

In-Plant Safety

Objectives

After completing this module, participants will be able to do the following:

1. Identify employee rights and responsibilities regarding workplace health and safety.
2. Know which health and safety items that FSIS provides to employees.
3. Introduction to the FSIS Safety and Health Program

Resources

The following workplace health and safety resources are covered in this module:

- Federal Laws and Regulations
 - o Occupational Safety and Health Act
 - o Responsibility and Rights
 - o Inspection and Abatement
- FSIS Safety and Health Program
- General Industry Standards
 - o Hazard Communication
 - o Personal Protective Equipment
 - o Occupational Noise
 - o General Safety
 - o General Occupational Health

Federal Laws and Regulations

Occupational Safety and Health and Act

The declared Congressional purpose of the Occupational Safety and Health Act (OSH Act) of 1970 is to “assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources.” Under the Act, the Federal government is authorized to develop and set mandatory occupational safety and health standards applicable to any business affecting inter-state commerce. The responsibility for promulgating and enforcing occupational safety and health standards rests with the Department of Labor’s Occupational Safety and Health Administration (OSHA). The OSH Act requires OSHA to develop standards for recognized hazards. It also requires Federal departments to establish safety and health programs.

Responsibilities and Rights

FSIS responsibilities and FSIS employee responsibilities and rights are contained in 29 CFR 1960.8 to 1960.10 and FSIS Directive 4791.1. The FSIS Safety and Health Poster summarize these responsibilities and rights. This poster should be in all headquarters’ establishments in accordance with 29 CFR 1910.12(c) and FSIS Directive 4791.1.

FSIS Employee Responsibilities

FSIS employee responsibilities regarding safety and health in the workplace include complying with OSHA standards and FSIS directives, and using FSIS provided and funded personal protective equipment.

FSIS Employee Rights

FSIS employees have rights that are outlined in FSIS Directive 4791.1 and include participating in the safety and health program, having access to records and documents, reporting hazards in their workplace, and freedom from fear of reprisal.

Inspection and Abatement

Hazard Reporting

Hazard reporting requirements are contained in 29 CFR 1960.28 and FSIS Directive 4791.12. Employees are encouraged to report unsafe or unhealthful working conditions to their supervisors. FSIS Form 4791.27 is used to document the report of a hazard. Reported hazards must be investigated or inspected by the supervisor at the workplace, and a log of reported unsafe or unhealthful working conditions must be maintained on FSIS Form 4791.26.

Special Hazard Abatement Requirements

According to Standard 29 CFR 1910.1(g), Federal employees working in establishments of private employers (such as meat and poultry establishments) are covered by their agencies' occupational safety and health programs. Although an agency may not have the authority to require abatement of hazardous conditions in a private sector workplace, the agency head must assure safe and healthful working conditions for his/her employees. This shall be accomplished using administrative controls, personal protective equipment, or withdrawal of Federal employees from the private sector facility to the extent necessary to assure the protection of the employees.

FSIS Safety and Health Program

Introduction

The Assistant Administrator for the Office of Management (OM) is the Designated Agency Safety and Health Official (DASHO) and has overall responsibility for management of the FSIS Safety and Health Program. The Environmental, Safety and Health Group (ESHG) within the Workers Safety and Health Division in the OM, is responsible for the planning, policy development, and management of the program at the Agency level. The Inspector-In-Charge (IIC) Public Health Veterinarians (PHVs) are responsible for managing the program at the establishment level.

FSIS Safety and Health Directives

Several FSIS safety and health directives have been issued which provide guidance for FSIS compliance with OSHA standards. The directives are revised and updated to reflect changes in the OSHA standards and FSIS policies. The following is a list of FSIS Directives pertaining to safety and health:

- 4791.1 Basic Occupational Safety and Health Program Part 1 – Basic Provisions
 - Part 2 – Safety and Health Committees
 - Part 3 – Personal Protective Equipment and Hand Tools for Inspection Personnel
 - 4791.5 Hazard Communication Program
 - 4791.11 Lockout/Tagout Safety Procedures
 - 4791.12 Reporting and Correcting Occupational Hazards Part 1 – Basic Provisions
 - Part 2 – Reporting and Correcting Hazards
 - 4791.13 Workplace Inspections, and Injury Illness and Motor Vehicle Incident Reporting
 - Part 1 – Basic Provisions
 - Part 2 – Safety and Health Workplace Inspections
 - Part 3 – Injury, Illness and Motor Vehicle Incident Reporting and Recordkeeping
- Guidelines
- 4792.1 First Aid

Environmental, Safety and Health Group (ESHG)

The mission statement of the ESHG is to:

Furnish FSIS employees a workplace which is free from recognized hazards or, where applicable, apply administrative controls or provide appropriate personal protective equipment to assure safe and healthful working conditions.
 Protect the environment and community through implementation of FSIS environmental management systems and pollution prevention programs.
 Develop safety, health and environmental management response actions for likely scenarios of FSIS workplace terrorist acts.

Occupational Safety and Health Specialists (OSHS)

Operations, the specialists are assigned to one or more districts. The following map specifies these assignments:



Name	Office Location	Contact Information
Glenn Kerschner Safety Specialist	Philadelphia, PA Raleigh, NC	Office: (202) 580-5157 Cell: (215) 430-6244
Todd Nixon Safety Specialist	Atlanta, GA Jackson, MS	Office: (404) 562-5886 Cell: (202) 957-9806
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Ann Hergenreter Safety Specialist	Alameda, CA Denver, CO	Office: (303) 236-9800 Cell: (202) 570-3582

The program areas within the ESHG are occupational safety and health, environmental management, and homeland security. Occupational safety and health is comprised of safety management, industrial hygiene, and occupational medicine.

As a component of occupational safety and health, the goal of safety management is to prevent accidents and injuries. This goal is achieved by providing technical assistance

and training at the district, circuit and work unit levels, evaluating the FSIS safety and health program at the plant level by performing plant reviews and maintaining an injury and illness database to identify safety and health program needs. The goal of the industrial hygiene component is prevention of occupational illnesses. This is accomplished by assessing workplace exposures for inspection operations and new microbial reduction technologies, providing technical assistance on chemical, physical and biological health hazards, and participating in the development of new sampling methods needed to assess workplace exposures in this industry. The goal of the occupational medicine component is to diagnose and prevent occupational illnesses and injuries. This is done by conducting medical reviews and providing medical opinions on occupational exposure issues in plants and laboratories (on a consultation basis), and by developing information on the health effects associated with chemicals used in plants and laboratories and implementing appropriate policies to control hazards.

Material Management Service Center

The Material Management Service Center (MMSC), formerly known as Beltsville Service Center, located in Beltsville, MD, is part of the Administrative Services Division and a vital part of the FSIS Safety and Health Program. It distributes supplies and over 30 types of personal protective equipment (PPE) and other safety and health related items to FSIS field employees.

The following is a list of the safety and health items stocked at the MMSC:

- Eye Protection: Safety Glasses (2 types)
Anti-Fog Eyeglass Wipes
- Head Protection: Hardhats (Regular)
Hardhats (Lightweight)
- Hand Protection: Cut-Resistant Gloves (3 sizes)
Nitrile Protective Gloves (5 sizes)
Disposable Latex Gloves (4 sizes)
- Body Protection: Freezer Coats
Freezer Vests
Freezer Jackets
Aprons
- Heat Stress Management: Neck Cooling Scarves
Sqwinchers (3 flavors)
- Leg Protection: Pant Gaiters
- Respiratory Protection: Dust Masks (3 types) [RESTRICTED, Approved Use Only]
- Hearing Protection: Earmuffs (2 types)
Foam plugs (4 types)
Reusable plugs (4 types)
Canal Caps
- Locks: Lockout/Tagout
- First Aid: First Aid Kits (2 types)
First Aid Kit (Refill) Instant
Cold Packs

Safety and Health Items Reimbursed by FSIS

Not all safety and health items are issued by the MMSC. Directive 3410.3, Revision 6, provides for reimbursement of permanent full-time inspection personnel for the following inspection expenditures:

- Work clothing
- Skid-resistant footwear
- Personal inspection equipment
- Flashlights and replacement batteries
- Hand, wrist, and arm support devices

General Industry Standards

The following topics are covered in this section of the training module:

- Hazard Communication
- Personal Protective Equipment
- Occupational Noise
- General Safety
- General Occupational Health

Hazard Communication

OSHA Hazard Communication Standard: 29 CFR 1910.1200

The purpose of this standard is to ensure that the hazards of all chemicals produced or imported are evaluated, and that information concerning their hazards is transmitted to employers and employees. The Hazard Communication Standard applies to any chemical that is known to be present in the workplace in such a manner that employees may be exposed under normal conditions of use or in a foreseeable emergency. It does not apply to ionizing radiation, non-ionizing radiation, biological hazards, or hazardous waste.

Under the standard, chemical manufacturers or importers are required to determine the hazards of the chemicals that they produce or import. Typically, this information is provided to employers on a document known as a safety data sheet (SDS) and on container labels. Employers are required to transmit this information to their employees by means of a comprehensive Hazard Communication Program.

FSIS Hazard Communication Program

The FSIS Hazard Communication Program is found in FSIS Directive 4791.5. It applies to FSIS employees working in meat, poultry, and import establishments.

The Frontline Supervisor (FLS) is assigned the responsibility of the overall coordinator of the program for FSIS employees in each plant or establishment.

Employee Responsibilities

As an FSIS employee, you are responsible for reading and understanding the FSIS written Hazard Communication Program, recognizing situations where hazardous chemicals are present in your workplace and notifying your supervisor of hazardous

conditions. In addition, you are responsible for understanding how the information on the SDS applies to the specific use of the chemical in your workplace and for properly using and wearing the FSIS-supplied personal protective equipment.

Methods of Hazard Communication

A safety data sheet (SDS) is a document that provides specific information about a hazardous chemical in accordance with OSHA guidelines. The SDS, prepared by the manufacturer of the chemical, includes physical and health information, recommended control measures, and precautions for the safe handling and use of a chemical.

An SDS is generally written by the chemical manufacturer for the “pure product” (e.g. 100% concentration) and not for the diluted form of the chemical as it is used in most applications at poultry and red meat establishments. This must be taken into consideration when reviewing and interpreting the information found on the SDS. This is especially true for the health hazard information because the health effects for the concentrated solution are more severe than for the diluted solution.

Chemical Hazards in FSIS Workplaces

Many chemicals are used in meat, poultry, egg product, and import facilities as disinfectants, sanitizers, cleaning agents, and processing aides.

- Chlorine is used in water sprays in numerous locations on the evisceration line, on the reprocessing line, and in the pre-chiller and chillers.
- Chlorine dioxide and trisodium phosphate (TSP) are typically used in rinse cabinets prior to the chiller to kill microbial organisms on the carcass.
- Ozone is used to disinfect recycled water for use in the chillers and the on-line reprocessing carcass washes.
- Acids, bases, quaternary ammonia, and sodium hypochlorite are chemicals commonly used for sanitation.

In addition, new chemical antimicrobial treatments are continuously being tested in establishment trials in an attempt to find more effective ways to ensure food products are safe from harmful bacteria. Some examples of chemical antimicrobial treatments are:

- Peroxyacetic acid (Inspexx 100)
- Acidified sodium chlorite solution (Sanova System)
- Ammonium hydroxide
- Acetic acid
- Acidic calcium sulfate (Mionix)
- Carbon Dioxide (TomCo)
- Sodium Acid Sulfate
- Chlorine Dioxide (Zep® Antimicrobial Treatment System)
- Lactoferrin Antimicrobial Spray

Other hazards, such as carbon monoxide and sulfur compounds, may be present from the exhaust gases of forklift trucks, singers, cooking operations, and rendering stacks. Ammonia and Freon are used in refrigeration systems, and exposures may occur from leaks. Carbon dioxide (in the form of dry ice) is used in food packaging and as a gas in some chiller systems to lower the pH of the water.

It is very important to refer to the SDS at your duty station for specific health hazard information.

Health Hazards of Chemicals

All of the chemicals mentioned above have similar health effects, including eye, nose, throat and respiratory irritation; nasal discharge; coughing, wheezing, and bronchitis; and skin irritation with prolonged, direct contact.

Personal Protective Equipment (PPE)

OSHA Standard

OSHA Standard 29 CFR Part 1910, Subpart I, contains the requirements for workplace hazard assessments, training, and several types of PPE. OSHA requires employers to protect employees from workplace hazards that have the potential to cause injury by physical contact, absorption through the skin, or inhalation.

Workplace Hazard Assessments

In order to determine which PPE will provide the best protection, the FSIS EHS has completed many workplace hazard assessments. Certain types of PPE are required to be worn based on workplace hazards that have been identified during workplace hazard assessments. Workplace hazards, and therefore required PPE, can be specific to your duty station.

Training Requirements

Inspectors must be able to demonstrate their ability to use properly PPE properly before being allowed to perform work requiring the use of PPE. OSHA standard 1910.132 requires that a PPE program be established to ensure that the appropriate PPE has been selected and that employees are trained in the proper use of PPE. FSIS Directive 4791.1 provides additional guidance on PPE.

Inspectors who are required to use PPE will be trained in the following: when PPE is necessary, what PPE is necessary, how to properly adjust and wear PPE, the limitations of the PPE, and the proper care, maintenance, useful life and disposal of the PPE.

Material Management Service Center

Most required and other optional PPE is available through the FSIS Material Management Service Center (MMSC). Available PPE includes such items as hardhats, earmuffs and ear plugs, impervious gloves, cut-resistant gloves and freezer coats. FSIS Directive 3410.3 provides guidance on reimbursement for direct purchases. Inspectors are reimbursed directly for the purchase of the following types of PPE and safety equipment: skid-resistant footwear, hand tools, knives, sharpening steels, node hooks, scabbards, chains with breakaway link, and flashlights.

Head Protection

The OSHA standard for head protection is 29 CFR 1910.1353. FSIS Directive 4791.1, Revision 3, requires that hardhats be worn at all inspected establishments. The MMSC provides two types of hardhats, standard and lightweight.

Eye and Face Protection

Studies indicate that about 60 percent of workers who suffered eye injuries were not wearing protective eye equipment. Eye and face protective equipment is required by OSHA in situations where there is a reasonable probability of preventing injury when such equipment is used. The OSHA standard for eye and face protection is 29 CFR 1910.133. There is no FSIS directive specifically for eye and face protection. The MMSC provides 2 types of safety glasses that may provide protection from small flying objects and blood and bodily fluids from animals.

Ear Protection

Exposure to high noise levels can cause hearing loss or impairment. The OSHA standard for hearing protection is 29 CFR 1910.95, Occupational Noise Exposure. Hearing protection is required in areas where noise levels are at or exceed 85 decibels (dB) since noise at or above this level can cause irreversible hearing loss. Four types of hearing protectors are provided: earmuffs, canal caps, foam plugs, reusable plugs.

Hand Protection

The OSHA standard for hand protection is 29 CFR 1910.138. FSIS Directive 4791.1, Revision 3, requires that red meat slaughter inspectors wear a cut-resistant glove on the non-knife hand when performing inspection tasks that require a knife and the assignment of two or more inspectors. The MMSC provides 3 sizes of cut-resistant gloves and 5 sizes of nitrile protective gloves to meet this FSIS requirement. The MMSC also supplies 4 sizes of disposable latex gloves to limit the potential risk of exposure to zoonotic diseases; however, use of latex gloves is voluntary.

Foot Protection

The OSHA standard for foot protection is 29 CFR 1910.136. This standard does not require foot protection for wet slippery surfaces. FSIS provides footwear that has skid-resistant soles, water-resistant uppers, and a closed heel and toe. Soles made from leather, wood, hard plastic, or metal materials are excluded.

Reimbursement

FSIS Directive 3410.3, Revision 6, provides for foot protection reimbursement. Reimbursement is limited to actual expenses, and the total allowance during the fiscal year shall not exceed \$108. However, supervisors may authorize reimbursement for additional replacement of skid-resistant footwear (up to an additional \$108 per pair) on an "as needed" basis.

Respiratory Protection

Respirators are not available through the Material Management Service Center. If the IIC believes that a respirator may be useful in certain situations, your Field Safety and Health Specialist should be contacted to perform a hazard assessment and provide you with the proper respirator.

Occupational Noise

The amount of hearing loss caused by noise depends on how loud the noise is and how long you are exposed. The loudness of a noise is measured in decibels (dB). Noise greater than 85 dB can damage hearing if the exposure is long enough. FSIS

employees working in meat and poultry establishments and egg product plants may be exposed daily to noise in this decibel range.

FSIS Safety and Health Program

The FSIS Hearing Conservation Program includes the following elements:

- Audiometric Testing
- Monitoring Noise Levels
- Hearing Protection
- Training on the effects of noise and the selection, use, fit, and care of hearing protectors

Audiometric Testing

There are two types of audiograms required in a Hearing Conservation Program: baseline audiograms and annual audiograms. The baseline audiogram is the reference audiogram against which all future audiograms are compared.

Baseline audiograms must be provided within 6 months of an employee's first exposure at or above an 8-hour time-weighted-average (TWA) of 85 dB. Annual audiograms must be conducted within one year of the baseline. It is important to test hearing on an annual basis to identify any changes in hearing ability. If hearing loss has occurred, protective follow-up measures can be initiated before hearing loss progresses. An annual audiogram can also help identify whether your hearing protection properly fits and whether you are using it correctly.

Audiograms will be provided to all FSIS employees at no cost, including reimbursement of travel expenses where necessary. Arrangements for you to have an audiogram will be made through your supervisor.

Monitoring Noise Levels

In accordance with FSIS Directive 4791.1, Basic Occupational Safety and Health Program, noise monitoring must be conducted, and results must be recorded on FSIS Form 4791-20 and posted in the Government office of each establishment. Monitoring has shown that noise levels within a meat or poultry establishment or egg products plant are typically between 85 to 105 db.

FSIS requires employees to wear hearing protectors if they are exposed to noise levels of 85 dBA TWA or greater.

Hearing Protection

The Material Management Service Center stocks four basic types of hearing protectors: foam earplugs, reusable earplugs, canal caps, and earmuffs. The type of hearing protection you select will depend on the noise level to which you are exposed, the fit of the hearing protector, and your personal choice for comfort. In some cases, with very high exposure, it may be necessary to wear both earplugs and earmuffs.

Training

FSIS employees who are exposed to noise levels at or exceeding 85 dB for an 8- hour

time-weighted average (TWA) are trained on the effects of noise, and the selection, use, fit, and care of hearing protectors.

The following are some tips on how to choose the best hearing protection for you:

- Choose hearing protection that works well at your job site.
- Be sure your hearing protection is the right size for you. There are many different types and sizes of ear plugs available.
- Practice inserting and removing your hearing protectors, so you become comfortable using them.
- Frequently check the fit to be sure you are using your hearing protection correctly.
- Always wear your hearing protection in areas where the noise levels are at or exceed 85 db.
- Learn the right way to care for your hearing protectors and know when to replace them.

General Safety

Lockout/Tagout

FSIS Lockout/Tagout Program

Details of the FSIS Lockout/Tagout Program, which was developed according to OSHA Standard 29 CFR 1910.147, are found in FSIS Directive 4791.11.

Authorized FSIS employees are required to lock and tag out machines or equipment to perform pre-op process verification inspections in coordination with the establishment's lockout/tagout program.

Training

Authorized FSIS employees must be trained in lockout/tagout procedures prior to performing pre-op process verification inspection. If you have to perform lockout/tagout procedures, you will be trained by your supervisor during initial assignment to your duty station. Authorized employees are trained to recognize applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods necessary for energy isolation and control. These procedures will vary from establishment to establishment.

Confined Spaces

A confined space is defined as a space that is large enough to enter and work in, has limited or restricted means of entry and exit, and is not designed for continuous human occupancy. Examples are pits, silos, tanks, hoppers, storage bins, railroad or truck tank cars, reactor vessels, and machinery enclosures.

Applicability to Food Inspection Activities

It is FSIS policy that employees DO NOT enter or work in confined spaces. Therefore, in accordance with the OSHA Standard, FSIS is required to do the following:

- Evaluate the workplace to determine if any spaces that FSIS may need to enter are permit-required confined spaces.

- Take measures to prevent employees from entering the spaces.
- Evaluate any changes to non-permitted confined spaces that increase the hazards (requiring them to be permitted).

FSIS employees have the following responsibilities regarding confined spaces:

- Be familiar with the location of permit-required confined spaces at your duty station/s.
- For permit required confined spaces that require inspection, arrange to have the interior of these spaces inspected by means that do not require the FSIS employee to enter the space.

Walking and Working Surfaces

Slips, trips, and falls are a major cause of accidents. They cause 15 percent of all accidental deaths and are second only to motor vehicles as a cause of fatalities. The walking and working surfaces within meat and poultry establishments and egg product plants may be hazardous.

OSHA Standard 29 CFR Part 1910, Subpart D, contains the requirements for walking and working surfaces and applies to all FSIS workplaces.

The following are safety considerations regarding walking and working surfaces:

- Wear skid resistant footwear with adequate tread on the soles.
- Use the “packing house shuffle” when walking in slippery areas.
- Walk in meat and poultry establishments and egg product plants. Do not run.
- Use all available hand and stair rails.
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Emergency Action Plans

OSHA Standard 29 CFR 1910.38 -Emergency Action Plans, requires the development of a written plan of action and employee training regarding their actions and responsibilities under the plan.

FSIS Directive 4791.6 provides procedures for the development of these plans. Each FSIS Workplace (establishment, laboratory, or office) must have its own written plan. A diagram of emergency evacuation routes and emergency numbers should be posted on the bulletin board in the USDA Office at every establishment.

General Occupational Health/Medical Services and First Aid

OSHA Standard 29 CFR 1910.151

This standard, which addresses medical services and first aid, is meant to ensure that employees receive medical attention when it is needed. FSIS Directive 4792.1 provides further direction on this standard as it applies to FSIS workplaces.

Injuries in the Workplace

FSIS employees should seek immediate medical attention if an injury occurs in the workplace. FSIS employees should be familiar with the specific workplace procedures

for notifying their supervisors and summoning emergency medical care.

The IIC/CS should develop a plan for obtaining emergency first aid, which includes an establishment health clinic managed by a health professional, a local community paramedical unit, or a hospital in near proximity to the workplace.

FSIS employees should know the location or phone number of these medical services.

Zoonotic Diseases

Zoonotic diseases are diseases and infections that are naturally transmitted between vertebrate animals (including their carcasses or by-products) and man. Currently there is no OSHA standard or FSIS directive for zoonotic diseases.

Although a review of CA 1 and CA 2s over the past 5 years has shown a very low potential for exposure to zoonotic diseases among the FSIS workforce (based on only a few documented cases), information regarding zoonotic diseases in the workplace is provided to FSIS employees. This includes precautions taken and the awareness needed to reduce the potential of a FSIS employee contracting a zoonotic disease in the workplace.

Protective Measures

The main mode of transmission for many zoonoses and the greatest potential risk of exposure to zoonosis for FSIS employees are from contact with tissue, blood, and bodily fluids of infected animals. Therefore, FSIS inspectors and veterinarians should protect their eyes, nose, mouth, and any open cuts for protection against exposures to potentially infected tissues or fluids. For example, open cuts should be covered with a waterproof bandage. Gloves should be worn to reduce direct contact, and safety glasses or a face shield should be worn when the potential for a significant exposure to splashes or tissue spatter exists. Practice good personal hygiene: wash hands after contact and do not touch face, eyes, nose, or mouth with contaminated hands or gloves.

Heat Stress

Heat stress is a problem that affects up to an estimated 10 million workers in the United States each year. During the hot summer months, FSIS inspectors may be exposed to extreme conditions of hot temperatures and high relative humidity in meat and poultry slaughter establishments.

Human Susceptibility Factors

People who have experienced a previous heat-related illness, have low-sodium diets, consume caffeine or alcohol, are taking certain types of medication (for example, heart-rate controlling drugs), or are wearing personal protective equipment, such as a respirator or protective suit, can be more susceptible to heat-related illness.

Heat Injuries

The more common heat injuries are heat cramps and heat exhaustion. These disorders are not life threatening; however, they may be intermediate steps on the way to heatstroke. Heat stroke, on the other hand, is a life-threatening emergency that requires immediate medical attention.

FSIS Heat Stress Management Program

There is currently no specific OSHA standard or FSIS directive for heat stress. However, OSHA may cite Federal Agencies for heat stress violators under 29 CFR 1960.8(a). FSIS is constrained by 29 CFR 1960.1(g) from requiring abatement of heat hazards in private sector workplaces but should attempt to work with establishment management on high heat days to improve ventilation and cooling of work areas.

FSIS has only three realistic options for managing exposures and for protecting inspectors working in high temperature environments in establishments:

- Administrative control: employee awareness training on actions to reduce the effect of heat stress.
- Administrative control: increasing the effectiveness of fluid intake using electrolyte replacement supplements.
- Personal protective equipment: neck-cooling scarves.

Using all three of these approaches is the basis of the FSIS Heat Stress Management Program.

Cold Stress

Workplace temperatures below 61° F may result in exposures to cold stress. The actual development of cold-stress related disorders will depend on conditions such as air temperature, air speed, the insulating value of clothing, the duration of the exposure, and the environment (e.g., exposure to wet conditions). Cold-related illness can slowly overcome a worker who has been chilled by low temperatures, brisk winds, or wet clothing.

Some FSIS inspectors may have processing assignments in areas that are maintained at 40°F or below. Also, FSIS inspectors may be required to enter walk-in freezers and coolers.

Cold Stress Disorders

Frostbite and hypothermia are two cold stress disorders. Frostbite is more common and is the result of freezing of the extracellular fluid in the skin. Hypothermia is the most dangerous cold stress disorder and is a result of abnormally low core body temperature (at or below 95°F).

FSIS Cold Stress Management Program

Currently there is no specific OSHA standard or FSIS directive for cold stress. However, OSHA may cite Federal Agencies for cold stress violators under 29 CFR 1960.8 (a).

The FSIS Cold Stress Program consists of providing awareness training and personal protective equipment (PPE). The PPE consists of freezer and cooler attire stocked by the Material Management Service Center (full-length freezer coat, freezer jacket, freezer vest).

