



Department of the Air Force
HQ AEDC (AFMC)
Arnold AFB, TN 37389

Safety, Health, and Environmental Standard

Title: FETAL PROTECTION

Standard No.: E10

Effective Date: 02/14/2014

The provisions and requirements of this standard are mandatory for use by all personnel engaged in work tasks necessary to fulfill the AEDC mission. Please contact your safety, industrial health and/or environmental representative for clarification or questions regarding this standard.

Approved:

A handwritten signature in black ink, appearing to read "Calvin D. Hanes".

Contractor /ATA Director
Safety, Health and Environmental

A handwritten signature in black ink, appearing to read "B. F.".

Air Force Functional Chief

Record of Review/Revision

(Current revisions are highlighted in yellow and marked with a vertical line in the right margin.)

Date/POC	Description
01/17/14 G. Bragg	Three-year review: Changed "SHG" to "SHE" and "Operating Contractor" to "Base Operating Contractor" throughout. Added "employee" to last sentence in 1.1. Deleted "annual" in front of "workplace surveys" definition and rearranged definitions to alphabetical order. Added "injection" as in definition of "entry routes." Deleted "strictly" in 4.1.5. Added 4.1.7 for Air Force personnel only. Deleted "routine" in 4.2.2.4. Deleted "periodic" in 4.2.4.6.No change to Base Operating Contractor process.
03/11/13	Added NFAC supplement; no other change.
02/11/11 G. Bragg	Reviewed. Format changes; added information for Tunnel 9; no change in process.
03/02/09 B. Bragg	Reviewed – No changes
03/02/07 G. Bragg	Reviewed – No changes
02/15/06 G. Bragg	Reviewed; No changes required
03/01/04 G. Bragg	Initial release



Safety, Health, and Environmental Standard

FETAL PROTECTION

1.0 INTRODUCTION/SCOPE/APPLICATION

- 1.1 Introduction – Employee safety and health is of the utmost importance in the workplace and comprehensive safety, industrial hygiene and occupational health programs are in place for all employees. These programs are considered all-inclusive and protective in every sense to include protection of the fetus. However, to ensure all aspects of potential exposures are assessed and addressed, this standard is set forth to establish an open-communication policy between the onsite physician and the pregnant employee or prospective father **employee**.
- 1.2 Scope – There is an emphasis on recognition, evaluation and control of workplace stresses and hazards to ensure the lowest exposures possible. Workplace stresses and hazards include, but are not limited to, teratogenic agents such as chemical hazards, toxic atmospheric contaminants, ionizing and non-ionizing radiation, noise, heat, humidity and cold stresses. In-place exposure control techniques include engineering controls, administrative controls and personal protection controls.
- 1.3 Applicability – This standard applies to all AEDC personnel at Arnold AFB and Tunnel 9. **NFAC personnel comply with the NFAC supplement attached to this standard.**

2.0 BASIC HAZARDS/HUMAN FACTORS

At Arnold AFB, pregnant employees and those considering a family are encouraged to contact the onsite physician as early as possible in the pregnancy or preferably before the pregnancy so that their work environment can be evaluated by **Base** Operating Contractor Safety, Health and **Environmental (SHE)**. The onsite physician is available to answer questions concerning the potential effect of the workplace environment on the unborn child. The onsite physician and **SHE** will observe the ethical and legal precepts governing the confidentiality of medical information. Upon written request by the employee, information will be made available to the employee's personal physician.

Services for Tunnel 9 personnel are coordinated via their medical provider who provides information to **Base** Operating Contractor medical staff and **SHE** as necessary.

3.0 DEFINITIONS/TERMS

Base Operating Contractor – A base contractor directly accountable to the Air Force for the AEDC mission.

Entry Routes – Employees can be exposed to chemicals in **the following** ways: by ingestion (e.g., eating food contaminated by a chemical on the person's fingers), by skin absorption (e.g., contamination of the skin), **by inhalation of the chemical in the air; or by injection (e.g., needle prick).**

Exposure Control Techniques – Chemical and physical exposures are controlled through engineering controls, administrative controls and personal protection controls.

Permissible Exposure Limit – A standard established by the Occupational Safety and Health Administration (OSHA) stating a permissible exposure limit (PEL) for a substance or physical agent which must not be exceeded.

Personal Monitoring – A program for sampling of air contaminants or physical energies in the work area in order to establish the level of worker exposure to such agents. Monitoring may consist of personnel wearing monitoring equipment or film badges throughout the work day.

Special Surveys – **SHE** personnel conduct special surveys which are not scheduled but are requested due to employee concerns or at the request of the onsite physician.

Teratogenic Agent – Any agent with the ability to produce a congenital defect.

Threshold Limit Value-Time-Weighted Average – Recommendations made by the American Conference of Governmental Industrial Hygienists (ACGIH), stating the time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, to which it is believed that nearly all workers may be repeatedly exposed, day after day, without adverse effect. A worker typically works 8 hours per day with a 16-hour break, during which time the body has a chance to remove, modify, or detoxify the chemical.

Workplace Surveys – **Base** Operating Contractor **SHE** personnel conduct detailed basewide surveys. An important aspect of these surveys is an evaluation of chemical exposures. Potential chemical and physical exposures are assessed and addressed at the time of the survey.

4.0 REQUIREMENTS/RESPONSIBILITIES

4.1 Requirements

- 4.1.1 **Base** Operating Contractor Safety, Health and **Environmental** (SHE) shall conduct routine industrial surveys in all work areas to determine potential workplace hazards. Physical and chemical agents shall be evaluated during these surveys. Reports and resultant recommendations shall be coordinated with the onsite physician.
- 4.1.2 The routine industrial survey reports shall be posted in the work area for ten days.
- 4.1.3 Special surveys shall be conducted by **SHE** upon request by the onsite physician when the onsite physician is notified that a woman is pregnant or that an employee is considering a family.
- 4.1.4 The results of the special surveys, including physical and chemical exposure data, shall be reported to the onsite physician who in turn shall report the findings to the employee for counseling if required. Surveys and reports shall be coordinated between the onsite physician and the other members of **SHE**. The onsite physician shall make recommendations based upon survey findings.
- 4.1.5 All recommendations made by the onsite physician shall be followed.
- 4.1.6 Upon the employee's written request, survey results and related work condition information shall be made available to the employee's personal physician.
- 4.1.7 **Air Force personnel must report to the Medical Aid Station to start a Form AF469 Duty Limiting Condition Report process once notified of positive pregnancy.**

4.2 Responsibilities

4.2.1 **Employees Requesting a Fetal Protection Evaluation:**

- 4.2.1.1 Notify the onsite physician of any concerns concerning workplace hazards relating to pregnancy.
- 4.2.1.2 Contact the onsite physician with questions concerning potential chemical or physical agent exposures.
- 4.2.1.3 Follow all recommendations made by the onsite physician.
- 4.2.1.4 Provide a written request for exposure information to be made available for their personal physician's review.
- 4.2.1.5 Complete AEDC hazard communication training requirements.

4.2.2 **Supervisors:**

- 4.2.2.1 Follow all recommendations made by the onsite physician for the prospective parent.
- 4.2.2.2 Direct all questions to the onsite physician.
- 4.2.2.3 Ensure that current employees are made aware of the availability of the fetal protection program and permitted to request special surveys as warranted by work conditions.
- 4.2.2.4 Post **all** industrial survey reports in the work area for ten days.

4.2.3 **Base Operating Contractor Clinic:**

- 4.2.3.1 Serve as the primary point of contact concerning questions on potential health hazards of the unborn child.
- 4.2.3.2 Maintain records of all correspondence and counseling sessions.
- 4.2.3.3 Request that **SHE** conduct a special workplace evaluation of all physical and chemical agents in a pregnant employee's workplace or the workplace of an employee considering a family.
- 4.2.3.4 Make recommendations and coordinate with **SHE** and the employee's supervisor as deemed necessary.
- 4.2.3.5 Ensure workplace evaluations are available upon the employee's written request for a personal physician's review.

4.2.4 Base Operating Contractor Safety, Health and Environmental:

- 4.2.4.1 Document workplace hazards during industrial surveys.
- 4.2.4.2 Conduct special surveys in the workplace upon the request of the onsite physician.
- 4.2.4.3 Document workplace evaluations along with supporting data and forward those evaluations to the onsite physician.
- 4.2.4.4 Coordinate with the onsite physician when necessary.
- 4.2.4.5 Provide new hire hazard communication training, to include presentation of the tenets of the fetal protection program.
- 4.2.4.6 Provide publications and announcements alerting employees to the availability of the fetal protection program.

5.0 TRAINING

Information on the fetal protection standard shall be included as a part of the new hire hazard communication training provided by SHE. In addition, this information is provided through periodic publications and announcements.

6.0 INSPECTIONS/AUDITS

Inspections of the work area shall be performed in accordance with this standard.

7.0 REFERENCES

- 7.1 Catalog of Teratogenic Agents, The Johns Hopkins University Press
- 7.2 The Effects of Workplace Hazards on Female Reproductive Health, National Institute for Occupational Safety and Health (NIOSH)
- 7.3 Fundamentals of Industrial Hygiene, National Safety Council
- 7.4 Patty's Industrial Hygiene and Toxicology, John Wiley and Sons, Inc.
- 7.5 Pocket Guide to Chemical Hazards, National Institute for Occupational Safety and Health (NIOSH)
- 7.6 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists
- 7.7 Women's Safety and Health Issues at Work, NIOSH

7.0 SUPPLEMENT

NFAC A321-0801-XSP E10 Fetal Protection

A321-0801-XSP E10 Fetal Protection Supplement

This supplement has been approved for the NFAC Site.

Review: This supplement will be reviewed and updated using the same cycle as the AEDC Safety Standard E10 "Fetal Protection."

References: AEDC Safety Standard E10 – Fetal Protection at the AEDC NFAC Site.

NASA Ames Procedural Requirement APR 1700.1 Chapter 1 Ames Health and Safety Supplement.

Scope:

This supplement provides supplement guidance for ensuring adequate protection is provided for pregnant employees and those considering starting a family while employed at the NFAC.

NFAC Worksite Application:

Employees of NFAC will utilize AEDC Safety Standard E10 for guidance on general safety concerns and requirements and responsibilities on the topic of Fetal Protection. Additional guidance on general health and safety is outlined in the NASA Ames Procedural Requirement APR 1700.1 Chapter 1 Ames Health and Safety Supplement.

At NFAC, pregnant employees and those considering a family are encouraged to contact the NASA Ames Health Unit physician as early as possible in the pregnancy or preferably before the pregnancy so that their work environment can be evaluated by the NFAC Management and Safety Engineer.

I. NFAC Staff shall:

1. Notify the NASA Ames Health Unit physician of any concerns about potential hazards in their designated work location.
2. Notify AEDC/TSD-SG upon employee's report of pregnancy.

II. NFAC Supervisors shall:

1. Ensure that all recommendations by the NASA Ames Health Unit physician are followed
2. Ensure that current employees are made aware of the availability of the fetal protection program and permitted to request special surveys as warranted by work conditions

III. NFAC Safety Engineer/Management Designee shall:

1. Conduct special surveys in the workplace upon the request of the NASA Ames Health Unit physician.
2. Ensure that new hire employees perform online Hazard Communication training.