



DEPARTMENT OF HEALTH & HUMAN SERVICES

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Public Health Service

Centers for Disease Control
and Prevention (CDC)
National Institute for Occupational
Safety and Health (NIOSH)
1095 Willowdale Road
Morgantown, WV 26505-2888

May 23, 2008
HETA 2008-0125
Interim Letter I

Mr. Eric Frumin
UNITE HERE
275 Seventh Avenue
New York, NY 10001

Dear Mr. Frumin:

In February 2008, the National Institute for Occupational Safety and Health (NIOSH) received a Health Hazard Evaluation request from the international union UNITE HERE to evaluate both the respiratory health and inhalation exposures of food preparation workers at Aramark – JP Morgan Chase, 277 Park Avenue, New York, NY. The purpose of this letter is to report on the preliminary analysis of the data.

On February 26, 2008, the New York City Department of Health and Mental Hygiene upon NIOSH's request collected bulk samples of current-use cooking oils at another Aramark facility in New York City and sent them to NIOSH for analysis. Of the bulks collected, two were reportedly currently in use at the 277 Park Avenue location: Frymax product #35071 (Aramark #3185345), and Prep product #35041 (Aramark #8007759). We did not detect diacetyl using gas chromatography with mass spectrometry in these two bulk samples.

On March 11-12, 2008, we completed a walk-through visit of this location where they interviewed current workers about their exposures and job duties, conducted air sampling, evaluated the cooking area ventilation systems, collected bulk samples of cooking oils currently in use, and reviewed the material safety data sheets (MSDS) and the Occupational Safety and Health Administration (OSHA) 300 logs. We collected personal and area air samples for diacetyl and acetoin using the modified OSHA method PV2118 and general-area air samples for volatile organic compounds (VOCs) using NIOSH method 2549. We also performed real-time air sampling for total VOC concentrations using a programmable pocket photo-ionization detector (ppbRAE, Rae Systems Inc., San Jose, CA); for airborne particle concentrations in the respirable size range using a particulate monitor (pDR-1000AN *personal* DataRAM, Thermo Scientific Corp., Franklin, MA); and for carbon monoxide (CO) concentrations using a single gas monitor (T82 Industrial Scientific Corp., Oakdale, PA). We used direct reading indicator tubes to sample for nitrous fumes (NO_x) and nitrogen dioxide (NO₂). Additionally, we measured ventilation air flow, air temperature, and relative humidity levels.

We did not detect diacetyl, acetoin, NO_x, NO₂, or CO in any of the air samples taken; limits of detection were 0.02, 0.07, 0.5, 0.5, and 1.0 parts per million (ppm), respectively. We detected levels of airborne VOCs during real time air sampling ranged from 0 to 785 parts per billion (ppb), with most levels under 100 ppb. The spike at 785 ppb lasted for only one minute and occurred during an operation involving the sautéing of vegetables in oil with garlic and cayenne pepper flakes. General-area air samples (using NIOSH method 2549) and bulk oil samples for VOC screening collected during the survey are undergoing laboratory analysis and are not currently available.

We detected levels of airborne particle concentrations (in the respirable size range) during real-time sampling ranging from 0.01 to 99.97 mg/m³, with most levels under 0.09 mg/m³. The spike at 99.97 mg/m³ occurred during a 12-minute interval when a worker used Scotch-Brite™ Quick Clean Griddle Liquid to clean a hot griddle, creating large amounts of steam.

A medical survey, consisting of an interviewer-administered questionnaire and spirometry (lung function) testing, was conducted April 3-4, 2008. We performed spirometry following the American Thoracic Society guidelines. We used a dry rolling-seal spirometer interfaced to a personal computer and compared spirometry results to reference values based on U.S. population data from the Third National Health and Nutrition Examination Survey. We selected each participating worker's largest forced vital capacity (FVC) and forced expiratory volume in the first second of exhalation (FEV₁) for analysis. We defined obstruction as an FEV₁/FVC ratio and an FEV₁ below their respective lower limits of normal. An obstructive abnormality indicates that air is exhaled from the lungs more slowly than normal. This can be seen in certain lung conditions such as asthma, bronchitis, emphysema, or bronchiolitis obliterans. We defined borderline obstruction as an FEV₁/FVC ratio below the lower limit of normal with normal FEV₁ and FVC. A borderline obstructive abnormality may indicate early evidence of obstruction, which also requires a low FEV₁. We defined restriction as an FVC below the lower limit of normal with a normal FEV₁/FVC ratio. A restrictive abnormality indicates that the amount of air exhaled is smaller than normal. This can be seen in certain lung conditions, such as lung scarring or fibrosis, or in people who are considerably overweight. Restriction can also be seen in people who have a severe obstructive abnormality. We defined a mixed pattern (obstruction and restriction) as an FEV₁/FVC ratio, FEV₁, and FVC all below their respective lower limits of normal. Workers with evidence of airways obstruction were administered albuterol, a bronchodilator medication used to treat obstructive lung diseases such as asthma, and were then re-tested after 10 minutes to see if the obstruction was reversible. We defined reversible obstruction (such as asthma) as an improvement in the FEV₁ of at least 12% and at least 200 milliliters after administration of albuterol. We defined fixed obstruction (such as bronchiolitis obliterans) as airways obstruction in which neither the FVC nor FEV₁ increased by 12% or more and at least 200 milliliters after the administration of albuterol.

Thirty-eight of the 50 current employees participated in this medical survey. Of the 38 participants, 36 performed spirometry testing. Two participants did not perform the breathing tests due to medical contraindications. The results of the spirometry testing were within normal limits for 22 participants. There were 14 breathing tests with results below the range of normal, of which four demonstrated borderline obstruction, six had restriction, three had a mixed pattern, and one individual had a reduction in the FEV₁ without clear obstruction or restriction. We sent

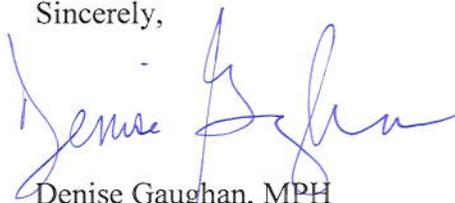
individual test results to each participant on May 1, 2008. In the cover letter accompanying the results, we recommended that each participant provide a copy of his or her spirometry results to his or her personal physician.

Interim Recommendations for Aramark Facility at 277 Park Avenue:

1. Use a ventilation hood for all cooking with an open-flame grill, flattop or ridged (marked) grill or griddle, panini press, or when sautéing or frying in a pan.
2. Personal protective equipment (PPE) such as gloves, goggles, and/or a respirator may be required for chemical cleaning of heated grills. Review and follow MSDS recommendations regarding PPE for cooking and cleaning products.
3. Ensure all workers, including temporary workers, receive initial and annual safety training regarding safe work practices. OSHA's Hazard Communication Standard, also known as the "Right to Know Law" (29 CFR 1910.1200 available at <http://www.osha.gov>), requires that employees are informed and trained of potential work hazards and associated safe practices, procedures, and protective measures. Training should be in Spanish for workers whose primary language is Spanish.

We appreciate the cooperation of UNITE HERE, Aramark, and employees during our surveys. We will continue to analyze the data from this facility and will provide you with a final report, including final recommendations, in the future. If you have any questions or concerns, please feel free to contact Denise Gaughan at (304) 285-6262 or Randy Boylstein at (304) 285-6062.

Sincerely,



Denise Gaughan, MPH
Lieutenant, U.S. Public Health Service
Respiratory Disease Hazard Evaluation and
Technical Assistance Program
Field Studies Branch
Division of Respiratory Disease Studies

A handwritten signature in black ink, appearing to read "Randy Boylstein". The signature is fluid and cursive, with a long horizontal stroke at the end.

Randy Boylstein, MS, REHS
Lieutenant Commander, U.S. Public Health Service
Respiratory Disease Hazard Evaluation and
Technical Assistance Program
Field Studies Branch
Division of Respiratory Disease Studies

cc:

Charles Butler, Aramark, 277 Park Ave
Michael Keffer, Aramark
Susan Eisma, Aramark
Lisa Olmo, UNITE HERE Local 100
New York State Department of Health
OSHA, Region 2