

**George Mason University
Medical Surveillance Plan**



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Environmental Health and Safety Office
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Acronyms

AL	Action Level
APHIS	Animal, Plant Health Inspection Service
BBP	Bloodborne Pathogens
CFR	Code of Federal Regulations
CC	Course Coordinators
CDC	Centers for Disease Control and Prevention
dBA	Decibel, A-weighted
DHRM	Virginia Department of Human Resources Management
EHS	Environmental Health and Safety Office
HBV	Hepatitis B virus
HHS	Department of Health and Human Services
HIV	Human Immunodeficiency Virus
JSA	Job Safety Analysis
NIOSH	National Institute for Occupational Safety and Health
SDS	Safety Data Sheet
OPIM	Other Potentially Infectious Material
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PLHCP	Physician or Other Licensed Healthcare Provider
PPE	Personal Protective Equipment
ppm	Parts Per Million
PRF	Project Review Form
SLSP	Supplemental Laboratory Safety Plan
SOP	Standard Operating Procedures
STEL	Short-Term Exposure Level
TWA	Time-Weighted Average
WC	Human Resources and Payroll Workers' Compensation Department

Foreword

George Mason University is required by US Code of Federal Regulation (CFR) 29 and Virginia Administrative Code (16 VAC 25-90) to ensure that employees exposed to health hazards at work are included in a medical surveillance program. This *Medical Surveillance Plan* describes George Mason University's Medical Surveillance Program which is supplemented with a robust air and noise monitoring program to help establish exposure levels while performing job tasks. The following document outlines George Mason University's Medical Surveillance Program and describes specific policies and procedures designed to satisfy federal and state safety and health requirements.

Document History

Version	Date	Comments
1	February, 2009	Initial <i>Medical Surveillance Program</i>
2	November, 2013	Routine review and update

1.0 Introduction

George Mason University employees may be exposed during the course of their work to occupational hazards which increase the risk of injury or illness. The Environmental Health and Safety Office (EHS) will assist supervisors in mitigating exposure to occupational hazards through the implementation of engineering controls, administrative controls, proper work practices, and personal protective equipment (PPE). Medical surveillance may be recommended or required in addition to these controls to reduce or monitor potential personnel exposure.

Medical surveillance is a series of medical services provided by a physician or other licensed healthcare professional (PLHCP) for prevention or identification of occupational injuries and illnesses, including a review of occupational and medical history, physical exams, diagnostic and performance testing, and vaccinations. Post-exposure treatment is provided by workers' compensation medical providers who give post-exposure treatment and prophylaxis. This *Medical Surveillance Plan* complies with applicable regulations and guidelines and establishes minimum medical surveillance requirements to prevent occupational injuries and illnesses for George Mason University personnel whose job duties place them at risk of exposure to occupational hazards. Elements of this plan include: roles and responsibilities, hazard assessment, medical surveillance, medical removal, recordkeeping and reporting, and program evaluation.

1.1 Scope

This *Medical Surveillance Plan* covers all George Mason University employees, including supervisors, employees, principle investigators (PI), laboratory supervisors (LS), students, and volunteers.

2.0 Roles and Responsibilities

This *Medical Surveillance Plan* for George Mason University is a cooperative effort between EHS, PLHCP, supervisors, employees, Principal Investigators/Laboratory Supervisors (PI/LS), students, and volunteers. Specific responsibilities relating to the Medical Surveillance Program are outlined below.

2.1 Environmental Health and Safety Office (EHS)

Specific responsibilities of EHS related to medical surveillance are to:

- Administer the *Medical Surveillance Program*.
- Upon supervisor request, conduct hazard assessments to identify occupational hazards that may require inclusion in a medical surveillance program.
- Conduct air/noise monitoring to determine exposure level for inclusion in the Medical Surveillance Program.
- Provide employees with monitoring results.
- Coordinate with PLHCP to provide required medical surveillance to employees.
- Pay all costs associated with required medical surveillance and follow-up examinations for university employees.
- Work with PLHCP, Human Resources and Payroll Workers' Compensation Department (WC), and supervisors to coordinate an employee's medical removal and reassignment when necessary.
- Obtain *Physician Written Opinion/Respirator Clearance Form* within 15 days of an employee receiving medical surveillance or treatment.
- Coordinate maintenance of all records related to medical surveillance with PLHCP according to 29 CFR 1910.1020 *Access to Employee Exposure and Medical Records*.
- Evaluate this *Medical Surveillance Plan* routinely and update as needed.

2.2 Physician or Other Licensed Healthcare Professional (PLHCP)

A PLHCP is an individual whose legally-permitted scope of practice (i.e., license, registration, or certification) allows him or her to independently provide, or be delegated the responsibility to provide, some or all of the medical surveillance listed in this *Medical Surveillance Plan*.

Specific responsibilities of PLHCP related to medical surveillance are to:

- Conduct required medical surveillance for employees upon request by EHS.
- Determine the extent of follow-up medical surveillance or treatment required.
- Provide required follow-up medical surveillance or treatment.
- Provide written opinion to EHS within 15 business days of conducting medical surveillance or follow-up treatment to employees.
- Inform employees of any medical condition identified that may require further treatment.
- Notify the employee and EHS if an employee demonstrates a need for a follow-up examination.

- Make recommendations for medical removal, if necessary, per applicable regulations.
- Provide any vaccinations that are required or recommended.
- Maintain a copy of George Mason University employees' records per 29 CFR 1910.1020.
- Provide any counseling or follow-up required by Occupational Safety and Health Administration (OSHA) standards or make a referral to appropriate health care provider.

2.3 Human Resources and Payroll Workers' Compensation Department (WC)

WC manages Workers' Compensation claims. Personnel who suffer a work-related injury or illness must contact WC and their supervisor and/or department as soon as possible. Specific responsibilities of WC are to:

- Maintain an updated list of post-exposure Workers' Compensation medical providers with expertise in occupational medicine.
- Notify EHS of any changes to the list of post-exposure medical providers.
- Process Workers' Compensation claims according to Virginia Workers' Compensation Commission procedures.
- Work with the PLHCP, EHS, and supervisor to coordinate an employee's medical removal and reassignment.

2.4 Occupational Health Physician/Workers' Compensation Medical Provider

An Occupational Health Physician/Workers' Compensation medical provider is a licensed healthcare facility or individual with expertise in occupational medicine who is approved by Virginia Department of Human Resource Management (DHRM) to provide medical treatment. Specific responsibilities related to medical surveillance are to:

- Determine the extent of follow-up medical surveillance or treatment required.
- Provide required follow-up medical treatment.
- Make recommendations for medical removal, if necessary, per applicable regulations.
- Provide WC with information necessary to file workers' compensation claims.
- Maintain a copy of George Mason University employees' records per 29 CFR 1910.1020.

2.5 Supervisors

Supervisors, including PI/LS, oversee George Mason University employees and their work. Specific responsibilities of supervisors related to medical surveillance are to:

- Work with EHS and employees to identify engineering and administrative controls to reduce exposure to hazardous substances.
- Implement engineering and administrative controls and work practices per EHS recommendations.
- Notify EHS when:
 - Changes are made to the materials or equipment used or job processes that present additional occupational hazards.

- A new employee is assigned duties for which the Job Safety Analysis (JSA) or *Supplemental Laboratory Safety Plan (SLSP)* describes required medical surveillance.
- Work with the PLHCP, EHS, and Workers' Compensation Department to coordinate an employee's medical removal and reassignment.
- Develop JSA or SLSP for specific high hazard tasks.
- Provide and ensure use of required PPE.
- Follow-up with employees to ensure available vaccinations have been offered.
- Ensure completion of all required medical surveillance and training.

2.6 Employees, Students, and Volunteers

Employees include faculty (professional, administrative, and research) and staff (classified, wage, and student wage). Others persons who may be included in the Medical Surveillance Program based on job hazards include: affiliates (visiting faculty, volunteers, visiting research associates), and paid students (graduate students, undergraduate students, laboratory assistants, etc.), and volunteers. Specific responsibilities of George Mason University employees related to medical surveillance are to:

- Work with EHS and supervisors to identify engineering and administrative controls to reduce exposure to hazardous substances.
- Participate in all required medical surveillance.
- Report physiological changes that could affect the ability to safely complete assigned duties to EHS.
- Complete all required training, prior to beginning work.
- Use all engineering controls available.
- Abide by all administrative controls deemed necessary for reduced exposure risk.
- Wear all PPE determined to be necessary to complete job assignment.

3.0 Hazard Assessment

EHS conducts hazard assessments to identify occupational hazards at George Mason University. Hazard assessments will be completed by:

- Interviewing supervisors and employees;
- Observing work practices;
- Reviewing supporting documents that may include applicable regulations and guidelines, chemical and biological inventories, Safety Data Sheets (SDS), Project Review Forms (PRF), and Standard Operating Procedures (SOP); and
- Conducting air, noise, or surface sampling, as necessary

Hazard assessments will be used to identify required medical surveillance based on the anticipated occupational hazards and required PPE. If medical surveillance is determined to be necessary, it must be included in the SLSP or JSA.

Supervisors must notify EHS when:

- Changes are made to the materials or equipment used;
- Job processes that present additional hazards; and
- New employees are assigned job duties for which medical surveillance is required.

4.0 Medical Surveillance

Based on applicable regulations and guidelines, EHS has identified specific chemical, physical, and biological hazards George Mason University employees may be exposed to during the course of their work. This *Medical Surveillance Plan* establishes minimum requirements and recommendations for medical surveillance for employees whose job duties are considered at risk because of their potential for exposure to these specific hazards. Further details of regulations and guidelines per specific chemical, physical and biological hazards can be found in Table 1 and Table 2.

4.1 Chemical Hazards

Medical surveillance for employees working with specific chemicals may include the following elements:

- Review of medical and occupational history;
- Physical examinations;
- Diagnostic and performance testing targeting specific biomarkers and organs, respectively; and
- Medical removal.

Table 1: Medical Requirements for Physical and Chemical Hazards

	Arsenic (Inorganic)	Asbestos	Benzene	Formaldehyde
OSHA Standard:	<i>Inorganic Arsenic</i> 29 CFR 1910.1018	<i>Asbestos</i> 29 CFR 1910.1001	<i>Benzene</i> 29 CFR 1910.1028	<i>Formaldehyde</i> 29 CFR 1910.1048
Route of Exposure:	Inhalation	Inhalation, ingestion	Inhalation, skin absorption	Inhalation, skin & eye contact
Action Level (AL)/ Permissible Exposure Limits (PEL):	AL: 5 µg/m ³ based on an 8-hour time-weighted average (TWA)	PEL: 0.1 fibers/cm ³ over 8-hour TWA, or 1 fiber/cm ³ as 30 minute TWA	AL: 0.5ppm based on 8-hour TWA PEL: 1.0 parts per million (ppm) based on 8-hour TWA	AL: 0.5 ppm based on 8-hour TWA. Short Term Exposure Limit (STEL); 2 ppm based on 15 minute TWA
Employees are enrolled if:	Exposed to ≥ AL ^(a) , for at least 30 days per year	Exposed to ≥ PEL ^(a) .	Exposed to ≥ AL ^(a) and (or) PEL	Exposed to ≥ AL ^(a) and (or) STEL
PLHCP Examination	Initial, annually, termination	Initial, annually, termination	Initial, annually	Initial, annually
Work and Medical History Review	Yes	Yes	Yes	Appendix F, <i>Non-Mandatory Medical Disease Questionnaire</i>

Chest X-ray	Yes (anterior & posterior)	Roentgenogram (anterior-posterior) 14x17 inches	No	No
Pulmonary Function Test (Spirometry)	No ^(b)	Yes. Including: forced vital capacity and forced expiratory volume at 1 second	Yes. For employees required to wear respirator \geq 30 days per year. Exam every 3 years	Yes. For employees exposed greater than TWA.
Employee Counseling by PLHCP:	Yes	Yes	Yes	Yes
Medical Removal Plan	No	No	Yes. If referred to hematologist/internist	Yes. If advised by PLHCP.

- (a) Without the use of respirators.
(b) Unless needed for use of respirators.

	Lead	Methylene Chloride	Vinyl Chloride
OSHA Standard:	<i>Lead</i> 29 CFR 1910.1025	<i>Methylene Chloride</i> 29 CFR 1910.1052	<i>Vinyl Chloride</i> 29 CFR 1910.1017
Route of Exposure:	Inhalation, ingestion	Inhalation, skin contact	Inhalation,
AL/ PEL:	AL: 30 $\mu\text{g}/\text{m}^3$ based on an 8-hour TWA PEL: 50 $\mu\text{g}/\text{m}^3$ over 8-hour TWA.	AL: 12.5ppm PEL: 25ppm based on 8-hour TWA. STEL: 125ppm based on 15-minute TWA.	AL: 0.5ppm based on 8-hour TWA. PEL: 1 ppm based on 8-hour TWA.
Employees are enrolled if:	Exposed to \geq AL, for more than 30 days	Exposed to \geq AL for \geq 30 days, or \geq PEL and STEL for \geq 10 days/year	Exposed to \geq AL.
PLHCP Examination	Initial, annually, termination	Initial, annually, termination	Initial, annually
Work and Medical History Review	Yes	Yes	Yes
Chest X-ray	No	No	No
Pulmonary Function Test (Spirometry)	No ^(b)	No ^(b)	No
Employee Counseling by PLHCP:	Yes	Yes	Yes

Medical Removal Plan	Yes	Yes	Yes
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- (a) Without the use of respirators.
- (b) Unless needed for use of respirators.

4.1.1 Laboratory Chemicals

Minimum medical surveillance requirements for employees working with laboratory chemicals are specified in the OSHA standard, *Occupational Exposure to Hazardous Chemicals in Laboratories* (29 CFR 1910.1450) and described in Table 1. For George Mason University employees working with hazardous chemicals in the laboratory, medical surveillance will be when:

- Exposure monitoring reveals an exposure level routinely above the AL (or in the absence of an AL, the PEL) for an OSHA-regulated substance;
- An employee develops signs or symptoms associated with a hazardous chemical to which the employee may have been exposed in the laboratory; or
- A spill, leak, or explosion occurs resulting in the likelihood of a hazardous exposure.

4.1.2 Organophosphates

Organophosphates are cholinesterase-inhibiting compounds that may be used in laboratory research or as a component of some restricted-use pesticides. Medical surveillance for employees exposed to organophosphates includes a baseline reading of red blood cell count and cholinesterase level.

4.1.3 Radioisotopes

George Mason University does not use large enough quantities of radioisotopes to require inclusion in a medical surveillance program at this time.

4.2 Physical Hazards

Medical surveillance for employees exposed to physical hazards may include the following elements:

- Review of medical and occupational history;
- Review of questionnaires similar in content to those included in appendices in applicable regulations;
- Physical examinations;
- Diagnostic and performance testing targeting specific biomarkers and organs, respectively; or
- Medical removal.

4.2.1 Lasers

Medical surveillance for employees working with Class 3b or 4 lasers will receive pre-exposure medical examinations. Medical surveillance is recommended for all employees who work

directly with Class 3b or Class 4 lasers or laser systems on a continual basis. Medical surveillance for employees working with Class 3b or Class 4 lasers may include the following elements:

- Ocular history;
- Amsler grid test; or
- Visual acuity correctable to 20/20.

4.2.2 Noise

Occupational exposure to noise is regulated by the OSHA standard *Occupational Noise Exposure* (29 CFR 1910.95). George Mason University complies with this requirement by using a mobile audiometric van that comes on campus every six months. Any employee that requires a follow-up audiometric test is sent to a local PLHCP for further testing.

Any employee exposed to noise in excess of the OSHA action level for noise, 85 decibels, A-weighting (dBA) based on an 8-hour TWA with an exchange rate of 5 dBA, must receive an audiometric exam from a PLHCP within six months of initial exposure and annually thereafter. Employees must avoid exposure to occupational and recreational noise for 14 hours prior to the audiometric exam.

4.3 Biological Hazards

Medical surveillance for employees exposed to biological hazards can be found in Table 2. It may include the following elements:

- Review of medical and occupational history;
- Physical examinations;
- Chest X-ray; or
- Vaccinations.

If Table 2 does not address the biological hazard of concern, please contact EHS for an individual assessment. For additional information on the Biological Safety Program at George Mason University, please see the *Biological Safety Manual*.

4.3.1 Bloodborne Pathogens (BBP)

Bloodborne pathogens (BBP) are pathogenic microorganisms present in human blood that can cause disease in humans. Medical surveillance requirements for employees who may be exposed to human blood or Other Potentially Infectious Materials (OPIM) are specified in OSHA standard *Bloodborne Pathogens* (29 CFR 1910.1030) and described in Table 2. According to the standard, employees who may be exposed to BBP in the course of their work must be offered the Hepatitis B vaccine series free of charge within 10 days of initial assignment. EHS will notify employees of their eligibility after they attend the *Bloodborne Pathogens Training*. George Mason University's *Exposure Control Plan and Bloodborne Pathogens Program* has been developed to comply with OSHA's *Bloodborne Pathogens Standard* (29 CFR 1910.1030).

4.3.2 Laboratory Animals

Medical surveillance for George Mason University employees, students, and volunteers is recommended when working with laboratory animals. If an employee, student, or volunteer wishes to decline inclusion of the Medical Surveillance Program, then an *Acknowledgement of Risk & Waiver Form* must be signed and submitted to EHS. The medical surveillance requirements for personnel working with or around animals are found in Table 2.

Some laboratory animals may be exposed to aerosols or inoculated for other biological agents. Employees working with animals exposed to other biological agents must also receive the required medical surveillance for the agent.

4.3.3 Risk Group 3 and Select Agents

Medical surveillance for George Mason University employees and students working with risk group 3 and select agents is required. Risk group 3 agents are biological agents that can cause serious disease in humans or animals, but there are usually effective preventative measures or treatment available. Select agents are biological agents or toxins that the Centers for Disease Control and Prevention (CDC) within U. S. Department of Health and Human Services (HHS) or U.S. Department of Agriculture Animal, Plant Health Inspection Service (APHIS) has determined have the potential to pose a severe threat to public health and safety. A list of CDC and APHIS select agents is included in 42 CFR 73, *Select Agents and Toxins* and 7 CFR 331 and 9 CFR 121, *Agriculture and Bioterrorism Act of 2002*, respectively.

All risk group 3 and select agents have agent-specific SOP. Medical surveillance for personnel working with risk group 3 and select agents are found in Table 2.

Table 2: Medical Requirements for Biological Hazards

Biological Hazard:	Bloodborne Pathogens	Laboratory Animals^(a)	Risk Group 3 Agents
Respirator Clearance		✓ ^(b)	✓
Animal Handler Clearance		✓	✓
Physical Examination		✓	✓
Tuberculosis Screening (Baseline)			✓
Hepatitis B Vaccine (3 shot one-time series)	✓	✓	✓

Biological Hazard:	Bloodborne Pathogens	Laboratory Animals ^(a)	Risk Group 3 Agents
Influenza Vaccine (annual)			✓
Rabies (3 shot series)			
Tetanus Vaccine Td/Tdap (every 10 years)		✓	✓
Anthrax Vaccine (5 shot series, annual booster)			✓

(a) Requirements may change based on animal species

(b) May be required based on medical screening.

Biological Hazard	Field Work With Animals	Child Care	Student Health Services	Police
Respirator Clearance			✓	✓
Animal Handler Clearance	✓			
Physical Examination	✓			
Tuberculosis Screening (Baseline)		✓ ^(a)		
Hepatitis B Vaccine (3 shot one-time series)	✓	✓	✓	✓
Influenza Vaccine (annual)		✓	✓ ^(b)	✓ ^(b)
Rabies (3 shot series)	✓			
Tetanus Vaccine Td/Tdap (every 10 years)	✓			

Measles, Mumps, & Rubella Vaccine				
Anthrax Vaccine (5 shot series, annual booster)				

- (a) Tuberculosis screening required every two years per Virginia Department of Social Services
- (b) Cost associated with this medical requirement will be covered by the employee’s respective department
- (c) Tuberculosis screening is determined based on the nature of the research conducted as well as environmental conditions surrounding the research

4.4 Medical Surveillance for Susceptible Individuals

Susceptible individuals may experience adverse effects of exposure to occupational hazards even at concentrations below the regulatory limits. Susceptible individuals may include allergic or sensitized individuals and pregnant workers.

4.4.1 Allergic or Sensitized Individuals

Sensitization or allergic reactions to chemical or biological agents may occur in some employees at doses considered acceptable for the average working population. Individuals are encouraged to discuss any concerns related to their occupational exposure and allergies or sensitivities with PHLCP. PHLCP may be able to help identify additional engineering or administrative controls or PPE to further reduce the employee’s occupational exposure to the agent. EHS is also available to assist with a workplace assessment upon request.

George Mason University employees may be exposed to harmful plants and animals when working outdoors or conducting field research. Some employees may be allergic or sensitized to some plants or animals. Employees who are at risk of anaphylactic shock should speak with their physician and consider carrying an EpiPen®.

4.4.2 Reproductive Health

Occupational exposure to hazardous substances for all employees should always be maintained as low as possible. However, some occupational hazards pose additional risks to reproductive health or the developmental health of fetuses. EHS is available to conduct a hazard assessment that may identify engineering and administrative controls and PPE available to further reduce the risk of occupational exposure to reproductive or developmental hazards upon request. Additional medical surveillance may also be recommended for pregnant workers.

4.5 PLHCP Written Opinion

EHS must obtain a copy of the PLHCP written opinion within 15 business days of providing medical surveillance or follow-up treatment containing the following information:

- Occupationally pertinent results which do not reveal specific findings or diagnoses unrelated to the employee's ability to work;
- Any conditions identified which place the employee at an increased risk of impairment from occupational exposure; and
- Recommendations related to the use of PPE or limitations on the employee's job duties.

5.0 Medical Removal

George Mason University will abide by specific OSHA standards which outline when an employee should be medically removed due to occupational exposure or other medical conditions identified during periodic medical surveillance. In the event a medical removal is required, EHS will work with the PLHCP and WC to coordinate an employee's medical removal and reassignment to a comparable job for which the employee is qualified (or can be trained in a short amount of time). The employee may not suffer a reduction in wage rate, seniority, or other benefits as a result of the reassignment.

6.0 Recordkeeping and Reporting

The maintenance of medical records related to medical surveillance and workers' compensation claims are maintained through a cooperative effort between EHS, WC, PLHCP, and workers' compensation medical providers. All records must be maintained confidentially according to 29 CFR 1910.1020 *Access to Employee Exposure and Medical Records* for 30 years after termination of employment. The records may not be disclosed without written permission per applicable regulatory standards. These records include the following:

- Records of all medical surveillance provided to employees in accordance with applicable regulations, including vaccination records, consent or declination forms, and medical evaluations;
- Materials provided to the PLHCP used to conduct a medical evaluation;
- Written opinions provided by the PLHCP;
- Descriptions of treatment or prescriptions;
- Employee medical complaints; and
- Copies of all exposure-monitoring data collected during personal or area-monitoring descriptive of an employee's exposure to hazardous substances.

Upon receipt of written permission from an employee or former employee, the employee or representative must be provided the requested records within 15 working days.

6.1 Workers' Compensation Records

The WC maintains records of all workers' compensation claims per DHRM standards.

7.0 Program Evaluation

EHS will evaluate this *Medical Surveillance Plan* routinely and update as needed for continued program effectiveness and compliance with applicable regulations and industry standards.

Appendix A Definitions

Action level: When this concentration of a hazardous substance or sound pressure level is exceeded in the environment, actions such as medical surveillance, the use of PPE, or routine air/noise monitoring are required. This value is determined by OSHA and is typically half of the published PEL.

Administrative controls: Work procedures, such as written safety policies, rules, supervision, and training, with the goal of reducing the duration, frequency, and severity of exposure to hazardous materials or situations.

Bloodborne pathogens: (As defined by OSHA in 29 CFR 1910.1030) Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

Centers for Disease Control and Prevention (CDC): Within the HHS, which strives to protect people's health and safety, provide reliable health information, and improve health through health promotion, prevention and preparedness.

Employee: Faculty (professional, administrative, and research), staff (classified, wage, and student wage), and graduate students receiving compensation.

Engineering controls: Controls that eliminate or reduce exposure to laboratory and other hazards through the use or substitution of engineered machinery or equipment. Examples include self-capping syringe needles, ventilations systems such as a fume hood, sound-dampening materials to reduce noise levels, safety interlocks, and radiation shielding.

Exchange rate: The exchange rate is equal to the increase in sound pressure level due to the addition of a second sound of equal pressure. OSHA uses an exchange rate of 5 dBA; American Conference of Governmental Industrial Hygienists uses an exchange rate of 3 dBA.

Job safety analysis (JSA): A procedure that focuses on individual job tasks as a way to identify and prevent hazards on the job before they occur. Hazards which can lead to injuries and illnesses can be prevented by evaluating workplace operations and establishing appropriate engineering, administrative, and physical controls for a specific job task.

Safety Data Sheet (SDS): A standard-formatted information sheet prepared by a material manufacturer, describing the potential hazards, physical properties, and procedures for safe use of a material.

Medical removal: Process by which an employee is removed from a job due to occupational exposure or other medical conditions identified during periodic medical surveillance and reassigned to a comparable job for which the employee is qualified (or can be trained in a short

amount of time). The employee may not suffer a reduction in wage rate, seniority, or other benefits as a result of the reassignment.

Medical surveillance: A battery of medical services by a PLHCP for the primary prevention of occupational injuries and illnesses, including a review of occupational and medical history, physical exams, diagnostic and performance testing, and vaccinations.

Occupational medicine: Branch of medicine that deals with injuries and illnesses resulting from exposure to hazard and hazardous substances in the occupational environment.

Occupational Safety and Health Administration (OSHA): Develops and enforces regulations based on federal statutes. OSHA regulates health and safety in the workplace, establishes enforceable chemical exposure limits, and sets minimum standards for work place health and safety.

Organophosphates: Cholinesterase-inhibiting compounds that may be used in laboratory research or as a component of some restricted use pesticides.

Other Potentially Infectious Materials (OPIM): 1) The following fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, amniotic fluid, and any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; 2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and 3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

OSHA Permissible Exposure Limits (PEL): Enforceable regulatory limits set by OSHA. The PEL is the maximum allowable eight-hour TWA air concentration. The PEL may also contain a skin designation.

OSHA Short-Term Exposure Limits (STEL): Enforceable regulatory limits set by OSHA. The STEL is the maximum allowable 15-minute TWA air concentration.

Personal Protective Equipment (PPE): Clothing and other work accessories designed to create a barrier against workplace hazards. Examples include safety goggles, blast shields, hard hats, hearing protectors, gloves, respirators, aprons, and work boots.

Physician or Other Licensed Healthcare Professional (PLHCP): A PLHCP is an individual whose legally-permitted scope of practice (i.e., license, registration, or certification) allows him or her to independently provide, or be delegated the responsibility to provide, some or all of the medical surveillance listed in this *Medical Surveillance Plan*.

Post-Exposure Prophylaxis: Medication administered following a potential exposure to a hazardous agent in order to prevent the development or spread of a disease.

Post-exposure Treatment: Medical treatment provided by a Workers' Compensation medical provider to personnel in response to an incident in which the employee was exposed or potentially exposed to an occupational hazard or hazardous agent.

Primary prevention: Preventing occupational illnesses and injuries by improving the health status of exposed employees and reducing the environmental risk of exposure, including programs aimed to reduce employee exposure and those designed to reduce the likelihood of experiencing illness or injury should an employee be exposed to a hazardous substance.

Project Review Form (PRF): Form which must be completed for all research and instructional projects involving the use of biological materials and/or sources of ionizing radiation at George Mason University. The form requests general project information and includes a checklist of materials that will be used in the project. Depending on the nature of the project, PI or Course Coordinators (CC) may need to submit one or several addenda. In some cases, PI/CC may be asked to provide supplemental information to facilitate the review process.

Reproductive hazard: A material (chemical, agent, or toxin) that has the potential to affect reproductive capabilities or to cause damage to the unborn embryo/fetus.

Respiratory protection: PPE designed to protect the user from inhaling hazardous substances; respiratory protection should be used as a last resort, only after attempting to mitigate the hazard by implementing engineering and administrative controls.

Select agents: Biological agents or toxins that HHS has determined have the potential to pose a severe threat to public health and safety. A list of select agents is included in 42 CFR 73, *Select Agents and Toxins*.

Supplemental Laboratory Safety Plan (SLSP): Additional documentation related to lab specific procedures, policies, and equipment.