Ames Procedural Requirements

Ames Health and Safety Manual

Chapter 54 – Reproductive and Developmental Health Program

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54.1. PURPOSE

Through the course of work at ARC, employees may work with agents known or suspected to be hazardous to human reproduction. These agents include radiation, chemicals, biological agents, and physical hazards. This program provides assistance to staff and supervisors when dealing with questions related to reproductive health and work at ARC.

54.2. POLICY

ARC’s policy is to implement appropriate control measures to keep potentially hazardous occupational exposures to recognized health hazards as low as reasonably achievable.

54.3. RESPONSIBILITIES

54.3.1 The Occupational Safety, Health and Medical Services Division shall:

a) Develop, implement, and administer the ARC Reproductive and Developmental Health Program
b) Upon employee request, perform a qualitative exposure assessment of the concerned employee’s work place
c) Maintain availability of training and technical information on potentially hazardous occupational exposures, including the proper use of personal protective equipment (PPE) and safety devices, the use of engineering controls, and other methods of decreasing exposure
d) Protect the privacy of the employee

54.3.2 Ames Radiation Safety Officer shall:

a) For declared pregnancies, implement measures to achieve the lower exposure limit (0.5 REM to an embryo/fetus during an entire gestation period) and conduct dose monitoring.
b) Upon request by any employee, provide specific radiation safety training including information on radiological issues related to reproductive health and pregnancy.

See Chapter 7 of the Ames Health and Safety Manual, APR 8715.1

54.3.3 Ames Health Unit

For civil service employees, the Ames Health Unit shall:

a) Maintain the written declaration of pregnancy in the employee’s occupational health record
b) Provide medical evaluation and/or provide referrals for outside medical evaluation, as appropriate
c) Following an exposure incident, recommend the components of an appropriate occupational health evaluation and share the exposure information with other medical providers, as needed.

d) Determine the content of medical evaluations according to NASA occupational health guidelines based on the specific chemical or physical hazard present and the degree of potential exposure.

54.3.4 Supervisors shall:

a) Include known reproductive hazards specific to the work area in the written job hazard analysis (JHA) or laboratory safety plan (LSP).

b) Provide individual operational training on the task-specific hazards in the JHA or LSP.

c) Upon receipt of a pregnancy declaration, notify the Industrial Hygiene Manager and the Radiation Safety Officer of the declaration.

d) When accommodations are requested in connection with workplace hazards, consult with Human Resources and the Office of Diversity and Equal Opportunity, as needed.

e) Notify the Occupational Safety, Health and Medical Services Division (Industrial Hygiene Program Manager, 650 604-5172) about any significant changes in the work environment.

54.3.5 Employees

54.4.5.1 Employees may voluntarily declare their actual, suspected, or planned pregnancy to their supervisor in writing.

54.4. PROCEDURE

54.4.1 Evaluation

54.4.1.1 Any employee may request an exposure assessment of the potential risk associated with known reproductive hazards in their work area by using the hazard reporting form on the Safety Division website.

54.4.1.2 The Ames Occupational Safety, Health and Medical Services Division industrial hygiene staff will give these requests the same priority as a hazard report for a serious hazard.

54.4.1.3 Workplace hazard assessments to determine where potential reproductive hazards exist may include these elements:

a) Review of past occupational health reports and historical sampling results

b) Inspection of the work area to identify potential hazards

c) Observation of work practices and PPE
d) Professional evaluation of the potential exposure(s) of the concerned employee to chemicals, hazardous noise levels, biologically hazardous materials, ergonomic hazards, extreme physical task demands, or ionizing radiation hazards

e) Review of the chemical inventory and chemical Safety Data Sheets against the list of known reproductive hazards published by the State of California in the Proposition 65 list, which can be found on the Ames Reproductive and Developmental Health web page.

54.4.1.4 Exposure assessments shall document the following aspects of the work environment:

a) The potential for exposure to occur through inhalation, by absorption through the skin, or through contact with the skin.
b) The frequency that the operation occurs and the quantity of exposure that typically occurs.
c) The engineering control methods used and their effectiveness.
d) Respirator and personal protective equipment used at the time the process or operation was observed.
e) The radiation or radioactive contamination levels in the area and the potential for and degree of radiation exposure to the embryo/fetus.

54.4.1.5 Where hazards are found, the industrial hygiene or health physics staff shall provide the supervisor with recommendations for engineering controls or PPE that can reduce workplace exposures.

54.4.2 Training and Information

54.4.2.1 Helpful information about reproductive health shall be posted on the Safety Division website.

54.4.2.2 The California Proposition 65 list shall be included in the Ames Reproductive and Developmental Health web page.

54.4.2.3 Training on reproductive hazards shall be integrated with existing hazard-based training courses, including the following:

a) Chemical Hygiene in Laboratories
b) Blood-borne Pathogens
c) Radiation Safety
d) Laboratory Safety Boot Camp
e) Hazard Communication
54.4.3 Control Measures

54.4.3.1 It is ARC’s policy to control exposures by using engineering and administrative controls when feasible. Examples of control methods include product substitution, fume hoods and local exhaust ventilation, and minimizing time of exposure.

54.4.3.2 When these controls are not feasible, personal protective equipment (PPE) may be used.

54.4.3.3 Special hazard controls for reproductive hazards used in laboratories are specified in APR 8715.1 Chapter 13 section 13.4.4.

54.4.4 Radiation (NASA NPR 1800.1, Section 4.13-4.15)

54.4.4.1 The Ames Occupational Safety, Health and Medical Services Division provides radiation monitoring of employees through the RSO. The RSO assigns a radiation-measuring badge to workers based on expected exposure or when deemed appropriate by the RSO. Any other activities that could result in plausible internal exposure shall be evaluated by the RSO.

54.4.4.2 Radiation monitoring and follow-up action shall be handled as described in Chapter 7 of the Ames Health and Safety Manual, APR 8715.1.

54.5 Recordkeeping

54.5.1 Hazard analysis documents including job hazard analyses, laboratory safety plans and procedures, shop safety plans and/or procedures, and PPE assessments shall be available in each work area to which they apply.

54.5.2 The Ames Health Unit shall maintain employee’s occupational health records, including results of individual medical monitoring.

54.5.3 Reports documenting exposure monitoring results shall be provided to involved personnel, the Safety Division and the Ames Health Unit.

54.5.4 The Safety Division shall maintain exposure assessment and exposure-monitoring records and records that document reports of unsafe or unhealthy working conditions.
APPENDIX A—DEFINITIONS AND ACRONYMS

Declared pregnancy—When a pregnant employee voluntarily informs Center management of her pregnancy, in writing, for the purpose of invoking the requirements of this APR. The declaration remains in effect until the declared pregnant woman withdraws the declaration or is no longer pregnant. A pregnancy that becomes self-evident, without an affirmative declaration, does not trigger the requirements of this APR. Similarly, an employee’s discussion of her pregnancy with the practitioners at the Health Unit does not, on its own, trigger the requirements of this APR.

Permissible exposure limit—Occupational exposure limits established by OSHA: the permissible concentration in air of a substance to which nearly all workers may be repeatedly exposed 8 hours per day, 40 hours per week, for 30 years, without adverse effects.

Reproductive hazard—Chemical, biological, radioactive, or physical agent that has the potential to adversely affect human reproductive capabilities.

REM - Unit of radiation dose applied to humans.

APPENDIX B: ACRONYMS

APR   Ames Procedural Requirement
ARC   NASA Ames Research Center
CFR   Code of Federal Regulations
NASA  National Aeronautics and Space Administration
NIOSH National Institute for Occupational Safety and Health
NPR   NASA Procedural Requirement
OSHA  Occupational Safety and Health Administration
PPE   Personal Protective Equipment
REM   Roentgen equivalent in man
RSO   Radiation Safety Officer
APPENDIX C: REFERENCES

NPR 1800.1C, NASA Procedural Requirement, NASA Occupational Health Program Procedures

OSHA, Reproductive Hazards, Hazard Recognition


National Institute for Occupational Safety and Health (NIOSH) No. 99–104, The Effects of Workplace Hazards on Female Reproductive Health

California Proposition 65, Chemicals Known to the State to Cause Cancer or Reproductive Toxicity

U.S. Nuclear Regulatory Commission, Regulatory Guide 8.13—Instructions Concerning Prenatal Radiation Exposure

Fair Labor Standards Act (FLSA) Public Law 106–310, 2010 Patient Protection and Affordability Act, Section 4207