centers for Disease Control and Prevention. *Morbidity and Mortality Weekly Report*. Fixed obstructive lung disease in a microwave popcorn factory-Missouri, 2000-2002. 51:345-347 (Apr. 26, 2002). Available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5116a2.htm

² Kreiss K, et al. Clinical bronchiolitis obliterans in workers at a microwave-popcorn plant. *N Engl J Med*. 2002;347(5):330-338.

³ National Institute for Occupational Safety and Health. Preventing lung disease in workers who use or make flavorings. NIOSH Publication No. 2004-110, 2004. Available at: http://www.cdc.gov/niosh/docs/2004-110/

⁴ Kanwal R, et al. Evaluation of flavorings-related lung disease risk at six microwave popcorn plants. *J Occup Environ Med*. 2006;48(2):149-157.

⁵ BASF. Report: study on the acute inhalation toxicity LC50 of diacetyl FCC as a vapor in rats 4-hour exposure. Project No. 1310247/927010, June 8, 1993. (Available at: http://www.defendingscience.org/)

⁶ Hubbs AF, et al. Necrosis of nasal and airway epithelium in rats inhaling vapors of artificial butter flavoring. *Toxicol Appl Pharmacol.* 2002;185:128-135.

⁷ Hubbs AF, et al. Inhalation toxicity of the flavoring agent, diacetyl (2,3-butanedione), in the upper respiratory tract of rats. *Toxicologist*. 2004;78(S-1):438-439. (Available at: http://www.toxicology.org/Al/Pub/tox/2004Tox.pdf)

⁸ Michaels D, Monforton C. Scientific evidence in the regulatory system: Manufacturing uncertainty and the demise of the formal regulatory system. *J Law Policy* 2005;13(1): 17-41. Available at: http://www.defendingscience.org/upload/Scientific-Evidence-in-the-Regulatory-System.pdf

⁹ Schneider A. Disease is swift, response is slow. *Baltimore Sun*. April 23, 2006. Available at: http://www.baltimoresun.com/news/health/bal-te.flavoring23apr23,0,2684871.story?coll=bal-nationworld-utility

¹⁰ Harrison R, Gelb A, Harber P. Department of Health Services, State of California. Food flavoring workers with bronchiolitis obliterans following exposure to diacetyl, California, May 15, 2006. Available at: http://www.capanet.org/pdfs/BO cases %20final 5 16 06.pdf