

**California Department of Public Health  
Division of Environmental and Occupational Disease Control  
Occupational Health Branch**

**HAZARD EVALUATION SYSTEM  
AND  
INFORMATION SERVICE**

**Annual Report**

**December 2007 – November 2008**

A report to the Legislature submitted to the Department of Industrial Relations for the  
Hazard Evaluation System and Information Service

## HAZARD EVALUATION SYSTEM AND INFORMATION SERVICE (HESIS)

### **Executive Summary**

**This report is mandated in Labor Code Section 147.2.** Herein is detailed the implementation and operation of a “repository of current data on toxic materials and harmful physical agents in use or potentially in use in places of employment in the state,” as mandated by the above regulation, and includes:

- ✓ The amounts of and source of funds allocated and spent on repository activities;
- ✓ The toxic materials, harmful physical agents, and other workplace hazards investigated during the past year, and recommendations made concerning them;
- ✓ Actions taken to inform interested persons of possible hazards of exposure to toxic materials and harmful physical agents; and
- ✓ Any recommendations for legislative changes relating to the functions of the repository.

The mandates of the Labor Code have been implemented in the following fashion:

- ✓ Provision of technical support and consultation regarding occupational health to the Department of Industrial Relations (DIR), California Department of Public Health (CDPH), and other agencies.
- ✓ Provision of a telephone information service to individuals seeking information about workplace hazards;
- ✓ Provision of educational materials and an education/outreach function;
- ✓ Provision of a hazard assessment function; and
- ✓ Provision of an extensive information repository.

In 2008, HESIS continued to implement its mandates to protect California workers from occupational illness and disease. HESIS identified, evaluated, and provided practical information on toxic chemicals and other workplace hazards; assisted the DIR Division of Occupational Safety and Health (Cal/OSHA) in determining whether illnesses and diseases were work-related and in promulgating protective occupational health standards; and initiated and worked collaboratively with others on targeted public health projects and activities. HESIS’ accomplishments include:

- Participated in a large-scale, multi-party, hazard evaluation, health surveillance, and intervention project in the flavor manufacturing industry (the Flavor Industry Safety and Health Evaluation Program, or “FISHEP”). This project was initiated jointly with Cal/OSHA as an industry-wide response following the identification of

the first California worker known to have bronchiolitis obliterans, a life-threatening lung disease. As detailed below, HESIS' role in FISHEP has been to provide:

- ✓ Medical surveillance protocols,
  - ✓ Worker, employer and physician education materials,
  - ✓ Ongoing review of spirometry quality and test results,
  - ✓ Data analysis, and
  - ✓ Technical oversight of employer-provided medical surveillance programs in concert with Cal/OSHA and National Institute for Occupational Safety and Health (NIOSH) personnel.
  - ✓ Technical input on Cal/OSHA's draft exposure standard (and medical surveillance requirements) for diacetyl exposure in flavoring formulation and food processing operations.
- Provided **68 medical consultations** to Cal/OSHA enforcement staff concerning a total of 87 employees (up from 15 consultations in 2006 and 41 in 2007).

Medial consultations, which often address the issue of work-relatedness of an injury, illness, or fatality, typically begin with a request from Cal/OSHA staff, followed by information gathering, data synthesis, medical literature and records review, and report writing. A typical medical consultation involves approximately 20 hours of time on the part of a HESIS Public Health Medical Officer.

- Responded to **219 calls to the Workplace Hazard Helpline** (also referred to as the "Telephone Response System" or "TRS"). Eighty-one percent of these calls were initiated by workers, relatives of workers, employers, health care providers treating workers, or industrial hygiene / safety personnel serving workers.

TRS responses generally involve 1-3 telephone interactions with the caller, as well as online technical data retrieval, determination of appropriate referral avenues, and provision of supporting documentation, either as online links or in hard copy. The average TRS response occupies approximately one hour of technical staff (i.e., Industrial Hygienist or Public Health Medical Officer) time.

- Completed a major revision of the following **worker-education document**:
  - ✓ Understanding Toxic Substances
- Began revisions of the following **worker-education documents**:
  - ✓ Chromium-6
  - ✓ Isocyanates
  - ✓ Sewing Machine Operators

HESIS' work with collaborators to expand the public health impact of the program continued this year, including participation in meetings and other activities of:

- Healthy Nail Salons Collaborative
- Interagency Indoor Air Quality Working Group
- Western Occupational and Environmental Medicine Association (WOEMA)
- Worksafe

HESIS continued to provide technical assistance to Cal/OSHA to help prevent workers from becoming ill or injured. HESIS provided medical consultation to Cal/OSHA Enforcement to determine whether 87 cases of illness, disease, or fatalities were work-related, and developed recommendations to assist employers in preventing new cases of work-related health problems. HESIS served on and provided technical assistance to Cal/OSHA Advisory Committees to help develop policies and procedures to amend permissible exposure limits for workplace chemicals and other agents, and to develop standards for diacetyl, aerosol transmissible diseases, and sensitizers. HESIS continued to serve as a referral source for inquiries received by Cal/OSHA on the health hazards of chemicals and other workplace hazards, and to inform employers and workers about Cal/OSHA regulations and services through the HESIS Workplace Hazard Helpline and HESIS publications.

Other collaborative public health activities this year included:

- Participation in a project along with the University of California, San Francisco, to evaluate the accessibility and quality of spirometry provided by local health care clinics involved in performing employer-based medical surveillance services for workers exposed to respiratory hazards.
- Participation in a project along with the University of California, Berkeley and San Francisco, to evaluate the feasibility of characterizing occupational exposures for a cohort of pregnant patients and identifying toxicants that pose risks of developmental toxicity using occupational codes on patient information forms.

HESIS staff continued to assess the health hazards of specific work-related exposures and to provide technical assistance to agencies and groups. Surveillance of the occupational health literature, identification of new and unappreciated hazards, and expansion of the information repository are ongoing. The Occupational Health Branch (OHB) Web site:

<http://www.cdph.ca.gov/programs/ohb/Pages/default.aspx>

continues to showcase the publications developed by HESIS. HESIS also continued to provide support for OHB through active participation on the management team and serving on Branch-wide and Division-wide committees.

**Specific Accomplishments :**

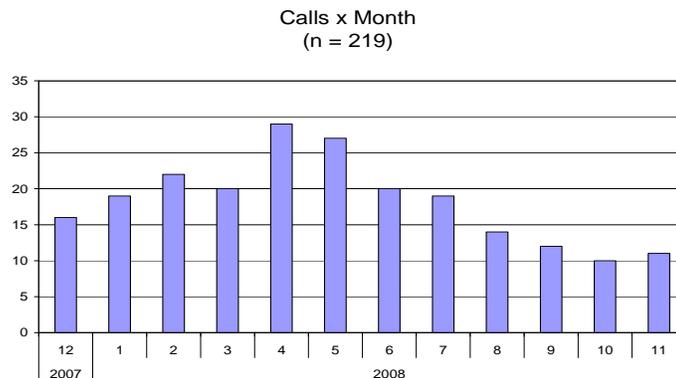
**Labor Code Section 147.2 – Mandate 1**

Provide reliable information of practical use to employers, employees and representatives of employees, and other governmental agencies on the possible hazards to employees of exposure to toxic materials or harmful physical agents.

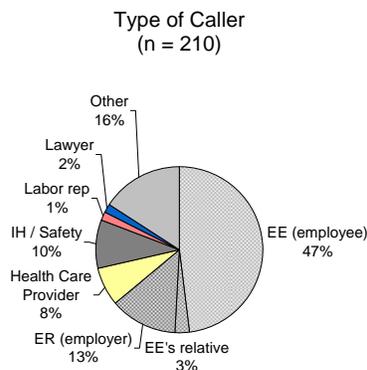
**1. Workplace Hazard Helpline / Telephone Response System (TRS)**

**A total of 219 calls were logged between December 2007 and November 2008:**

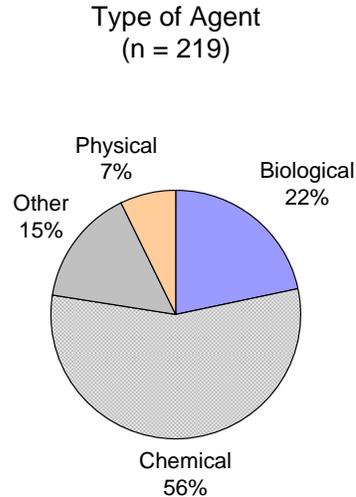
\* Monthly calls varied from 10 to 28 in number, peaking in the spring of 2008:



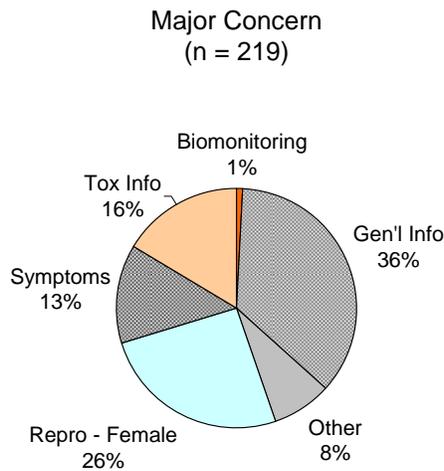
- Callers. Responded most frequently to inquiries from employees and their relatives, followed by employers, industrial hygiene / safety personnel, health care providers, attorneys, labor representatives, and others.



- \* Agents of concern were principally chemical in nature, followed by biological and physical agents, and other work-related issues:



- Major Concern. The greatest numbers of calls solicited general workplace information, followed in frequency by questions related to the impact of work exposures on pregnancy outcome, specific questions regarding chemicals, questions about the relationship of symptoms to work exposures, biological monitoring, and “other.”



- **Examples of 2007-2008 TRS calls include:**

- ✓ A pregnant teacher in her first trimester is exposed to methyl methacrylate vapors from a roofing repair and wishes to know if it poses a hazard to her fetus.
  - ✓ A utility worker who lost consciousness briefly after removing a utility hole cover requests information on possible neurologic consequences of hydrogen sulfide intoxication.
  - ✓ A worker who handles pallets that have been treated with methyl bromide wishes to know if they are safe to dispose of by burning.
  - ✓ A teacher who suffers a needlestick from the contents of a student's backpack wants advice on possible post-exposure prophylaxis for bloodborne pathogens.
  - ✓ A call-center operator with pre-existing asthma reports exacerbation of her condition when co-workers use disinfectant wipes on telephones and other office equipment and requests advice on obtaining workplace accommodation.
  - ✓ The health and safety director of a surgicare center reports a case of possible work-related asthma, as well as several complaints of sensory irritation, among staff using a new disinfectant product. Caller seeks advice on alternative products and/or practices
- Electronic database of TRS calls. A searchable database of TRS calls was set up using CDC's shareware, EpiInfo. This database allows more detailed tracking of the types of calls received and the amount of time spent responding to calls.
  - \* TRS Intranet Site. Utilized CDPH Information Technology Services' Sharepoint utility to establish an intranet site for use by TRS responders within OHB. Site includes commonly consulted documents, Web site URLs, and other information resources.

## 2. Educational Materials Development

- A revised version Understanding Toxic Substances, one of HESIS' most frequently requested publications, was completed in November 2008. This 36-page booklet provides an introduction to the science of toxicology for the layman.
- Revisions were begun on three other HESIS Publications: Chromium-6, Isocyanates, and Sewing Machine Operators.

### 3. Educational Materials Dissemination

- HESIS Outreach Activities / Publications Request Line. **Distributed 2,280 hardcopies of HESIS publications** through outreach activities and in response to direct requests during the report period. This was in addition to requests received via the OHB Web site.

Continued to mail HESIS publications to the Cal/OSHA District and Area Offices for further dissemination by Enforcement and Consultation staff, and to serve as resource information for their telephone consultations.

**Organizations and groups that requested and disseminated HESIS publications** included:

- UCLA / Labor Occupational Safety and Health Program (copies of all hazard alerts and booklets)
- WorkSafe (Understanding Toxic Substances; Chemical Hazards to Reproduction; Artificial Nails; If I'm Pregnant; n-Methyl Pyrrolidone; Diesel Exhaust)
- Conferences, Meetings, Presentations. Continued to distribute HESIS publications, brochures, and publication lists at formal conferences and meetings, and at presentations and lectures given by HESIS and other OHB staff. This year, these included:
  - Western Occupational Health Conference
  - Pacific Builders Safety Expo
  - Worksafe Conference
  - Western Sustainability and Pollution Prevention Network Conference
  - Preventing and Managing Workplace Musculoskeletal Disorders: Current Research and Ergonomic Programs that Work (continuing education course)
  - Cal/OSHA Senior Health Staff meetings
- TRS Consultations. Disseminated additional HESIS publications to supplement and reinforce the hazard evaluation and prevention information provided to callers.
- OHB Web Site. Migrated Web site from CDHS to CDPH server. Continued to disseminate HESIS educational materials via the program's new Web site:

<http://www.cdph.ca.gov/programs/hesis/Pages/Publications.aspx>.

**206 Web pages** (including PDF downloads) **were seen 188,217 times during the first six months of the reporting period (the period for which reporting is available).**

**The top ten HESIS publications downloaded or viewed were:**

- Rabies Fact Sheet
- Epoxy Resin Systems
- Understanding Toxic Substances
- Chromium six
- Trichloroethylene (TCE)
- Perchloroethylene
- Glycol Ethers
- What Is Hepatitis C
- Toluene
- Xylene

**4. Education / Outreach**

**HESIS staff spoke regarding workplace hazards to a variety of audiences:**

- Dennis Shusterman, HESIS Chief, spoke on “Irritant and asphyxiant gases” in Medicine 180 (Occupational Toxicology) at the University of California, San Francisco (UCSF) on 2/29/08.
- Dennis Shusterman, HESIS Chief, led a seminar on “Irritants and odorants: Health effects in the allergic and nonallergic patient” at the Annual Meeting of the American Academy of Allergy Asthma and Immunology (AAAAI) in Philadelphia, PA, on 3/16/08.
- Dennis Shusterman, HESIS Chief, spoke on “Rhinitis and the Workplace” at UCSF’s “Occupational and Environmental Medicine Update” continuing education course on 3/28/08.
- Janice Prudhomme, HESIS physician, was co-presenter with DOSH’s Amalia Neidhardt on the topic of “Heat illness surveillance” at the annual meeting of the Council of State and Territorial Epidemiologists in Denver, CO on 6/10/08.
- Dennis Shusterman, HESIS Chief, spoke on “The differential diagnosis of episodic dyspnea in the workplace” as part of the Summer Didactic Program for UCSF Occupational and Environmental Medicine Residents on 7/7/08.
- Dennis Shusterman, HESIS Chief, gave a talk entitled “HESIS: An overview” as part of the Summer Didactic Program for UCSF Occupational and Environmental Medicine Residents on 7/11/08.
- Dennis Shusterman, HESIS Chief, acted as symposium co-moderator for a session entitled: “Nasal trigeminal chemoreception: Quantitative, qualitative, and

temporal effects” as part of the International Symposium on Olfaction and Taste (ISOT) held in San Francisco on 7/25/08.

- Dennis Shusterman, HESIS Chief, gave a presentation on “Indoor air chemistry” at Cal/EPA ‘s Department of Toxic Substances Control in Emeryville on 9/10/08.
- Dennis Shusterman, HESIS Chief, gave a presentation entitled “Can clinical practice help inform public health priorities?” as part of the annual meeting of the Western Occupational and Environmental Medicine Association (WOEMA) held in Napa, CA on 9/18/08.

## Labor Code Section 147.2 – Mandate 2

**Collect and evaluate toxicologic and epidemiologic data and any other information that may be pertinent to establishing harmful effects on health of exposure to toxic materials or harmful physical agents.**

### 1. Technical Assistance – Cal/OSHA Medical Unit Consultations

- HESIS provided a total of 68 medical consultations in 2008 (involving 87 workers), up from 15 consultations in 2006 and 41 in 2007. Seven of the consultations involved multiple cases in the same workplace (ranging from 2-10 employees). The workplace hazards, by class, included:
  - Physical (heat) in 55 investigations involving 67 workers
  - Chemical in 1 investigation involving 4 workers
  - Biological in 4 investigations involving 5 workers
  - Traumatic in 8 investigations involving 11 workers
- Physical (heat):

Of 67 suspected illness cases (55 investigations), 42 were medically confirmed as primarily heat-related, 3 as partially heat-related, 3 were inconclusive, 18 as not heat-related, and for one the determination of work-relatedness is still pending. Six heat-related investigations involved fatalities
- Chemical:

Of 4 suspected cases (single investigation), all were medically confirmed as chemically related, and none resulted in fatalities. The chemical exposure involved was carbon monoxide.

- Biological:

Of 5 suspected biological and/or infectious cases reviewed in detail, 3 cases had a probable occupational etiology, one was presumed occupational, and one case was indeterminate.

- Traumatic:

Of the 11 suspected traumatic / cumulative trauma case (8 investigations), all but one case was confirmed as work-related.

## **2. Support for Cal/OSHA Appeals Hearings**

- Physicians from HESIS, OHB's Occupational Lead Poisoning Prevention Program, and OHB's Occupational Health Surveillance and Evaluation Program provided pre-hearing medical consultation and/or testimony in support of multiple citation appeals, including cases pertaining to heat illness, stoop labor, thermal injury (burns), infectious laboratory hazards, and bloodborne pathogens.

## **3. Selected Hazard Assessments**

### **Cal/OSHA Technical Assistance Requests**

- Provided toxicology / health input on a variance application for the use of nitrous oxide as a tracer gas for fume hood certification.
- Reviewed an employer's OSHA 300 Log for evidence for use of prescription medication for compliance case
- Reviewed an employer's bloodborne pathogen program in support of a compliance inspection.
- Assisted Cal/OSHA staff in the preparation of a PowerPoint presentation on heat illness for the annual Council of State and Territorial Epidemiologists (CSTE) meeting.
- Facilitated investigation of a tuberculosis case in a correctional facility, including coordination of services with the Calif. Dept. of Correction and Rehabilitation and CDPH's Tuberculosis Control Branch.
- Developed a list of California plants at which workers are potentially at risk for progressive inflammatory neuropathy due to pork processing.
- Provided information for a "tailgate training" on silica in construction.
- Consulted on noise exposure for High-Hazard Employer Program.

- Provided literature regarding potential isocyanate hazard associated with spray-on truck bed liners and auto body painting.
- Helped review Federal Equivalence Memo on relaxation of annual fit testing for use of N-95 respirators in protection from aerosol transmissible diseases.
- Reviewed pulmonary toxicology of flavorings other than diacetyl.
- Reviewed heat illness prevention protocol.
- Flavor Industry Safety and Health Evaluation Program (FISHEP). Ongoing investigation and associated activities:
  - ✓ HESIS has continued to provide oversight for the medical surveillance program for the 26 flavor companies covered by FISHEP.
  - ✓ HESIS staff has worked directly with employers and healthcare providers to ensure that the requirements for effective medical surveillance are met.
  - ✓ HESIS staff worked collaboratively with NIOSH and medical experts to develop a protocol for effective medical surveillance for the flavor industry employees, including respiratory health questionnaires in English and Spanish.
  - ✓ With assistance from NIOSH, HESIS and other OHB staff have further established a data system for the analysis of questionnaire and spirometry data to provide feedback on the health impact of diacetyl and other chemicals exposures on flavor manufacturing workers in California.
  - ✓ HESIS and other OHB staff have met with Cal/OSHA Consultation Service staff on an ongoing basis to ensure coordination of the medical surveillance with the industrial hygiene interventions.
  - ✓ Associated activities include:
    - Provision of medical expertise and updates of the FISHEP program at Cal/OSHA diacetyl regulation advisory committee meetings.
    - Provision of specific medical input into the proposed medical surveillance and other requirements of the planned diacetyl regulation.

#### **4. Technical Assistance – Selected Other Constituents**

##### **Federal government**

- US Environmental Protection Agency. Provided occupational hazard information on fly ash and construction demolition materials for EPA's Strategic Planning and Partnership Office.

### **State government**

- California Depts. of Motor Vehicles and Employment Development. Provided information regarding potential cancer clusters among state office workers in two different settings. Coordinated services with staff of the California Cancer Registry.
- California Department of Transportation. Provided information relevant to a potential chromium-6 inhalation hazard to bridge painters.
- California Emergency Medical Services Authority. Provided assistance in revising the K-12 Science Safety Handbook.
- California Department of Food and Agriculture (CDFA). Worked with CDFA and CDPH's Tuberculosis Control Branch and Division of Communicable Disease Control to provide input on a proposed worker screening program related to the occurrence of bovine tuberculosis in dairy herds.

### **Local government**

- Provided mold regulatory information pertaining to a city-owned building

### **Academia**

- Protecting California Workers from Respiratory Disease: Assessing the Capacity of Local Health Care Clinics to Provide Spirometry-based Medical Surveillance Services to Employers (University of California)

This spirometry assessment project involves an interagency agreement with the University of California and is designed to assess CA providers' capacity to perform quality spirometry in order to meet the expectations of FISHEP, the anticipated Cal/OSHA diacetyl standard, and any other standard or recommendation designed to protect the respiratory health of California workers exposed to airborne hazards. During the past year, clinics providing primary occupational medicine services have been identified and a questionnaire has been designed to elicit information about the capacity and quality of spirometry services in CA. The next phase of this project will include administration of the questionnaire and review of findings. This will help HESIS make practical, "best practice" recommendations for medical providers performing spirometry-based medical surveillance and will help inform the development of required medical surveillance guidelines for any proposed Cal/OSHA standard involving the prevention of occupational lung disease.

- Evaluating Occupational Coding on Patient Information Forms to Identify At-Risk Exposure to Pregnant Workers

This project is being implemented through an interagency agreement with the University of California, Berkeley (UCB). It was developed in response to the ongoing inquiries HESIS receives about the effects of chemicals and other workplace exposures on pregnancy outcome. The goal of the project is to evaluate the feasibility of characterizing occupational exposures for a cohort of pregnant patients and identifying toxicants that pose risks of developmental toxicity using occupational codes on patient information forms. This information would help HESIS conduct industry and job-related education and outreach to workers, employers, and health care providers on reproductive and developmental toxicants, and on ways to protect against exposure. The project was granted a no-cost extension due to the need to identify a new health care facility to conduct the clinical aspect of this project after the originally identify facility was unable to complete the work. The Project Lead at UCB is now working directly with clinicians at the University of California, San Francisco, to incorporate selected questions into the existing patient forms and to capture the necessary data for completion of this project.

- Labor Occupational Health Program (University of California, Berkeley)

Reviewed publication: “Heat Hazards in Agriculture: A Guide for Employers to Carry out Tailgate Training for Workers”. Participated in heat illness prevention meetings with several stakeholders, including Cal/OSHA.

Worked with UCLA’s LOSH program, OHB’s OHSEP program, and UCSF’s Ergonomics Laboratory to revise HESIS’ pamphlet on safe practices for Sewing Machine Operators.

### **Nongovernmental organizations**

- Healthy Nail Salon Collaborative. HESIS staff provided technical information in ongoing meetings and participated in meetings with the Cal/OSHA Consulting Service’s educational staff to develop e-tools on safe work practices and ventilation in the nail salon industry.
- WorkSafe. Provided summary of health and safety issues pertaining to elimination of meal and rest breaks.
- California Rural Legal Assistance. Assisted with development of White Paper on Heat Illness in farm workers.

## **5. Product substitution / pollution prevention.**

Consistent with the “**hierarchy of industrial hygiene controls**,” HESIS has been engaged in the evaluation of safer substitutes for potentially hazardous products through collaboration with the California Department of Toxic Substances Control, the California Environmental Protection Agency, the US Environmental Protection Agency, industry / trade groups, and worker advocacy groups. Positive results from such activities are expected to have benefits both in terms of worker protection and environmental protection.

## **6. Information Repository**

- HESIS Electronic Repository of Occupational Health Information (e-ROHI) HESIS staff, in collaboration with the UC Berkeley Public Health Library, arranged for electronic document delivery to Cal/OSHA Standards and Research staff and for access to web-based bibliographic data base management software by both Cal/OSHA staff and members of the Health Expert Advisory Committee (HEAC). The objectives of these arrangements were to increase the efficiency of HESIS technical support to the 5155 / Permissible Exposure Limit standards-setting process, and to facilitate our functions as a repository of toxicologic information.

## **Labor Code Section 147.2 – Mandate 3**

**Recommend to the Chief of the Division of Occupational Safety and Health that an occupational safety and health standard be developed whenever it has been determined that a substance in use or potentially in use in places of employment is potentially toxic at the concentrations or under the conditions used.**

### **Standards Recommendations / Assistance**

Cal/OSHA Development of Permissible Exposure Limits (PELs) in California Code of Regulations Title 8 Section 5155

- Standards Recommendations

HESIS staff, both directly and through a subcontract with the Office of Environmental Health Hazard Assessment (OEHHA) in Cal/EPA, provided feedback on the scientific basis for exposure standards to the following air contaminants: carbon disulfide, dichloroacetic acid, ethylbenzene, hydrogen chloride, hydrogen fluoride, n-methyl pyrrolidone, sulfuric acid, trichloroethylene, and toluene.

- Using Quantitative Risk Assessment as the Basis for Setting Occupational Standards for Carcinogens and Reproductive Toxins

This project aims to promote the use of accepted quantitative risk assessment methods and results, currently used for setting California environmental regulations, as the scientific, health-based “starting point” for occupational health standards for identified carcinogens and reproductive toxins. This project represented a collaboration between HESIS and the Office of Environmental Health Hazard Assessment (OEHHA) in Cal/EPA. Release of the final report took place in December 2007. Follow-up presentations and discussion of the report contents occurred at several HEAC meetings in 2008.

- Health Effects Advisory Committee (HEAC)

HESIS staff participated in quarterly meetings of HEAC, part of the 5155 standard-setting process. Two former HESIS staff continue to serve as HEAC members

- Cal/OSHA Standards Advisory Committees (Other than Section 5155)

HESIS (and Occupational Health Branch) staff provided input to Cal/OSHA committees developing standards for the following issues: aerosol transmissible diseases, diacetyl, and sensitizers.

### **Labor Code Section 147.2 – Mandate 4**

Notify the Director of Food and Agriculture of any information developed by the Repository which is relevant to carrying out his or her responsibilities under Chapter 2 (commencing with Section 14001) of the Division of Food and Agriculture Code.

There were no activities under this mandate during the report period.

### **Labor Code Section 147.2 – Mandate 5**

Assure the use of and non-duplication of resources of other governmental agencies.

### **Use of Other Governmental Agency Services / Resources**

- Cal/OSHA. HESIS continued, on a routine basis, to meet with, consult with, and make referrals to Cal/OSHA, and to use and disseminate Cal/OSHA educational materials.
- CDPH. HESIS continued, routinely, to consult with, make referrals to, and use materials and Web site information developed by numerous other CDPH programs to evaluate and provide consultations regarding workplace hazards. In the report period, these programs included: the Environmental Health Laboratory Branch Indoor Air Quality Section, Environmental Management Branch, Vector-Borne Diseases Section, Disease Investigations and Surveillance Branch, Radiological Health Branch, Environmental Health Investigations Branch, and the Immunization Branch.
- Cal/EPA - Office of Environmental Health Hazard Assessment. HESIS continued to consult with OEHHA staff and use risk assessment resources to identify occupational carcinogens and reproductive toxicants and to assist Cal/OSHA in developing Permissible Exposure Limits for workplace chemicals. Continued to share the resources of the Occupational and Environmental Health Library.
- Cal/EPA – Department of Toxic Substances Control Pollution Prevention and Technology Development. HESIS continued to consult with Cal/EPA staff and to use technical information and other resources to recommend pollution prevention strategies to protect workers from the adverse health effects of organic solvents and other hazardous substances.
- National Institute for Occupational Safety and Health. HESIS continued to use and disseminate NIOSH educational materials and to use and refer callers to their Web site for information and publications. Continued to work with NIOSH staff to identify and protect workers who may be at risk for bronchiolitis obliterans in California's flavor manufacturing industry.

### **Labor Code Section 147.2 – Mandate 6**

Recommend legislative changes related to the functions of HESIS.

There were no activities conducted under this mandate in the report period.

## Authorized positions in HESIS for 2008

### Permanent positions

Public Health Medical Officer III	Dennis Shusterman, MD, MPH	100%
Public Health Medical Officer II	Janice Prudhomme, D.O., MPH	100%
Senior Industrial Hygienist	Elizabeth Katz, MPH, CIH	100%
Management Services Technician	Beverly Broadway	100%

### Source of funding

HESIS is supported through an interagency agreement between the Department of Industrial Relations, Cal/OSHA, and the California Department of Public Health (formerly Department of Health Services), Occupational Health Branch.

### Annual budget

\$715,413 (2007-2008 fiscal year)